RECLAMATION
Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

Central Valley Project Interim Renewal Contracts for Panoche Water District and San Luis Water District 2013 – 2015

FONSI-12-055

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that the renewal of two Central Valley Project (CVP) San Luis Unit interim renewal contracts for Panoche Water District (PWD) and San Luis Water District (SLWD) for the contract period March 1, 2013 through February 28, 2015 is not a major federal action that will significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact is supported by Reclamation's Environmental Assessment (EA) Number EA-12-055, *Central Valley Project Interim Renewal Contracts for Panoche Water District and San Luis Water District 2013 – 2015*, and is hereby incorporated by reference.

Background

Section 3404(c)(1) of the Central Valley Project Improvement Act (CVPIA) authorizes and directs Reclamation to prepare appropriate environmental review before renewing an existing water service contract for a period of twenty-five years. Section 3404(c) of the CVPIA further provides for the execution of interim renewal contracts for contracts which expired prior to completion of the CVPIA Programmatic Environmental Impact Statement (PEIS). Interim renewal contracts have been and continue to be undertaken under the authority of the CVPIA to provide a bridge between the expiration of the original long-term water service contracts and the execution of new long-term water service contracts as required by the CVPIA. The interim renewal contracts reflect current Reclamation law, including modifications resulting from the Reclamation Reform Act and applicable CVPIA requirements. The initial interim contract renewals were negotiated in 1994 with subsequent renewals for periods of two years or less to provide continued water service. Many of the provisions from the interim contracts were assumed to be part of the contract renewal provisions in the description of the CVPIA PEIS Preferred Alternative.

The PEIS did not analyze site specific impacts of contract renewal but rather CVP-wide impacts of long-term contract renewal. Consequently, as contract renewal negotiations were completed, Reclamation prepared environmental documents that tiered from the PEIS to analyze the local effects of long-term contract renewals at the division, unit, or facility level. Tiering is defined as the coverage of general matters in broader environmental impact statements with site-specific environmental analyses for individual actions. Environmental analysis for the interim renewal contracts has also tiered from the PEIS to analyze site specific impacts. Consequently, the analysis in the PEIS as it relates to the implementation of the CVPIA through contract renewal and the environmental impacts of implementation of the PEIS Preferred Alternative are foundational and laid the groundwork for EA-12-055. The PEIS analyzed the differences in the environmental conditions between existing contract requirements (signed prior to CVPIA) and the No Action Alternative described in EA-12-055 which is reflective of minimum implementation of the CVPIA.

Proposed Action

In accordance with and as required by Section 3404(c) of the CVPIA, Reclamation proposes to execute two San Luis Unit interim renewal contracts beginning March 1, 2013 for PWD and SLWD. Both PWD and SLWD are currently on their second interim renewal contract and this Proposed Action will be their third. The two interim renewal contracts will be renewed for a two-year period from March 1, 2013 through February 28, 2015. In the event a new long-term water service contract is executed, the interim water service contract then-in-effect will be superseded by the long-term water service contract.

The Proposed Action will continue the existing interim renewal contracts, with only minor, administrative changes to the contract provisions to update the previous interim renewal contracts for the new contract period. No changes to the contractors' service areas or water deliveries are part of the Proposed Action. CVP water deliveries under the two proposed interim renewal contracts can only be used within each designated contract service area.

The two interim renewal contracts contain provisions that allow for adjustments resulting from court decisions, new laws, and from changes in regulatory requirements imposed through re-consultations. Accordingly, to the extent that additional restrictions are imposed on CVP operations to protect threatened or endangered species, those restrictions will be implemented in the administration of the two interim renewal contracts considered in this EA. As a result, by their express terms the interim renewal contracts analyzed herein will conform to any applicable requirements lawfully imposed under the Federal Endangered Species Act (ESA) or other applicable environmental laws.

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following factors:

FINDINGS

Water Resources

Execution of interim renewal contracts for PWD and SLWD will not change contract water quantities from the quantities in the existing contracts, and will not lead to any increased water use. Therefore, there will be no effect on surface water supplies or quality. As described under the No Action Alternative in EA-12-055, execution of two year interim renewal contracts will not change historical values in quantity, quality, or discharge of drainage emanating from or within PWD and SLWD. The Proposed Action will, in essence maintain the environmental status quo, i.e., the same amount of water will go to the same areas for the same uses (albeit under a different legal document); therefore, there are no adverse impacts to water resources as a result of the Proposed Action.

Land Use

The proposed renewal of interim renewal contracts for PWD and SLWD will not provide for additional water supplies that could act as an incentive for conversion of native habitat or

increased agricultural production acreage. Generally, lands within the San Luis Unit that are productive are farmed. In addition, the short terms of the interim renewal contracts do not provide sufficient certainty to permit municipal and industrial (M&I) development of land currently in agricultural production; therefore, land will continue to be used for existing purposes. Likewise, the interim renewal contracts will not change contract terms or conditions governing the allocation of CVP water during times of limited supply (i.e., drought), so will not provide additional water reliability conducive to conversion of land use from agricultural to M&I uses. Consequently, there will be no impact to land use as a result of the Proposed Action.

Biological Resources

Under the Proposed Action Alternative, the conditions of special status species and habitats under U.S. Fish and Wildlife's (USFWS) jurisdiction will be the same as those covered under the USFWS 2010 letter of concurrence for PWD's and SLWD's expiring interim renewal contracts, or potentially improved. No additional effects to these special status species or critical habitats are associated with this alternative. Existing and future environmental commitments addressed in Biological Opinions, including the CVPIA Biological Opinion will be met under the Proposed Action Alternative, including continuation of ongoing species conservation programs.

Reclamation's biological impacts determination also takes into account the service area's compliance with applicable requirements of existing Biological Opinions, as described above in Section 3.2.1. The Proposed Action will not result in substantial changes in natural and semi-natural communities and other land uses that have the potential to occur within the study area and other portions of the San Luis Unit. Additionally, execution of interim renewal contracts under the Proposed Action will not involve construction of new facilities or installation of structures.

PWD and a portion of SLWD have drainage outside of their contract service areas that can reach the San Joaquin River via the Grassland Bypass Project (GBP). Reclamation, SLWD, and PWD are subject to water quality regulations for constituents with the potential to have an effect on the environment and have committed to the reduced discharge of agricultural drainwater through participation in a number of activities, including GBP. The GBP continues to provide environmental benefits in addition to the overall decrease in selenium and salts through the continued separation of unusable agricultural drainwater discharged from the Grassland Drainage Area from that of wetland water supply conveyance channels and mitigation for use of the Mud Slough footprint through the provision of off-site water supply and improvements, The GBP's careful regimen of drainage management maintains agriculture in the Grassland Drainage Area at the same time as it promotes the improvement in water quality in the San Joaquin River.

Cultural Resources

There will be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action will facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities will occur as part of the Proposed Action. The pumping, conveyance, and storage of water will be confined to existing CVP facilities. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

Reclamation has determined that there will be no impacts to Indian sacred sites as a result of the Proposed Action since the Proposed Action will not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.

Indian Trust Assets

No physical changes to existing facilities are proposed and no new facilities are proposed. Continued delivery of CVP water to PWD and SLWD under an interim renewal contract will not affect any Indian Trust Assets because existing rights will not be affected; therefore, Reclamation has determined that the Proposed Action will not impact Indian Trust Assets.

Socioeconomic Resources

The renewal of interim renewal contracts with only minor administrative changes to the contract provisions will not result in a change in contract water quantities or a change in water use and will not adversely impact socioeconomic resources within the contractors' respective service areas.

Environmental Justice

Renewal of interim renewal contracts with only minor administrative changes to the contract provisions will not result in a change in contract water quantities or a change in water use. The Proposed Action will not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action will not disproportionately impact economically disadvantaged or minority populations as there will be no changes to existing conditions.

Air Quality

The Proposed Action will not require construction or modification of facilities to move CVP water to PWD or SLWD. CVP water will be moved either via gravity or electric pumps along the Delta-Mendota Canal and San Luis Canal which will not produce emissions that impact air quality. The generating power plant that produces the electricity to operate the electric pumps does produce emissions that impact air quality; however, water under the Proposed Action is water that will be delivered from existing facilities under either alternative and is therefore part of the existing conditions. In addition, the generating power plant is required to operate under permits issued by the air quality control district. As the Proposed Action will not change the emissions generated at the generating power plant, no additional impacts to air quality will occur and a conformity analysis is not required pursuant to the Clean Air Act.

Global Climate Change

The Proposed Action will not involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate the electric pumps produce carbon dioxide that could potentially contribute to greenhouse gas emissions; however, water under the Proposed Action is water that will be delivered from existing facilities under either alternative and is therefore part of the existing conditions. There will be no additional impacts to global climate change as a result of the Proposed Action.

Cumulative Impacts

Cumulative impacts relating to diversion of water and CVP operations were considered in the CVPIA PEIS. Reclamation's action is the execution of two interim renewal water service contracts between the United States and PWD and SLWD. Both PWD and SLWD have existing interim renewal contracts. It is likely that subsequent interim renewals will be needed in the future until long-term contract renewals are executed. The Proposed Action will, in essence maintain the environmental status quo, i.e., the same amount of water will go to the same areas for the same uses (albeit under a different legal arrangement). Because the renewals of interim contracts maintain the status quo of deliverable quantities and CVP operations, and in essence only change the legal arrangements of a continuing action, they do not contribute to cumulative impacts in any demonstrable manner.

Climate change is considered a cumulative impact and refers to changes in the global or a regional climate over time. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. Water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change will be addressed within Reclamation's operation flexibility and therefore surface water resource changes due to climate change will be the same with or without the Proposed Action. The Proposed Action does not involve physical changes to the environment or construction activities that could result in greenhouse gas emissions. In addition, deliveries of CVP water to PWD and SLWD are part of existing baseline conditions, and will therefore, not impact global climate change.

RECLAMATION

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Draft Environmental Assessment

Central Valley Project Interim Renewal Contracts for Panoche Water District and San Luis Water District 2013-2015

EA-12-055

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South-Central California Area Office
Fresno, California

October 2012

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Section 1 Introduction

1.1 Background

On October 30, 1992, the President signed into law the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575) which included Title 34, the Central Valley Project Improvement Act (CVPIA). The CVPIA amended previous authorizations of the Central Valley Project (CVP) to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic water supply uses, and fish and wildlife enhancement as having an equal priority with power generation. Through the CVPIA, the Bureau of Reclamation (Reclamation) is developing policies and programs to improve the environmental conditions that were affected by the operation and maintenance (O&M) and physical facilities of the CVP. The CVPIA also includes tools to facilitate larger efforts in California to improve environmental conditions in the Central Valley and the San Francisco Bay-Delta system.

Section 3404(c) of the CVPIA directs the Secretary of the Interior to renew existing CVP water service and repayment contracts following completion of a Programmatic Environmental Impact Statement (PEIS) and other needed environmental documentation by stating that:

> … *the Secretary shall, 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* [i.e., the CVPIA PEIS] … *has been completed.*

Reclamation released a Draft PEIS on November 7, 1997. An extended comment period closed on April 17, 1998. The U.S. Fish and Wildlife Service (USFWS) became a co-lead agency in August 1999. Reclamation and the USFWS released the Final PEIS in October 1999 (Reclamation 1999) and the Record of Decision (ROD) in January 2001. The CVPIA PEIS analyzed a No Action Alternative, 5 Main Alternatives, including a Preferred Alternative, and 15 Supplemental Analyses. The alternatives included implementation of the following programs: Anadromous Fish Restoration Program with flow and non-flow restoration methods and fish passage improvements; Reliable Water Supply Program for refuges and wetlands identified in the 1989 Refuge Water Supply Study and the San Joaquin Basin Action Plan; Protection and restoration program for native species and associated habitats; Land Retirement Program for willing sellers of land characterized by poor drainage; and CVP Water Contract Provisions for contract renewals, water pricing, water metering/monitoring, water conservation methods, and water transfers.

The CVPIA PEIS provided a programmatic evaluation of the impacts of implementing the CVPIA including impacts to CVP operations north and south of the Sacramento-San Joaquin River Delta (Delta). The PEIS addressed the CVPIA's region-wide impacts on communities,

industries, economies, and natural resources and provided a basis for selecting a decision among the alternatives.

Section 3404(c) of the CVPIA further provides for the execution of interim renewal contracts for contracts which expired prior to completion of the CVPIA PEIS by stating that:

> *No such renewals shall be authorized until appropriate environmental review, including the preparation of the environmental impact statement required in section 3409 of this title, has been completed. Contracts which expire prior to the completion of the environmental impact statement required by section 3409* [i.e., the CVPIA PEIS] *may be renewed for an interim period not to exceed three years in length, and for successive interim periods of not more than two years in length, until the environmental impact statement required by section 3409 has been finally completed, at which time such interim renewal contracts shall be eligible for long-term renewal as provided above.*

Interim renewal contracts have been and continue to be undertaken under the authority of the CVPIA to provide a bridge between the expiration of the original long-term water service contracts and the execution of new long-term water service contracts as required by the CVPIA. The interim renewal contracts reflect current Reclamation law, including modifications resulting from the Reclamation Reform Act and applicable CVPIA requirements. The initial interim renewal contracts were negotiated in 1994 with subsequent renewals for periods of two years or less to provide continued water service. Many of the provisions from the interim renewal contracts were assumed to be part of the contract renewal provisions in the description of the PEIS Preferred Alternative.

The PEIS did not analyze site specific impacts of contract renewal but rather CVP-wide impacts of execution of long-term renewal contracts. Consequently, as long-term renewal contract negotiations were completed, Reclamation prepared environmental documents that tiered from the PEIS to analyze the local effects of execution of long-term renewal contracts at the division, unit, or facility level (see Section 1.1.1). Tiering is defined as the coverage of general matters in broader environmental impact statements with site-specific environmental analyses for individual actions. Environmental analysis for the interim renewal contracts has also tiered from the PEIS to analyze site specific impacts. Consequently, the analysis in the PEIS as it relates to the implementation of the CVPIA through contract renewal and the environmental impacts of implementation of the PEIS Preferred Alternative are foundational and laid the groundwork for this document. The PEIS analyzed the differences in the environmental conditions between existing contract requirements (signed prior to CVPIA) and the No Action Alternative described in this Environmental Assessment (EA) which is reflective of minimum implementation of the CVPIA.

In accordance with and as required by Section 3404(c) of the CVPIA, Reclamation proposes to execute two San Luis Unit interim renewal contracts beginning March 1, 2013 for Panoche Water District (PWD) and San Luis Water District (SLWD). The two interim renewal contracts listed in Table 1-1 would be renewed for a two-year period from March 1, 2013 through

February 28, 2015. In the event a new long-term water service contract is executed, the interim renewal contract then-in-effect would be superseded by the long-term water service contract.

Table 1-1 Contractors, Existing Contract Amounts, and Expiration Dates

Contractor	Current Contract Number	Contract Quantity (acre-feet)	Expiration of Existing Interim Renewal Contract
Panoche Water District	14-06-200-7864A-IR2	94,000	2/28/2013
San Luis Water District	14-06-200-7773A-IR2	125,080	2/28/2013

Reclamation has prepared this EA, which tiers from the PEIS, to determine the site specific environmental effects of any actions resulting from the execution of these two interim renewal contracts.

The long-term contracts for PWD and SLWD expired December 31, 2008. In 2008, Reclamation executed the first interim renewal contracts for each of the contractors for up to two years and two months. In 2011, Reclamation executed the second interim renewal contracts for PWD and SLWD for up to two years. Previous interim renewal contract EAs, which tiered from the PEIS, have been prepared for these contracts and approved as follows:

- EA-10-070, *San Luis Water District's and Panoche Water District's Water Service Interim Renewal Contracts 2011-2013* (Reclamation 2010a) which covered contract years[1] 2011 through 2013
- EA-07-056, *San Luis Unit Water Service Interim Renewal Contracts – 2008-2011* (Reclamation 2007) which covered the contract years 2008 through 2011

These two previous documents are incorporated by reference into this analysis. Information from the previous EAs are summarized and updated, as needed into this EA.

This EA was developed consistent with regulations and guidance from the Council on Environmental Quality, and in conformance with the analysis provided in *Natural Resources Defense Council v. Patterson,* Civ. No. S-88-1658 (Patterson). In Patterson the Court found that "…[on] going projects and activities require NEPA [National Environmental Policy Act] procedures only when they undergo changes amounting in themselves to further 'major action'." In addition, the Court went further to state that the NEPA statutory requirement applies only to those changes. The analysis in this EA and the incorporated EAs finds in large part that the renewal of the interim contracts is in essence a continuation of the "status quo", and that although there are financial and administrative changes to the contracts, the contracts continue the existing use and allocation of resources (i.e., the contracts are for the same amount of water and for use on the same lands for existing/ongoing purposes). This EA is therefore focused on the potential environmental effects resulting to proposed changes to the contract as compared to the No Action Alternative.

1.1.1 Long-Term Renewal Contracts

Reclamation completed long-term renewal contract environmental documentation in early 2001 for CVP contracts in the Friant Division, Hidden Unit, and Buchanan Unit of the CVP (Reclamation 2000a, 2001). Twenty-five of the 28 Friant Division long-term contracts were

[1] A contract year is from March 1 of a particular year through February 28/29 of the following year.

executed between January and February 2001, and the Hidden Unit and Buchanan Unit long-term renewal contracts were executed in February 2001. The Friant Division long-term renewal contracts with the City of Lindsay, Lewis Creek Water District, and City of Fresno were executed in 2005. In accordance with Section 10010 of the Omnibus Public Land Management Act of 2009 (Public Law 111-11), Reclamation entered into 24 Friant Division 9(d) Repayment Contracts by December 2010.

A Final Environmental Impact Statement (EIS) analyzing effects of the long-term renewal contracts for the Sacramento River Settlement Contracts and the Colusa Drain Mutual Water Company was completed in December 2004 (Reclamation 2004a). The 147 Sacramento River Settlement Contracts were executed in 2005, and the Colusa Drain Mutual Water Company contract was executed on May 27, 2005. A revised EA for the long-term renewal contract for the Feather Water District water-service replacement contract was completed August 15, 2005 and the long-term renewal contract was executed on September 27, 2005 (Reclamation 2005a).

Environmental documents were completed by Reclamation in February 2005 for the long-term renewal of CVP contracts in the Shasta Division and Trinity River Divisions (Reclamation 2005b), the Black Butte Unit, Corning Canal Unit, and the Tehama-Colusa Canal Unit of the Sacramento River Division (Reclamation 2005c). All long-term renewal contracts for the Shasta, Trinity and Sacramento River Divisions covered in these environmental documents were executed between February and May 2005. As Elk Creek Community Services District's long-term contract didn't expire until 2007 they chose not to be included at that time. Reclamation continues to work on long-term renewal contract renewal environmental documentation for Elk Creek Community Services District.

Reclamation completed long-term renewal contract environmental documents for the Delta Division (Reclamation 2005d) and the U.S. Department of Veteran Affairs (Reclamation 2005e). In 2005, Reclamation executed 17 Delta Division long-term renewal contracts.

Reclamation completed long-term renewal contract environmental documents for Contra Costa Water District (Reclamation 2005f) and executed a long-term renewal contract in 2005.

Reclamation completed long-term renewal contract environmental documents for the majority of the American River Division (Reclamation 2005g). The American River Division has seven contracts that are subject to renewal. The ROD for the American River long-term renewal contract EIS was executed for five of the seven contractors. Reclamation continues to work on long-term renewal contract environmental documentation for the other two remaining contractors.

On March 28, 2007, the San Felipe Division existing contracts were amended to incorporate some of the CVPIA requirements; however, the long-term renewal contracts for this division were not executed. The San Felipe Division contracts expire December 31, 2027. Reclamation continues to work on long-term renewal contract environmental documentation for the San Felipe Unit as well.

Cross Valley Contractors and San Luis Unit long-term renewal contract has not been completed as Endangered Species Act (ESA) consultation for the CVP/State Water Project (SWP) Coordinated Operations was remanded by the U.S. District Court without *vacatur* prior to completion of the long-term environmental analysis. As the CVP/SWP Coordinated Operations ESA consultation is still pending, Reclamation is pursuing completion of environmental compliance for the long-term contracts under separate environmental documentation.

1.1.2 Water Service Contracts within the San Luis Unit

CVP water service contracts in the San Luis Unit are between the United States and individual water users or districts and provide for an allocated supply of CVP water to be applied for beneficial use. Water service contracts are required for the receipt of CVP water under federal Reclamation law and among other things stipulate provisions under which a water supply is provided, to produce revenues sufficient to recover an appropriate share of capital investment, and to pay the annual O&M costs of the CVP.

Reclamation has completed negotiating the provisions of the long-form of the interim renewal contract with the San Luis Unit contractors; however, Reclamation has not yet completed environmental documentation for proposed long-term contracts within the San Luis Unit (West San Joaquin Division), including SLWD and PWD, in part due to pending litigation. With the exception of Pacheco Water District's long-term contract (which expires at the end of February 2024), the remaining San Luis Unit contractors have interim renewal contracts which expire at the end of February 2013 or February 2014.

Reclamation recognizes that the capacity to deliver CVP water has been constrained in recent years because of several hydrologic, regulatory, and operational uncertainties, and that these uncertainties may exist or become more constraining in the future as competing demands for water resources intensify. Therefore, the likelihood of contractors receiving the amount of water set out in the long-term renewal contract and the interim renewal contracts in any given year is uncertain, but likely similar to, or less than levels of historic deliveries.

1.2 Need for the Proposed Action

As described in Section 1.1.1, execution of long-term renewal contracts for San Luis Unit contractors is still pending. The purpose of the Proposed Action is to execute two interim contracts in order to extend the term of the contractors' existing interim renewal contracts for two years, beginning March 1, 2013 and ending February 28, 2015. Execution of these two interim contracts is needed to continue delivery of CVP water to these contractors, and to further implement CVPIA Section 3404(c), until their new long-term renewal contract can be executed.

Interim renewal contracts are needed to provide the mechanism for the continued beneficial use of the water developed and managed by the CVP and for the continued reimbursement to the federal government for costs related to the construction and operation of the CVP by the contractors. Additionally, CVP water is essential to continue agricultural production and municipal viability for these contractors.

1.3 Scope

The diversion of water is an on-going action and the current conditions of that diversion and operation of the CVP were analyzed in the PEIS (see Chapter III of the PEIS). As the diversion of water for delivery under the interim renewal contracts is an on-going action and the current conditions of that diversion are discussed in the PEIS, this EA covers the environmental analysis of fulfilling Reclamation's obligation to renew interim renewal contracts pending execution of their long-term renewal contract. Renewal of the contracts is required by Reclamation Law, including the CVPIA, and continues the current use and allocation of resources by CVP contractors, within the framework of implementing the overall CVPIA programs.

This EA has been prepared to examine the impacts on environmental resources as a result of delivering water to the contractors listed in Table 1-1 and shown in Figure 1-1 under the proposed interim renewal contracts. The water would be delivered for agricultural or municipal and industrial (M&I) purposes within Reclamation's existing water right place of use. The water would be delivered within the contractor service area boundaries using existing facilities for a period of up to two years. See Appendix A for contractor-specific service area maps.

Environmental reviews of CVP operations and other contract actions have been or are being conducted within the framework of the CVPIA PEIS. As discussed above, the long-term contract renewals for many CVP contractors both north and south of the Delta, other than the San Luis Unit, have already been executed following site-specific environmental review. Water resources north of the Delta including the Trinity, Sacramento and American rivers are not analyzed in this EA. Several environmental documents and associated programs, address north of Delta water resources including:

- The Bay Delta Conservation Plan (BDCP) that is being developed to provide the basis for the issuance of endangered species permits for the operation of the CVP and SWP. The BDCP is a long-term conservation strategy that addresses species, habitat and water resources that drain to the Delta.
- The Trinity River Restoration Program was developed to restore the Trinity River as a viable fishery. The 2001 Trinity River ROD issued for the program specifies four modes of restoration including: flow management through releases from Lewiston Dam, construction of channel rehabilitation sites, augmentation of spawning gravels, control of fine sediments and infrastructure improvements to accommodate high flow releases.
- The CVP Conservation Program was formally established to address Reclamation's requirements under the ESA. Over 80 projects have been funded by the CVP Conservation Program since its beginning and more recent budgets are allowing for funding of seven to fourteen projects annually.
- The Habitat Restoration Program was established under Title 34 of the CVPIA to protect, restore, and mitigate for past fish and wildlife impacts of the CVP not already addressed by the CVPIA.
- The CVPIA PEIS (described above).

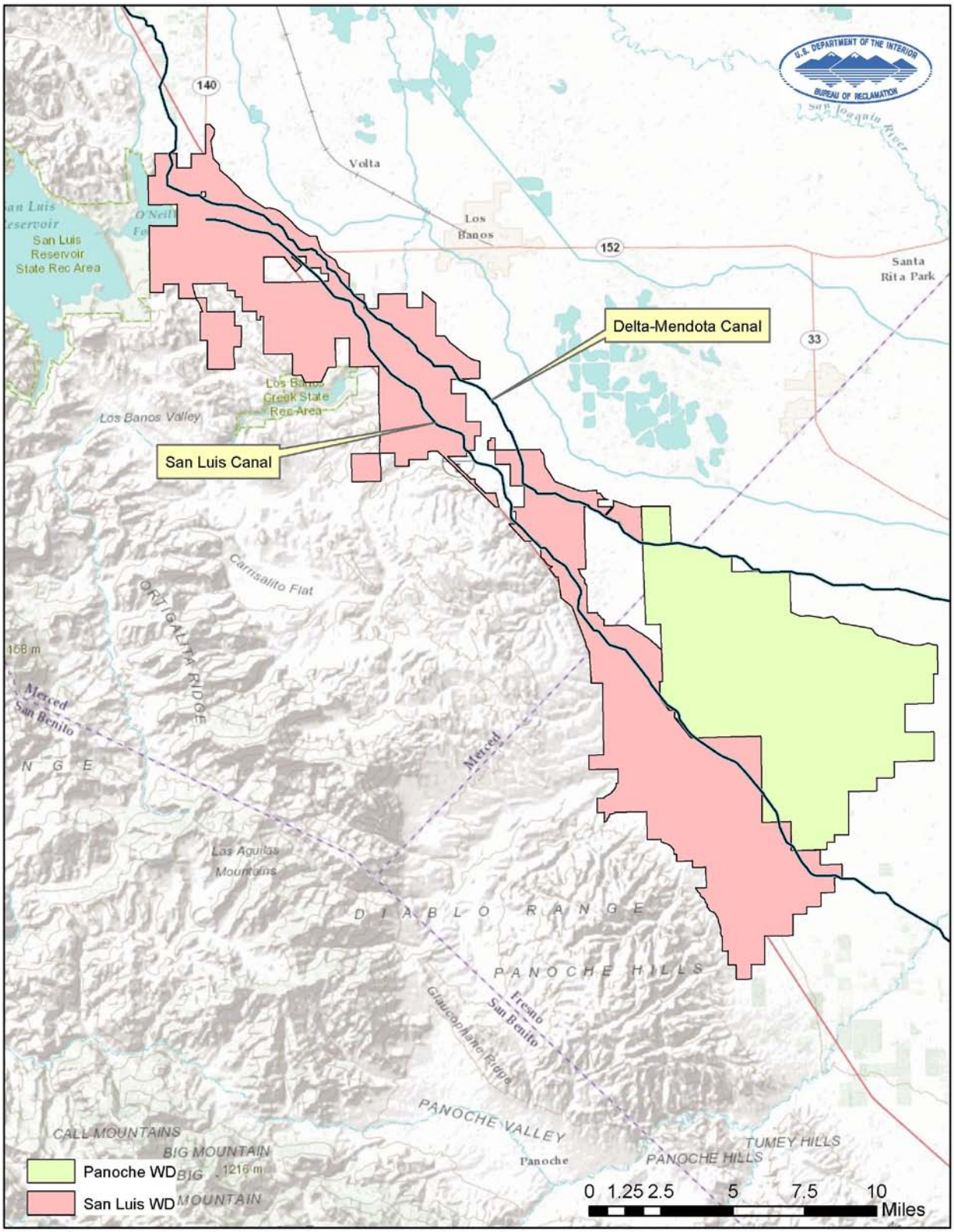

Figure 1-1 PWD and SLWD Service Areas

1.4 Issues Related to CVP Water Use Not Analyzed

1.4.1 Contract Service Areas

No changes to any contractor's service area are included as a part of the alternatives or analyzed within this EA. Reclamation's approval of a request by a contractor to change its existing service area would be a separate discretionary action. Separate appropriate environmental compliance and documentation would be completed before Reclamation approves a land inclusion or exclusion to any contractor's service area.

1.4.2 Water Transfers and Exchanges

No sales, transfers, or exchanges of CVP water are included as part of the alternatives or analyzed within this EA. Reclamation's approvals of water sales, transfers, and exchanges are separate discretionary actions requiring separate additional and/or supplementary environmental compliance. Approval of these actions is independent of the execution of interim renewal contracts. Pursuant to Section 3405 of the CVPIA, transfers of CVP water require appropriate site-specific environmental compliance. Appropriate site-specific environmental compliance is also required for all CVP water exchanges.

1.4.3 Contract Assignments

Assignments of CVP contracts are not included as part of the alternatives or analyzed within this EA. Reclamation's approvals of any assignments of CVP contracts are separate, discretionary actions that require their own environmental compliance and documentation.

1.4.4 Warren Act Contracts

Warren Act contracts between Reclamation and water contractors for the conveyance of non-federal water through federal facilities or the storage of non-federal water in federal facilities are not included as a part of the alternatives or analyzed within this EA. Reclamation's decision to enter into Warren Act contracts are separate actions and independent of the execution of interim renewal contracts. Separate environmental compliance would be completed prior to Reclamation executing Warren Act contracts.

1.4.5 Purpose of Water Use

Use of contract water for agricultural irrigation use or M&I use under the proposed interim renewal contracts would not change from the purpose of use specified in the existing contracts. Any change in use for these contracts would be separate, discretionary actions that require their own environmental compliance and documentation.

1.4.6 Drainage

This EA acknowledges ongoing trends associated with the continued application of irrigation water and production of drainage related to that water. It does not analyze the effects of Reclamation's providing agricultural drainage service to the San Luis Unit. The provision of drainage service is a separate federal action that has been considered in a separate environmental document, the *San Luis Drainage Feature Re-Evaluation Final Environmental Impact Statement* [SLDFR-FEIS] (Reclamation 2005h). The SLDFR-FEIS evaluated seven action alternatives in addition to the no action alternative for implementing drainage service within the San Luis Unit. The In-Valley/Water Needs Land Retirement alternative analyzed in the SLDFR-FEIS was chosen for implementation and documented in Reclamation's SLDFR ROD which was signed

March 9, 2007. Subsequently, Reclamation prepared the *San Luis Drainage Feature Re-Evaluation Feasibility Report* (Feasibility Report) to evaluate the feasibility of implementing the In-Valley/Water Needs Land Retirement alternative. The SLDFR-FEIS identified drainage areas within SLWD and PWD and incorporated the Westside Regional Drainage Plan (WRDP). WRDP components are currently being implemented through the ongoing Grassland Bypass Project (GBP). Reclamation and the San Luis & Delta-Mendota Water Authority prepared the *Grassland Bypass Project 2010-2019 Environmental Impact Statement and Environmental Impact Report* (Reclamation 2009) and Reclamation completed associated consultations under the ESA. Further, as part of the SLDFR-Feasibility Report, Reclamation is preparing to construct a Demonstration Treatment Facility near Firebaugh, California within Panoche Drainage District's San Joaquin River Improvement Project (SJRIP) reuse area within the Grasslands Drainage Area. Reclamation completed an EA for the facility (EA-10-030) entitled *San Luis Drainage Feature Reevaluation Demonstration Treatment Facility at Panoche Drainage District* on June 7, 2012 (Reclamation 2012). The primary purpose of the facility is to demonstrate and operate the reverse osmosis and selenium biotreatment technologies described in the Feasibility Report in order to collect cost and performance data required for final design of the corresponding full-scale drainage service treatment components to be constructed in Westlands Water District in accordance with Public Law 86-488 and the revised Control Schedule filed November 4, 2011 by the United States in *Firebaugh Canal Water District, et al. v United States of America, et. al.*, (CV-F-88-634 and CV-F-91-048 Partially Consolidated). The actions considered in this EA would not alter or affect the analysis or conclusions in the SLDFR-FEIS or its ROD.

1.5 Resources of Potential Concern

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential direct and indirect impacts and cumulative effects to the following resources:

- Water Resources
- Land Use
- Biological Resources
- Cultural Resources
- Indian Sacred Sites
- Indian Trusts Assets (ITA)
- Socioeconomic Resources
- Environmental Justice
- Air Quality
- Global Climate

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Section 2 Alternatives Including the Proposed Action

The No Action Alternative and the Proposed Action include the renewal of interim renewal contracts for PWD and SLWD. The two interim contracts, their contract entitlements, and purpose of use under both alternatives can be found in Table 2-1 below.

Table 2-1 Contracts, Contract Entitlements and Purpose of Use

Contractor	Contract number	Contract Quantity (acre-feet)	Purpose of Use
SAN LUIS UNIT			
Panoche Water District	14-06-200-7864A-IR2	94,000	Ag &/or M&I
San Luis Water District	14-06-200-7773A-IR2	125,080	Ag &/or M&I

For purposes of this EA, the following assumptions are made under each alternative:

A. Execution of each interim renewal contract is considered to be a separate action;
B. A two year interim renewal period is considered in the analysis, though contracts may be renewed for a shorter period.
C. The contracts would be renewed with existing contract quantities as reflected in Table 2-1;
D. Reclamation would continue to comply with commitments made or requirements imposed by applicable environmental documents, such as existing Biological Opinions including any obligations imposed on Reclamation resulting from re-consultations; and
E. Reclamation would implement its obligations resulting from Court Orders issued in actions challenging applicable Biological Opinions that take effect during the interim renewal period.

2.1 No Action Alternative

The No Action Alternative is the continued delivery of CVP water under the interim renewal of existing contracts which includes terms and conditions required by non-discretionary CVPIA provisions. The No Action Alternative, therefore, consists of the interim renewal of current water service contracts that were considered as part of the Preferred Alternative of the CVPIA PEIS (Reclamation 1999) adapted to apply for an interim period.

The CVPIA PEIS Preferred Alternative assumed that most contract provisions would be similar to many of the provisions in the 1997 CVP interim renewal contracts, which included contract terms and conditions consistent with applicable CVPIA requirements. In addition, provisions in the existing long-term contracts that are specific to the San Luis Unit contracts regarding O&M of certain facilities and drainage service under the 1960 San Luis Act would be incorporated into the No Action Alternative without substantial change.

Section 3405(d) of the CVPIA requires tiered pricing to be included in contracts greater than three years in duration. Consequently, if at least 80 percent of the contract total is delivered in any year for contracts greater than three years, in such year incremental charges based on the 80/10/10 pricing structure would be collected and paid to the Restoration Fund.

2.1.1 Other Contract Provisions of Interest

Several applicable CVPIA provisions which were incorporated into the Preferred Alternative of the Final PEIS and which are included in the No Action Alternative include tiered water pricing, defining M&I water users, requiring water measurement, and requiring water conservation. These provisions were also summarized in EA-07-56 (Reclamation 2007) and are incorporated by reference into EA-10-070 (Reclamation 2010a) and this EA.

In addition, the No Action Alternative includes environmental commitments as described in the Biological Opinion for the CVPIA PEIS (Reclamation 2000b).

2.2 Proposed Action

The Proposed Action evaluated in this document is the execution of two interim renewal water service contracts between the United States and the contractors listed in Table 2-1. These are the same two contracts included under the No Action Alternative. Both PWD and SLWD are currently on their second interim renewal contract and this Proposed Action would be their third. Drafts of the interim renewal contracts were released for public comment on October 11, 2012 and are available at the following website: http://www.usbr.gov/mp/cvpia/3404c/lt_contracts/2013_int_cts/index.html.

The Proposed Action would continue these existing interim renewal contracts, with only minor, administrative changes to the contract provisions to update the previous interim renewal contracts for the new contract period. In the event a new long-term water service contract is executed, the interim renewal contract then-in-effect would be superseded by the long-term water service contract.

No changes to the contractors' service areas or water deliveries are part of the Proposed Action. CVP water deliveries under the two proposed interim renewal contracts can only be used within each designated contract service area (see Figure 1-1). The contract service area for the proposed interim renewal contracts have not changed from the existing interim renewal contracts. If the contractor proposes to change the designated contract service area separate environmental documentation and approval will be required. The proposed interim renewal contract quantities (Table 2-1) remain the same as in the existing interim renewal contracts. Water can be delivered under the interim renewal contracts in quantities up to the contract total, although it is likely that deliveries will be less than the contract total. The terms and conditions of the 2011 interim renewal contracts analyzed within EA-07-56 (Reclamation 2007) and EA-10-070 (Reclamation 2010a) are incorporated by reference into the Proposed Action.

The two interim renewal contracts contain provisions that allow for adjustments resulting from court decisions, new laws, and from changes in regulatory requirements imposed through re-consultations. Accordingly, to the extent that additional restrictions are imposed on CVP

operations to protect threatened or endangered species, those restrictions would be implemented in the administration of the two interim renewal contracts considered in this EA. As a result, by their express terms the interim renewal contracts analyzed herein would conform to any applicable requirements lawfully imposed under the Federal ESA or other applicable environmental laws.

2.2.1 Comparison of Alternative Differences

The primary difference between the Proposed Action and the No Action Alternative is that the Proposed Action does not include tiered pricing. Section 3405(d) of the CVPIA does not require tiered pricing to be included in contracts of three years or less in duration and negotiations between Reclamation and San Luis Unit contractors concluded with a form of contract which does not include tiered pricing. Consequently, if at least 80 percent of the contract total is delivered in any year during the term of the interim renewal contracts, in such year no incremental charges for water in excess of 80 percent of the contract total would be collected and paid to the Restoration Fund. The terms and conditions under the Proposed Action is a continuation of the terms and conditions under the first executed interim renewal contract excepting minor administrative changes.

2.3 Alternatives Considered but Eliminated from Further Analysis

2.3.1 Non-Renewal of Contracts

Section 1(4) of the "Administration of Contracts under Section 9 of the Reclamation Project Act of 1939" dated July 2, 1956 provided for the rights of irrigation contractors to a stated quantity of the project yield for the duration of their contracts and any renewals thereof provided they complied with the terms and conditions of those contracts and Reclamation law. Section 2 of the "Renewal of Water Supply Contracts Act of June 21, 1963" provided the same for M&I contractors. Therefore, Reclamation does not have the discretionary authority to not renew CVP water service contracts. Reclamation law mandates renewals at existing contract amounts when the water is being beneficially used. The non-renewal alternative was considered, but eliminated from analysis in this EA because Reclamation has no discretion not to renew existing water service contracts as long as the contractors are in compliance with the provisions of their existing contracts.

2.3.2 Reduction in Interim Renewal Contract Water Quantities

Reduction of contract water quantities due to the current delivery constraints on the CVP system was considered in certain cases, but eliminated from the analysis of the interim renewal contracts for several reasons:

First, the Reclamation Project Act of 1956 and the Reclamation Project Act of 1963 mandate renewal of existing contract quantities when beneficially used. Irrigation and M&I uses are beneficial uses recognized under federal Reclamation and California law. Reclamation has determined that the contractors have complied with contract terms and the requirements of applicable law. It also has performed water needs assessments for all the CVP contractors to identify the amount of water that could be beneficially used by each water service contractor. In

the case of each interim renewal contractor, the contractor's water needs equaled or exceeded the current total contract quantity.

Second, the analysis of the PEIS resulted in selection of a Preferred Alternative that required contract renewal for the full contract quantities and took into account the balancing requirements of CVPIA (p. 25, PEIS ROD). The PEIS ROD acknowledged that contract quantities would remain the same while deliveries are expected to be reduced in order to implement the fish, wildlife, and habitat restoration goals of the Act, until actions under CVPIA 3408(j) to restore CVP yield are implemented (PEIS ROD, pages 26-27). Therefore, an alternative reducing contract quantities would not be consistent with the PEIS ROD and the balancing requirements of CVPIA.

Third, the shortage provision of the water service contract provides Reclamation with a mechanism for annual adjustments in contract supplies. The provision protects Reclamation from liability from the shortages in water allocations that exist due to drought, other physical constraints, and actions taken to meet legal or regulatory requirements. Reclamation has relied on the shortage provisions to reduce contract allocations to water service contractors in most years in order to comply with regulation requirements. Further, CVP operations and contract implementation, including determination of water available for delivery, is subject to the requirements of Biological Opinions issued under the Federal ESA for those purposes. If contractual shortages result because of such requirements, the Contracting Officer has imposed them without liability under the contracts.

Fourth, retaining the full historic water quantities under contract provides the contractors with assurance the water would be made available in wetter years and is necessary to support investments for local storage, water conservation improvements and capital repairs.

Therefore, an alternative reducing contract quantities would not be consistent with Reclamation law or the PEIS ROD, would be unnecessary to achieve the balancing requirements of CVPIA or to implement actions or measure that benefit fish and wildlife, and could impede efficient water use planning in those years when full contract quantities can be delivered.

Section 3 Affected Environment and Environmental Consequences

This section describes the service area for PWD and SLWD which receive CVP water from the Delta via the Delta-Mendota Canal and the San Luis Canal. The study area, shown in Figure 1-1, includes portions of Fresno and Merced Counties.

3.1 Water Resources

3.1.1 Affected Environment

Reclamation makes CVP water available to contractors for reasonable and beneficial uses, but this water is generally insufficient to meet all of the contractors' needs due to hydrologic conditions and/or regulatory constraints. In contractors' service areas, contractors without a sufficient CVP water supply may extract groundwater if pumping is feasible or negotiate water transfers with other contractors. Alternative supplies from groundwater pumping and/or transfers are accessed as supply sources when CVP surface water deliveries are inadequate for crop needs due to shortages imposed under the terms of the contracts or become more expensive than pumping or transfer costs.

Water Delivery Criteria

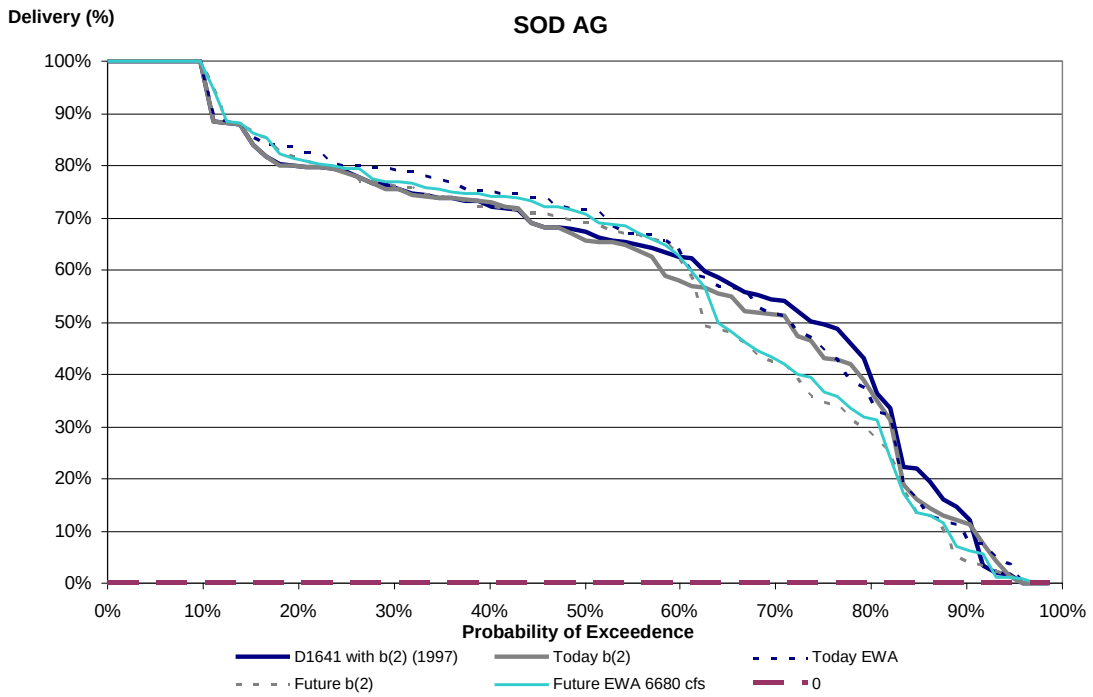
The amount of CVP water available each year for contractors is based, among other considerations, on the storage of winter precipitation and the control of spring runoff in the Sacramento and San Joaquin River basins. Reclamation's delivery of CVP water diverted from these rivers is determined by state water right permits, judicial decisions, and state and federal obligations to maintain water quality, meet federal Endangered Species Act obligations or otherwise enhance environmental conditions, and prevent flooding. The CVPIA PEIS considered the effects of those obligations on CVP contractual water deliveries. Experience since completion of the CVPIA PEIS has indicated even more severe contractual shortages applicable to South-of-Delta (SOD) water deliveries (Reclamation 1999), and this information has been incorporated into the modeling for the current CVP/ SWP Coordinated Operations of the Delta (Reclamation 2004b).

Water Delivery Conditions under CVPIA Implementation Modeling done for the CVPIA PEIS predicted that, with the implementation of the CVPIA PEIS Preferred Alternative and under conditions in the late 1990s, SOD CVP agricultural water service contractors would receive an average of 59 percent of their current total contract amounts (Reclamation 1999). These conditions would result in the delivery of total contract amounts to agricultural water service contractors located SOD approximately 15 percent of the time. Minimum deliveries of zero would occur only in critically dry years.

Additionally, tables from the CVP/SWP Coordinated Operations Plan (Reclamation 2004b) also show that deliveries of over 80 percent of the contract total for agricultural purposes would occur

between 22 and 24 percent of the time (Figure 3-1). Under these conditions, modeling predicts that tiered pricing (if it were required) would apply once every fourth or fifth year.

Figure 3-1 CVP SOD Agricultural Allocation Exceedance Chart



Source: Reclamation 2004a.

Contractor Water Needs Assessment

In 2003 a Water Needs Assessment was developed in order to identify the beneficial and efficient future water needs and demands for each interim renewal contractor (Appendix A). The demands were compared to available non-CVP water supplies to determine the need for CVP water. If the negative amount (unmet demand) was within 10 percent of the total supply for contracts greater than 15,000 acre feet (AF) per year (AFY), or within 25 percent for contracts less than or equal to 15,000 AFY, the test of full future need of the water supplies under the contract was deemed to be met. Because the CVP was initially established as a supplemental water supply for areas with inadequate supplies, the needs for most contractors were at least equal to the CVP water service contract and frequently exceeded the previous contract amount. Increased total contract amounts were not included in the needs assessment because such increases would require new contracts that CVPIA prohibits until specified future conditions are met. The analysis for the Water Needs Assessment did not consider that the CVP's ability to deliver CVP water has been constrained in recent years and may be constrained in the future because of many factors including hydrologic conditions and implementation of federal and state laws. The likelihood of contractors actually receiving the full contract amount in any given year is uncertain. No new water needs assessments are anticipated.

Panoche Water District's Water Use

PWD is also located on the western side of the San Joaquin Valley in both Merced and Fresno Counties. PWD's conveyance system is composed of approximately 45 miles of canals and

pipelines to serve its landowners. This includes approximately 15 miles of unlined canals, 22 miles of lined canals, and almost 8 miles of pipeline. PWD obtains CVP water through two diversion points on the Delta-Mendota Canal and five diversion points on the San Luis Canal.

PWD's water needs analysis completed by Reclamation in June 2003 estimated that there would be an unmet demand for 2025 of 1,136 AF (see Appendix A).

CVP Contracts On August 16, 1955, PWD entered into a long-term contract (Contract 14-06-200-7864) with Reclamation for 93,988 AF of CVP supply from the Delta-Mendota Canal (Reclamation 1955). This contract was amended on August 30, 1974 (Contract 14-06-200-7684A) to allow a maximum delivery of 94,000 AF of CVP supply from the Delta-Mendota Canal or San Luis Canal. This contract was further revised on January 13, 1986 and November 14, 1988 in amendatory contracts that revised some contract terms but did not revise the maximum quantity of CVP water to be supplied. The long-term contract expired December 31, 2008. An initial interim renewal contract (Contract 14-06-200-8033A-IR1) was issued in 2008 and expired February 28, 2011 (Reclamation 2008a). A second interim renewal contract (Contract 14-06-200-8033A-IR2) was issued March 1, 2011 and remains in effect until February 28, 2013 (Reclamation 2011a).

Other Available Water Supplies In addition to its CVP water, PWD has entered into a long-term water supply contract with the Central California Irrigation District and Firebaugh Canal Water District. This agreement provides 3,000 AFY in supplemental water to PWD through 2033. PWD has also entered into an agreement with San Luis Canal Company. This agreement provides up to 5,000 AFY of supplemental water to PWD through December 31, 2021. Both sources supplement anticipated ongoing shortages in the CVP contract supply that are imposed as described in Section 2.3.2 and provide that total deliveries to PWD cannot exceed the CVP contract total quantity.

Some groundwater is also used within PWD. There are 42 privately owned and operated groundwater wells in the district service area in addition to one district owned well. Because of its poor quality, groundwater is primarily used as a water shortage contingency water supply source.

San Luis Water District's Water Use

SLWD is located on the western side of the San Joaquin Valley near the City of Los Banos, in both Merced and Fresno Counties (see Figure 1-1). SLWD's current distribution system consists of 52 miles of pipelines, 10 miles of lined canals, and 7.5 miles of unlined canals. About 20,000 acres within the district, referred to as the Direct Service Area, receive CVP water from 39 turnouts on the Delta-Mendota Canal and 23 turnouts on the San Luis Canal. In addition to the Direct Service Area, three improvement districts are also served through distribution systems branching off the San Luis Canal. Both Improvement Districts 1 and 2 are primarily located within Fresno County; Improvement District 3 is located primarily in Merced County.

SLWD's water needs analysis completed by Reclamation in June 2003 estimated that there would be an unmet demand for 2025 of 5,830 AF (see Appendix A).

CVP Contracts On February 25, 1959, SLWD entered into a long-term contract (Contract 14-06-200-7563) with Reclamation for 93,300 AF of CVP supply from the Delta-Mendota Canal (Reclamation 1959). This contract was superseded by a contract executed on June 19, 1974 (Contract 14-06-200-7773A) for a maximum of 125,080 AF of CVP supply from the Delta-Mendota Canal and San Luis Canal which was further amended on January 13, 1986. This contract expired December 31, 2008. An initial interim renewal contract (Contract 14-06-200-8033A-IR1) was issued in 2008 and expired February 28, 2011 (Reclamation 2008b). A second interim renewal contract (Contract 14-06-200-8033A-IR2) was issued March 1, 2011 and remains in effect until February 28, 2013 (Reclamation 2011b).

Other Available Water Supplies CVP water is SLWD's only long-term water supply. The district does not own any groundwater wells and has no long-term contracts for surface water or groundwater supplies. There are 20 privately owned and operated groundwater wells that provide water to 6,000 acres in the Direct Service Area. There are no agricultural wells within the three improvement districts. The vast majority of the SLWD's water users do not have meaningful access to groundwater that can be used for irrigation, and therefore, supplementation of the CVP supply is nominal.

Although water deliveries by the SLWD historically have been almost exclusively used for agricultural use, substantial development in and around the cities of Los Banos and Santa Nella have resulted in a shift of some water supplies to M&I use. SLWD currently supplies approximately 800 AFY as a wholesaler (but not to end users) and approximately 40 AFY to end users as treated water. M&I use demands are expected to increase over time, but not during the term of the proposed interim renewal contracts.

Groundwater Resources

The San Joaquin River Hydrologic Region covers approximately 9.7 million acres (15,200 square miles) and includes all of Calaveras, Tuolumne, Mariposa, Madera, San Joaquin, and Stanislaus counties, most of Merced and Amador counties, and parts of Alpine, Fresno, Alameda, Contra Costa, Sacramento, El Dorado, and San Benito counties (DWR 2003). Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,000 square miles) and includes all of Kings and Tulare Counties and most of Fresno and Kern Counties (DWR 2003). PWD and SLWD fall within these two hydrologic regions. However, conditions within each of the regions vary significantly from location to location.

The California Department of Water Resources (DWR) estimates an annual overdraft of approximately 205,000 AF of groundwater within the San Joaquin Valley. This over-drafting of groundwater has caused ground subsidence since the mid-1920s. By 1970, 5,200 square miles of the valley were affected and maximum subsidence exceeded 28 feet in an area west of Mendota. Much of this area is now served by the CVP's San Luis Unit (DWR 2003; Reclamation 2005h). During the past 40 years, recharge increased dramatically as a result of imported irrigation water. Increased rates of recharge resulting from percolation of irrigation water, combined with the rapid post-1967 decrease in pumping, caused a rise in the height of the water table over much of the western valley (Belitz and Heimes 1990).

The large-scale groundwater use during the 1960s and 1970s, combined with the introduction of imported surface water supplies, has modified the natural groundwater flow pattern in some

areas. Flow largely occurs from areas of recharge toward areas of lower groundwater levels due to groundwater pumping (Bertoldi et al. 1991). The vertical movement of water in the aquifer has also been altered in this region as a result of thousands of wells constructed with perforations above and below the Corcoran clay layer, which, where present, provide a direct hydraulic connection (Bertoldi et al. 1991).

Both PWD and SLWD have approved groundwater management plans.

General Impacts of Agriculture on Groundwater In 1989, Dubrovsky and Deverel concluded that percolation of irrigation water past crop roots, pumping of groundwater from deep wells, and imported surface water used for irrigation have combined to create large downward hydraulic-head gradients. The salts in the irrigation water, and soil salts leached from the unsaturated zone, increased salt and selenium concentrations in groundwater. In low-lying areas of the valley, and where the water table is within seven feet of land surface, evaporation from the shallow water table has further increased salt and selenium concentrations. A U.S. Geological Survey report indicated that irrigation had affected the upper 20 to 200 feet of the saturated groundwater zone (Dubrovsky and Deverel 1989). In some locations, this poor quality groundwater zone is moving downward in response to recharge from above the water table and pumping from deep wells.

Groundwater Quality Groundwater quality conditions vary throughout the San Joaquin Valley. Significant portions of the groundwater in the San Luis Unit exceed the California Regional Water Quality Control Board's recommended Total Dissolved Solids (TDS) concentration. Calcium, magnesium, sodium, bicarbonates, selenium, sulfates, and chlorides are all present in significant quantities as well (Reclamation 2005h). Groundwater zones commonly used along a portion of the western margin of the San Joaquin Valley have high concentrations of TDS, ranging from 500 milligrams per liter (mg/L) to greater than 2,000 mg/L (Bertoldi et al. 1991). The concentrations in excess of 2,000 mg/L commonly occur above the Corcoran clay layer. These high levels have impaired groundwater for irrigation and municipal uses in the western portion of the San Joaquin Valley.

The high TDS content of west side groundwater is due to recharge of stream flow originating from marine sediments in the Coast Range (DWR 2003). The high TDS content in the trough of the valley is the result of concentration of salts due to evaporation and poor drainage from naturally saline and high clay content soils, which restricts drainage. Nitrates may occur naturally or as a result of disposal of human and animal waste products and fertilizer. Boron and chloride are likely a result of concentration from evaporation near the valley trough (DWR 2003). Organic contaminants contributed by agriculture have been detected in groundwater throughout the region but primarily in areas east of the San Luis Unit where soil permeability is higher and depth to groundwater is shallower. In the central and west-side portions of the valley, where the Corcoran Clay confining layer exists, water quality is generally better beneath the clay than above it (DWR 2003).

Contractors in the San Luis Unit with drainage-impacted lands have developed aggressive programs to manage salts in the root zone and to minimize deep percolation through the use of high-efficiency irrigation techniques, such as sprinklers and advanced drip technologies,

shortened rows, and the installation of groundwater monitoring wells. While PWD and the drainage-affected portions of SLWD have continued to have a drainage outlet, lack of a drainage outlet in some areas of the San Luis Unit has led to an increase in saline groundwater beneath some portions of the region.

Production of Drainage Water within PWD and SLWD The Northern Area of the San Luis Unit includes approximately 38,000 acres in PWD, 4,100 acres in Pacheco Water District and 3,882 acres of SLWD land located within Charleston Drainage District (Pacheco Water District is not included in the current interim renewal contract process as their contract does not expire until 2024). Approximately 30,000 acres within the Northern Area are presently improved with subsurface drainage systems (SLDFR Draft EIS Table C1-4) including approximately 24,000 acres between PWD and SLWD. Drainage water from irrigation within the Northern Area of the San Luis Unit is produced primarily through operation of subsurface tile and deep drain collector systems which remove subsurface water from the plant root zones. Drainage produced within the Northern Area may also result from uncontrolled groundwater intrusion from upslope irrigation, subterranean flows from the Coastal Range, and seepage from the California Aqueduct. Such inputs may be diffuse or highly localized and the quantities and effects within particular areas have not been fully documented. Each of the districts in the Northern Area encourage on-farm drainage management through policies to control surface water discharges, programs to support on-farm irrigation efficiency improvements, and mandatory water conservation planning. Drainage water is also reused within drainage service areas.

PWD and a portion of the SLWD are within the Grassland Drainage Area and participate in the GBP, which serves a total of 97,000 acres. At present, drainage that leaves each district's boundaries is disposed of by reuse on the 6,000-acre SJRIP and/or discharged through the GBP into the San Luis Drain, Mud Slough North and ultimately, the San Joaquin River. This is the only route for drainage disposal for these service areas. Table 3-1 below lists the amount of drainage discharged between 1986 and 2011 by PWD (as Panoche Drainage District) and a portion of SLWD (SLWD lands contained within Charleston Drainage District). Load reduction requirements for selenium and salts for the GBP continue through 2019, and while there will continue to be annual variability based on water year types and load requirements, the Districts anticipate overall decreased discharges from the Grassland Drainage Area as they continue to work towards "zero" discharge. For example, for 2012, a dry/below normal year, PWD's annual load of selenium leaving Panoche Drainage District (an area that contains all of PWD plus an additional 6,000 acres) is projected to be 235 pounds, compared to 1,003 in wet year 2011, and overall Grassland Drainage Area selenium load is approximately 65 percent below the dry year load target through July and projected to be at least 50 percent below the annual target for all of 2012.

Table 3-1 Discharges for PWD and SLWD from the Grassland Drainage Area

	Charleston Drainage District (includes SLWD)			PWD as Panoche Drainage District		
Year	Discharge (AF)	Salt Load (tons)	Selenium Load (pounds)	Discharge (AF)	Salt Load (tons)	Selenium Load (pounds)
1986	3,186	10,699	474	31,573	102,699	4,480
1987	4,769	19,023	946	35,229	111,435	4,990
1988	5,015	20,062	906	31,575	114,989	4,930
1989	2,799	12,068	519	24,075	92,633	4,032
1990	2,126	8,592	387	21,462	88,117	4,009
1991	781	3,161	227	14,092	60,414	2,558

Year	Charleston Drainage District (includes SLWD)			PWD as Panoche Drainage District		
	Discharge (AF)	Salt Load (tons)	Selenium Load (pounds)	Discharge (AF)	Salt Load (tons)	Selenium Load (pounds)
1992	730	3,279	153	12,658	58,766	2,824
1993	1,858	8,412	425	19,774	90,696	4,779
1994	3,199	14,330	808	19,265	85,959	4,083
1995	4,316	19,376	971	28,533	121,128	5,942
1996	3,897	14,771	609	24,538	103,384	5,276
1997	1,509	6,676	349	17,028	76,824	3,250
1998	1,674	8,100	456	19,268	82,142	3,662
1999	983	4,787	233	12,823	55,483	1,771
2000	869	4,210	256	13,047	53,487	1,790
2001	533	3,370	205	11,436	51,484	1,882
2002	1,179	6,653	327	9,351	42,097*	1,548
2003	943	5,172	271	9,928	44,694*	1,504
2004	1,180	6,111	399	9,003	40,531*	3,216
2005	2,056	10,890	554	13,825	62,236*	2,020
2006	1,748	8,381	330	8,189	36,868*	1,007
2007	1,482	8,218	423	6,583	29,638*	1,285
2008	213	372	45	6,298	28,353*	848
2009	310	1,123	69	6,615	29,780*	735
2010	171	908	43	6,829	31,468	806
2011	125	545	24	8,345	40,276	1,003
Average	1,833	8,050	400	16,205	66,753	2,855
Maximum	5,015	20,062	971	35,229	121,128	5,942
Minimum	125	372	24	6,298	28,353	735
*Amounts based on estimated values Source: PWD and SLWD						

As described previously, Reclamation issued the SLDFR FEIS and ROD analyzing the effects of implementing drainage service. The ROD reflects Reclamation's decision to implement the In-Valley/Water Needs Land Retirement alternative, which includes drainage reduction measures, drainage water reuse facilities, treatment systems, and evaporation ponds. It also includes retiring 194,000 acres of land from irrigated farming from the entire San Luis Unit.

Notwithstanding the requirements of the San Luis Act that the United States provide drainage service to the San Luis Unit and the issuance of the ROD, SLWD, PWD, Pacheco Water District and Westlands Water District have district-specific policies and methods for dealing with drainage (Pacheco Water District and Westlands Water District are located in the San Luis Unit but not included in the Proposed Action). Lack of a drainage outlet has led to an increase in saline groundwater beneath some portions of the San Luis Unit, but PWD and the Charleston Drainage District area of SLWD will continue to be drained through the GBP through 2019, well beyond the term of the proposed renewal of the interim renewal contracts for PWD and SLWD.

3.1.2 Environmental Consequences

No Action

Contract provisions under the No Action Alternative stipulate that a tiered pricing structure (80/10/10 tiered pricing) would be applied. Tiered pricing is mandated under the water conservation section of the CVPIA for contracts of more than three years. As described previously, model predictions indicate that the number of years when tiered pricing would be applicable would be limited to approximately 22 or 24 percent of the time (or one year out of four or five) for interim contracts greater than three years. Water supplies do not typically meet demands for most contractors and many contractors are very active on the water market

purchasing water supplies. Areas within the San Luis Unit have been planted in permanent crops and the contractors from these areas, to make up for shortages and preserve their crop investment, have paid prices for water that exceed the maximum amount that would be paid if tiered pricing were applied. For that reason, increasing water prices due to tiered pricing would not likely change water use trends. In addition, some San Luis Unit contractors, such as PWD, have tiered pricing components under their own Water Management Plans, so tiered pricing as an incentive for conservation is already in effect.

For those areas where groundwater is of suitable quality and therefore available for irrigation, CVP water is considered to be a supplemental supply. Most agricultural contractors already rely on groundwater supplies and in some cases water transfers to meet on-farm needs. Alternate surface water supplies frequently are expensive and are not readily or reliably available. Thus, tiered pricing is unlikely to cause a grower to switch to alternate supplies. In areas within PWD and SLWD where groundwater is utilized to meet crop demands, farmers would have no alternative but to pay the additional tiered pricing costs as any further reduction in water supplies would lead to further overdraft and potentially subsidence. Water users within the service area of these contractors have been installing high efficiency irrigation systems without the incentive of CVPIA tiered pricing in order to manage drainage and to maximize available supplies during times of shortage. The systems are frequently utilized to sustain permanent crops, and it is unlikely that the systems would be abandoned on such crops even in years of full supplies. Much of the PWD and a portion of SLWD is drainage impacted, so high efficiency irrigation is implemented as a mechanism for reducing deep percolation and subsurface drainage production. Reclamation does not anticipate that implementation of tiered pricing through the No Action Alternative would cause any changes from historical values in the quantity, quality or discharge of drainage emanating from or within SLWD or PWD during the two years of the interim renewal contracts.

The contract provisions under the No Action Alternative also stipulate that a definition of M&I water would be applied. Having water use on a less than five acre parcel defined as M&I, rather than a two-acre parcel, would not result in a change in water use but would have an impact on the rates Reclamation collects. It is unlikely with the small number of parcels involved, the small size of the parcels, and the small quantities of water involved that changing this definition would have any effects on water resources.

PWD and SLWD would continue to operate and maintain facilities related to their individual water delivery activities, including turnouts from pumping stations on the San Luis Canal and Delta-Mendota Canal, on terms substantially the same as the existing long-term contracts. These activities relate to already constructed facilities on federal rights-of-way with no anticipated changes in activity level or use; therefore there would be no impact to CVP or district facilities.

Proposed Action

Execution of interim renewal contracts for PWD and SLWD would not change contract water quantities from the quantities in the existing contracts, and would not lead to any increased water use. Therefore, there would be no effect on surface water supplies or quality. As described under the No Action Alternative, execution of two year interim renewal contracts would not change historical values in quantity, quality, or discharge of drainage emanating from or within PWD and SLWD. The Proposed Action would, in essence maintain the environmental status

quo, i.e., the same amount of water would go to the same areas for the same uses (albeit under a different legal document); therefore, there are no adverse impacts to water resources as a result of the Proposed Action.

Cumulative Impacts

Reclamation's action is the execution of interim renewal contracts between the United States and PWD and SLWD under either the No Action alternative or the Proposed Action. PWD and SLWD have existing interim renewal contracts. It is likely that subsequent interim renewals would be needed in the future pending the execution of long-term renewal contracts. Because the renewals of interim renewal contracts maintain the status quo of deliverable quantities and CVP operations, and in essence can only change the legal documentation of a continuing action, they do not contribute to cumulative impacts in any demonstrable manner.

3.2 Biological Resources

3.2.1 Affected Environment

PWD's and SLWD's service areas are dominated by agricultural habitat that includes field crops, orchards, and pasture (CDC 2008, 2010). The ongoing intensive management of agricultural lands, including repetitive activities such as soil preparation, planting, irrigation, applying various chemicals, and harvesting disturbs the land surface and reduces the value of these habitat for wildlife.

In 2007, Reclamation initiated consultation with the USFWS on the issuance of the first interim renewal contracts for the San Luis Unit contractors, including PWD and SLWD (Reclamation 2008c). USFWS concurred with Reclamation's determination that the issuance of interim renewal contracts for 26 months to PWD and SLWD would not likely adversely affect (NLAA) the San Joaquin kit fox (*Vulpes macrotis mutica*) and the giant garter snake (*Thamnophis gigas*), with specific restrictions relating to drainage water (USFWS 2008a). Species impacts due to discharge of drainage water containing more than 2 parts per billion selenium from PWD and SLWD were addressed in the GBP Biological Opinion (USFWS 2009) and SLDFR Biological Opinion (USFWS 2006). The GBP Biological Opinion provided reasonable and prudent measures, and terms and conditions toaddress project effects. The execution of interim renewal contracts for PWD and SLWD were subjected to those terms and conditions.

In 2010, Reclamation re-consulted with USFWS for the renewal of PWD and SLWD interim renewal contracts for a period of 24 months, beginning March 1, 2011 and going through February 28, 2013 (Reclamation 2010b). The USFWS concurred with Reclamation's NLAA determination for the federally-listed San Joaquin kit fox, giant garter snake, and Delta smelt (*Hypomesus transpacijicus*), including Delta smelt designated critical habitat (USFWS 2010).

In 2008, Reclamation consulted with the National Marine Fisheries Service [NMFS] for potential effects to listed anadromous fish species and fish habitat resulting from approving the first PWD and SLWDinterim renewal contracts and a Biological Opinion was issued (NMFS 2008). NMFS determined that the continued existence of listed anadromous fish species were not likely to be jeopardized nor would permanent destruction or adverse modification to designated or proposed critical habitat occur by renewing the interim renewal contracts. However, NMFS stated adverse

impacts to Essential Fish Habitat (EFH) as defined under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 38 §1801 et seq.), of Pacific salmon in the action area would occur from drainage water as a result of executing interim renewal contracts. NMFS requested the Biological Opinion's terms and conditions, and conservation recommendations be adopted to act as EFH Conservation Recommendations as well. NMFS also commented in the Biological Opinion on the benefits of the GBP to listed fish species and their habit by reducing drainage water into the San Joaquin River (NMFS 2009a).

Reclamation re-consulted with NMFS the second renewal of interim renewal contracts for PWD and SLWD, and NMFS issued a Biological Opinion on February 23, 2011 for the effects of drainage water entering the San Joaquin River (NMFS 2011). NMFS concluded the execution of interim renewal contracts would not likely jeopardize the continued existence of the federally listed endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), the threatened Southern distinct population segment (DPS) of North American green sturgeon (*Acipenser medirostrisi*), nor destroy or adversely modify designated critical habitat of Central Valley steelhead and the Southern DPS of North American green sturgeon. NMFS determined drainage water would cause adverse impacts to Pacific salmon EFH and provided specific terms and conditions to Reclamation for conservation. Reclamation has continued to comply with requirements of the Biological Opinion (NMFS 2011).

On September 6, 2012, Reclamation requested an official species list from the USFWS via the Sacramento Field Office's website: http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm (Document Number 120906041024; USFWS 2012). The list includes species identified from the following U.S. Geological Survey 7½ minute quadrangles surrounding the Proposed Action area including: Chounet Ranch, Dos Palos, Hammonds Ranch, Broadview Farms, Charleston School, Ortigalita Peak NW, Laguna Seca Ranch, Los Banos Valley, Volta, Los Banos, and San Luis Dam. Reclamation further queried the California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the project location as well as protected species records present downstream (CNDDB 2012). The two lists, in addition to other information within Reclamation's files were combined to create the following list (Table 3-2).

Table 3-2 Biological Species List for the Proposed Action, Including Fish Downstream

Species	***Status***[1]	***Effects***[2]	***Potential to occur and summary basis for ESA determination***[3]
Amphibians			
California red-legged frog (*Rana draytonii*)	T, X	NE	**Absent.** No CNDDB[4]-recorded occurrences in action area. Area is not within areas designated as critical habitat.
California tiger salamander (*Ambystoma californiense*)	T, X	NE	**Absent.** No CNDDB-recorded occurrences in action area. Area is not within areas designated as critical habitat.
Fish			
Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*)	T, X NMFS	LAA	**Present.** Suitable habitat and species are present downstream of the Proposed Action area and can be affected by agricultural drainage.

Species	***Status***[1]	***Effects***[2]	***Potential to occur and summary basis for ESA determination***[3]
Central Valley steelhead (*Oncorhynchus mykiss*)	T, X NMFS	LAA	**Present.** Suitable habitat and species are present downstream of the Proposed Action area and may be affected by agricultural drainage water.
Delta smelt (*Hypomesus transpacificus*)	T, X	NLAA	**Present**. Natural waterways within the species' range have been addressed in GBP Biological Opinion and all Terms and Conditions will be followed.
Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*)	E, X NMFS	LAA	**Present**. Suitable habitat and species are present downstream of the Proposed Action area and may be affected by drainage water.
Southern distinct population segment of North American green sturgeon (*Acipenser medirostrisi*)	T, X NMFS	LAA	**Present**. Suitable habitat and species are present downstream of the Proposed Action area andmay be affected by drainage water.
Invertebrates			
longhorn fairy shrimp (*Branchinecta longiantenna*)	E	NE	**Absent**. No records or vernal pools in area of effect.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	NE	**Absent.** No records in area of effect. No elderberry shrubs will be impacted by the proposed action.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	T	NE	**Absent**. No records or vernal pools in area of effect.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	E	NE	**Absent**. No records or vernal pools in area of effect.
Mammals			
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	E	NE	**Unlikely**. No CNDDB-recorded occurrences and managed agricultural lands are not expected to provide suitable habitat. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
giant kangaroo rat (*Dipodomys ingens*)	E	NE	**Unlikely**. No CNDDB-recorded occurrences and managed agricultural lands are not expected to provide suitable habitat. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
San Joaquin kit fox (*Vulpes mactotis mutica*)	E	NLAA	**Present**. There are several CNDDB-recorded occurrences in area and site could be used for movement and as foraging habitat. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Plant			
San Joaquin woolly-threads (*Monolopia congdonii*)	E	NE	**Absent**. No CNDDB-recorded occurrences in action area.
Reptiles			
blunt-nosed leopard lizard (*Gambelia sila*)	E	NE	**Possible**. There are CNDDB-recorded occurrences located in the western section of SLWD along I-5. Agricultural lands do not provide suitable habitat No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Giant garter snake (*Thamnophis gigas*)	T	NLAA	**Possible**. CNDDB records are approximately 4 miles to east of SLWD on other side of Delta-Mendota Canal. Suitable habitat lacking in project area; potential impacts downstream in Mud Slough are currently being addressed under the GBP; water quality objectives in the San Joaquin River provide protection to other downstream habitats.

Species	***Status***[1]	***Effects***[2]	***Potential to occur and summary basis for ESA determination***[3]

1 Status= Status of federally protected species protected under ESA
E: Listed as Endangered
NMFS: Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service
T: Listed as Threatened
X: Critical Habitat designated for this species
2 Effects = Effect determination
LAA: May Affect, Likely to Adversely Affect
NE: No Effect
NLAA: Not Likely to Adversely Affect
3 Definition Of Occurrence Indicators
Present: Species recorded in area and suitable habitat present.
Possible: Species recorded in area and habitat suboptimal.
Unlikely: Species recorded in area but habitat marginal or lacking entirely.
Absent: Species not recorded in study area and suitable habitat absent.
4 CNDDB = California Natural Diversity Database 2012

Documents Addressing Potential Impacts of Actions of the CVP (Other than the Proposed Action) to Listed Species

Biological Opinions for Coordinated Operations of the CVP and SWP In December 2008, USFWS issued a Biological Opinion analyzing the effects of the coordinated long-term operation of the CVP and SWP in California (USFWS 2008b). The USFWS Biological Opinion concluded that "the coordinated operation of the CVP and SWP, as proposed, was likely to jeopardize the continued existence of the delta smelt" and "adversely modify delta smelt critical habitat". The USFWS Biological Opinion included a Reasonable and Prudent Alternative (RPA) for CVP and SWP operations designed to allow the projects to continue operating without causing jeopardy or adverse modification. On December 15, 2008, Reclamation provisionally accepted and then implemented the USFWS RPA.

NMFS issued a Biological Opinion analyzing the effects of the coordinated long-term operation of the CVP and SWP on listed salmonids, Southern DPS of North American green sturgeon and Southern resident killer whale (*Orcinus orca*) in June 2009 (NMFS 2009b). The NMFS Biological Opinion concluded that the long-term operation of the CVP and SWP, as proposed, was likely to jeopardize the continued existence of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, Southern DPS of North American green sturgeon, and Southern Resident killer whales. Also the NMFS Biological Opinion concluded that the coordinated long-term operation of the CVP and SWP, as proposed, was likely to destroy or adversely modify designated critical habitat for these species. The NMFS Biological Opinion included an RPA designed to allow the projects to continue operating without causing jeopardy or adverse modification. On June 4, 2009, Reclamation provisionally accepted and then implemented the NMFS RPA.

However, since that time, the Eastern District Court of California remanded without *vacatur* both Biological Opinions and ordered Reclamation to comply with NEPA before accepting the RPAs. It is expected that once a new Proposed Action is selected through the NEPA process, Reclamation will request consultation with USFWS and NMFS. In the meantime RPA's from the two Biological Opinions, as modified for any specific time period or component by Court order, remain in effect.

Operation and Maintenance Program for the South-Central California Area Office
Reclamation has consulted under the ESA on the *Operation and Maintenance Program Occurring on Bureau of Reclamation Lands within the South-Central California Area Office*, resulting in a Biological Opinion issued by the USFWS (USFWS 2005). The opinion considers the effects of routine O&M of Reclamation's facilities used to deliver water to the study area, as well as certain other facilities within the jurisdiction of the South-Central California Area Office, on California tiger salamander (*Ambystoma californiense*), vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), blunt-nosed leopard lizard (*Gambelia sila*), vernal pool tadpole shrimp (*Lepidurus packardi*), San Joaquin wooly-threads (*Monolopia congdonii*), California red-legged frog (*Rana draytonii*), giant garter snake (*Thamnophis gigas*), San Joaquin kit fox, and on proposed critical habitat for the California red-legged frog and California tiger salamander.

3.2.2 Environmental Consequences

No Action
Under the No Action Alternative, conditions of special status species and habitats would be the same as current conditions described in the Affected Environment. No additional effects to special status species or critical habitats are associated with this alternative. Existing and future environmental commitments addressed in Biological Opinions, including the CVPIA Biological Opinion (USFWS 2000) would be met under the No Action Alternative, including continuation of ongoing species conservation programs.

Proposed Action
Under the Proposed Action Alternative, the conditions of special status species and habitats under USFWS' jurisdiction would be the same as those covered under the USFWS 2010 letter of concurrence, or potentially improved. No additional effects to these special status species or critical habitats are associated with this alternative. Existing and future environmental commitments addressed in Biological Opinions, including the CVPIA Biological Opinion (USFWS 2000) would be met under the Proposed Action Alternative, including continuation of ongoing species conservation programs.

Reclamation's biological impacts determination also takes into account the service area's compliance with applicable requirements of existing Biological Opinions, as described above in Section 3.2.1. The Proposed Action would not result in substantial changes in natural and semi-natural communities and other land uses that have the potential to occur within the study area and other portions of the San Luis Unit. Additionally, execution of interim renewal contracts under the Proposed Action would not involve construction of new facilities or installation of structures.

PWD and a portion of SLWD have drainage outside of their contract service areas that can reach the San Joaquin River via the GBP. Reclamation, SLWD, and PWD are subject to water quality regulations for constituents with the potential to have an effect on the environment and have committed to the reduced discharge of agricultural drainwater through participation in a number of activities, including GBP. The GBP continues to provide environmental benefits in addition to the overall decrease in selenium and salts through the continued separation of unusable

agricultural drainwater discharged from the Grassland Drainage Area from that of wetland water supply conveyance channels and mitigation for use of the Mud Slough footprint through the provision of off-site water supply and improvements, The GBP's careful regimen of drainage management maintains agriculture in the Grassland Drainage Area at the same time as it promotes the improvement in water quality in the San Joaquin River.

Cumulative Impacts

Interim renewal contracts, when added to other past, present, and reasonably foreseeable future actions, represent a continuation of existing conditions which are unlikely to result in cumulative impacts on the biological resources of the study area and other portions of the San Luis Unit. Interim renewal contracts obligate the delivery of the same contractual amount of water to the same lands without the need for additional facility modifications or construction. As discussed in other sections of this EA, through local and on-farm activities, through the implementation of regional projects that increase irrigation efficiency and continued use of reuse areas for the application of drainwater to salt tolerant plants in accordance with existing permits, Reclamation expects that drainage production within the study area during the interim period would continue to be reduced, and discharges to the San Joaquin River would decrease. Thus, the interim renewal contracts, together with reasonably foreseeable future actions, would not incrementally contribute to any physical impacts to study area biological resources.

Interim renewal contracts occur within the context of implementation of the CVPIA by the United States Department of the Interior, including Reclamation and USFWS. Reclamation and the USFWS explained the CVPIA in a report entitled *CVPIA, 10 Years of Progress* (Reclamation 2002), as follows:

> The CVPIA has redefined the purposes of the CVP to include the protection, restoration, and enhancement of fish, wildlife, and associated habitats; and to contribute to the State of California's interim and long-term efforts to protect the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary. Overall, the CVPIA seeks to "achieve a reasonable balance among competing demands for use of [CVP] water, including the requirements of fish and wildlife, and agricultural, municipal and industrial, and power contractors."

Finally, as explained above, interim renewal contracts would be subject to regulatory constraints imposed pursuant to Section 7 of the ESA, regardless of whether those constraints exist today. Consequently, there would be no cumulative adverse impacts as a result of the Proposed Action.

3.3 Socioeconomic Resources

3.3.1 Affected Environment

The agricultural industry significantly contributes to the overall economic stability of the San Joaquin Valley. SLWD's and PWD's service areas are predominately rural and agricultural with numerous small cities and a few large communities, such as Los Banos. The regional economic indicators of social well being are all measures of the social conditions within a region. Demographic information for Fresno and Merced County are summarized in Table 3-3. In June 2012, unemployment rates for Fresno and Merced County were five to seven percent higher than the State, respectively.

Table 3-3 Demographics

Demographics	Fresno County	Merced County	California
Total Population (2011 estimate)	942,904	259,898	37,691,912
White, non-Hispanic	32.4%	31.3%	40.1%
Black or African American	5.9%	4.3%	6.2%
American Indian	3.0%	2.4%	1.0%
Asian	10.3%	7.9%	13.0%
Native Hawaiian/Pacific Islander	0.3%	0.4%	0.4%
Hispanic	50.9%	55.7%	37.6%
June 2012 Unemployment rate	15.3%	17.8%	10.7%
Source: U.S. Census Bureau 2012; California Employment Development Department 2012			

3.3.2 Environmental Consequences

No Action

Renewal of interim renewal contracts under the No Action alternative with only minor administrative changes to the contract provisions would not result in a change in contract water quantities or a change in water use; however, contract provisions which stipulate the tiered water pricing structure (80/10/10) for contracts greater than three years would place an additional financial burden on PWD and SLWD when tiered pricing is required. The tiered pricing structure stipulated in the contract would result in higher water prices for both agricultural and M&I contractors when second or third tier water is provided. Because the economy of the Central Valley is heavily dependent on these water supplies, this increased burden, may translate into economic impacts throughout the affected area. However, as discussed previously, the impact from tiered pricing would occur only when allocations are above 80 percent which has only occurred twice in the last 10 years (2005 and 2006). Therefore, any changes due to tiered pricing would likely be within the normal range of annual or seasonal variations.

Proposed Action

The renewal of interim renewal contracts with only minor administrative changes to the contract provisions would not result in a change in contract water quantities or a change in water use and would not adversely impact socioeconomic resources within the contractors' respective service areas.

Cumulative Impacts

The No Action alternative could have cumulatively adverse impacts socioeconomic resources when tiered pricing is required due to additional financial burdens placed on an already economically impacted area. The Proposed Action may have slight beneficial impacts to socioeconomic resources over the short-term due to the continued stability within the contractors' service area; however, the duration of the interim renewal period is only for up to two years or until the renewal of the long-term contracts has been executed whichever is sooner. Consequently, the Proposed Action would not have any long-term cumulative impacts to socioeconomic resources.

3.4 Environmental Justice

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

3.4.1 Affected Environment

The Hispanic community within Fresno and Merced Counties is greater than the California average (see Table 3-3). The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America. The population of some small communities typically increases during late summer harvest. Table 3-4 provides population percentages for the minority and poverty populations of the Fresno and Merced County. As shown in Table 3-4, both Counties minority population was nearly 70 percent in 2010 with more than 20 percent of their population living below the poverty level between 2006 and 2010.

Table 3-4 Project Area Minority and Poverty Profile

Place	2010Total Population	Percent of Total Population Identified as Minority in 2010	Percent of Total Population Below Poverty Level (2006-2010)
Fresno County	930,450	67.6	22.5
Merced County	255,793	68.7	21.8
Source: U.S. Census Bureau 2012			

3.4.2 Environmental Consequences

No Action

Renewal of interim renewal contracts under the No Action alternative with only minor administrative changes to the contract provisions would not result in a change in contract water quantities or a change in water use; however, contract provisions which stipulate the tiered water pricing structure (80/10/10) would place an additional financial burden on populations within PWD and SLWD when tiered pricing is required. Therefore, the No Action alternative could adversely impact minority and disadvantaged populations when tiered pricing is required. During those times, implementation of tiered pricing would increase the cost of water, which could reduce farming revenues and decrease land values. As previously described, tiered pricing could, but is not likely to result in changes in agricultural practices, including cropping patterns and land fallowing. M&I users may also be impacted by changes in water supply costs placing increased pressure on low income households. However, as discussed previously, the impact from tiered pricing would occur only when allocations are above 80 percent which has only occurred twice in the last 10 years (2005 and 2006). Therefore, any changes due to tiered pricing would likely be within the normal range of annual or seasonal variations.

Factors contributing to population change, employment, income levels, and unemployment rates in the affected area are closely tied to CVP water contracts through either agricultural or M&I dependence. Because no changes in water supplies or CVP operations would occur under this alternative, no changes in population and the various indicators of social well-being are expected. Additionally, the No Action Alternative would support continued agricultural production and would not directly result in changes to employment of minority and low-income populations; therefore, there would be no substantial adverse impacts due to this action alternative.

Proposed Action

Renewal of interim renewal contracts with only minor administrative changes to the contract provisions would not result in a change in contract water quantities or a change in water use.

The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations as there would be no changes to existing conditions.

Cumulative Impacts

Employment opportunities for low-income wage earners and minority population groups would be within historical conditions under either alternative. Neither alternative would subject disadvantaged or minority populations to disproportionate impacts, except when tiered pricing is required under the No Action alternative. The No Action alternative could have cumulatively adverse impacts to minority and disadvantaged populations when tiered pricing is required due to additional financial burdens placed on an already economically impacted area. The Proposed Action would not differ from current or historical conditions and would not disproportionately affect minority or low income populations in the future; therefore, there would be no adverse cumulative impacts as a result of the Proposed Action.

3.5 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment of the Proposed Action and No Action Alternative and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

Land Use

The interim renewal contracts for PWD and SLWD under either alternative would not provide for additional water supplies that could act as an incentive for conversion of native habitat or increased agricultural production acreage. Generally, lands within the San Luis Unit that are productive are farmed. In addition, the short terms of the interim renewal contracts do not provide sufficient certainty to permit M&I development of land currently in agricultural production; therefore, land would continue to be used for existing purposes under either alternative. Likewise, the interim renewal contracts would not change contract terms or conditions governing the allocation of CVP water during times of limited supply (i.e., drought), so would not provide additional water reliability conducive to conversion of land use from agricultural to M&I uses. Consequently, there would be no impact to land use as a result of the Proposed Action or No Action alternative.

Cultural Resources

Cultural Resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

There would be no impacts to cultural resources under the No Action alternative as conditions would remain the same as existing conditions. There would be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action would facilitate the flow

of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. The pumping, conveyance, and storage of water would be confined to existing CVP facilities. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." Executive Order 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites.

No impact to Indian sacred sites would occur under the No Action Alternative as conditions would remain the same as existing conditions. Reclamation has determined that there would be no impacts to Indian sacred sites as a result of the Proposed Action since the Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.

Indian Trust Assets

ITA are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the interior is the trustee for the United States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITA cannot be sold, leased or otherwise alienated without United States’ approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

No impact to ITA would occur under the No Action Alternative as conditions would remain the same as existing conditions. No physical changes to existing facilities are proposed and no new facilities are proposed. Continued delivery of CVP water to PWD and SLWD under an interim renewal contract would not affect any ITA because existing rights would not be affected; therefore, Reclamation has determined that the Proposed Action would not impact ITA.

Air Quality

Established under Clean Air Act section 176(c)(4), the General Conformity Rule requires Federal agencies to work with state, tribal and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the

applicable state or tribal implementation plan. Regulations under 43 CFR §93.150 through 43 CFR §93.165 require a conformity determination for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed a *de minimis* threshold.

Neither the No Action nor Proposed Action alternative would require construction or modification of facilities to move CVP water to PWD or SLWD. CVP water would be moved either via gravity or electric pumps along the Delta-Mendota Canal and San Luis Canal which would not produce emissions that impact air quality. The generating power plant that produces the electricity to operate the electric pumps does produce emissions that impact air quality; however, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. In addition, the generating power plant is required to operate under permits issued by the air quality control district. As the Proposed Action would not change the emissions generated at the generating power plant, no additional impacts to air quality would occur and a conformity analysis is not required pursuant to the Clean Air Act.

Global Climate

The Environmental Protection Agency (EPA) has issued regulatory actions under the Clean Air Act as well as other statutory authorities to address climate change issues (EPA 2011). In 2009, the EPA issued a rule (40 CFR §98) for mandatory reporting of greenhouse gases (GHG) by large source emitters and suppliers that emit 25,000 metric tons or more of GHG [as carbon dioxide equivalents per year] (EPA 2009). The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change and has undergone and is still undergoing revisions (EPA 2011). In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is further directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020.

Neither the Proposed Action nor the No Action alternative would involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate the electric pumps produce carbon dioxide that could potentially contribute to GHG emissions; however, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. There would be no additional impacts to global climate change as a result of the Proposed Action.

Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore surface water resource changes due to climate change would be the same with or without either alternative.

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the Draft Finding of No Significant Impact and Draft EA during a 30-day public review period.

4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)

Section 7 of the ESA requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would support existing uses and conditions. No native lands would be converted or cultivated with CVP water. The water would be delivered to existing homes or farmlands, through existing facilities, as has been done under existing contracts, and would not be used for land conversion.

Effects to Sacramento-San Joaquin River Delta species and critical habitats, such as the Delta smelt, salmonids, and green sturgeon which are the result of CVP operations, are addressed in the CVP/SWP Coordinated Operations consultation.

Reclamation will initiate consultation with USFWS and NMFS for the Proposed Action and would comply with any terms and conditions. Also, NMFS will be consulted for affects to EFH of the Pacific salmon in the action area and adopts any conservation recommendations. Execution of the contracts would not occur until after consultation is completed with USFWS and NMFS.

Section 5 Preparers and Reviewers

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Section 6 Acronyms and Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
BDCP	Bay Delta Conservation Plan
CARB	California Air Resources Board
CNDDB	California Natural Diversity Database
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin River Delta
DPS	Distinct Population Segment
DWR	California Department of Water Resources
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Feasibility Report	San Luis Drainage Feature Re-Evaluation Feasibility Report
GBP	Grassland Bypass Project
GHG	Greenhouse gases
ITA	Indian Trust Asset
mg/L	Milligram per liter
M&I	Municipal and Irrigation
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLAA	Not Likely to Adversely Affect
NMFS	National Marine Fisheries Service
O&M	Operation and maintenance
PEIS	Programmatic Environmental Impact Statement
PWD	Panoche Water District
Reclamation	Bureau of Reclamation
ROD	Record of Decision
RPA	Reasonable and Prudent Alternative
SJRIP	San Joaquin River Water Quality Improvement Project
SLDFR-FEIS	San Luis Drainage Feature Re-Evaluation Final EIS
SLWD	San Luis Water District
SOD	South-of-Delta
SWP	State Water Project
TDS	Total Dissolved Solids
USFWS	U.S. Fish and Wildlife Service
WRDP	Westside Regional Drainage Plan

Section 7 References

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DRAFT ENVIRONMENTAL ASSESSMENT (12-055)

CENTRAL VALLEY PROJECT INTERIM RENEWAL CONTRACTS FOR PANOCHE WATER DISTRICT AND SAN LUIS WATER DISTRICT 2013-2015

Appendix A
Contractor's Water Needs Assessments

October 2012

PANOCHE WD-DMC

Contractor ID: 202030

West San Joaquin

Water Needs Assessment

Contractor's Water Supply Sources and Quantities (acre-feet)

Date: 6/2/2003 8:27:14 A

Timeframe 1	Surface Water Supply: Reference Delivery 2	USBR Total Deliv/Max 3	SWP 4	Local 5	Local Source 6	Trsfr / Rtrn / Recycle In 7	Trsfr / Out 8	Groundwater Supply: District 9	Private 10	Safe Yield 11	Recharge 12	Total Supply 13
1989 WC Plan	86,081	91,887	0	0		1,792	42	0	0		0	93,637
1999	0	0										0
2025	94,000 *	94,000 *	0	0		0	48	0	0		0	93,952

Contractor's Agricultural Water Demands

Maximum ProductiveAcres: 35,786

Timeframe 1	Crop Water Requirement (acre-feet) 15	District Irrig. Efficiency (%) 16	Effective Precip (acre-feet) 17	Reference Effective Precip (acre-ft) 18	Calculated Net Crop Water Req (acre-feet) 19	USBR Net Crop Water Req (acre-feet) 20	Average Irrigated Acres (acres) 21	Reference Irrigated Acres (acres) 22	Calculated FDR (AF/acre) 23	USBR FDR (AF/acre) 24	Conveyance Loss (acre-feet) 25	Total Ag Demand (acre-feet) 26
1989	80,707	75	6,555	10,676	98,869	99,641	35,661	35,586	2.77	2.80	7,903	106,772
1999	81,443	75	10,859	10,859	94,112	94,112	36,197	36,197	2.60	2.60		
2025	85,916	85	11,430	11,430	87,630	87,630	38,100	38,100	2.30	2.30	5,186	92,816

Contractor's M&I Water Demands

Timeframe 1	Residential Water Demand: Population 28	Per Capita Demand (gpcd) 29	Total Demand (acre-feet) 30	Nonresidential Water Demand: Industrial (acre-feet) 31	Comm / Instit. (acre-feet) 32	Total Demand (acre-feet) 33	Loss: Unacc. / Distr. (acre-feet) 34	Ref Urban Per Capita Dmd (gpcd) 35	Calc Urban Per Capita Dmd (gpcd) 36	Total M&I Demand (acre-feet) 37	Total Ag + M&I Dmd (acre-feet) 38	Unmet Demand (acre-feet) 39
1989						0	0			0	106,772	13,135
1999						0	0			0	0	0
2025						0	0			0	92,816	-1,136

* Represents Maximum Contract Amount

Notes: In 1989 and 2025, USBR total supply includes 42 & 48 AF M&I; these supplies are shown as transfers out to make this solely an assessment of ag water need.

SAN LUIS WD-DMC

Contractor ID: 202100

Delta

Water Needs Assessment

Contractor's Water Supply Sources and Quantities (acre-feet)

Date: 6/2/2003 8:27:04 A

Timeframe 1	Surface Water Supply: Reference Delivery 2		USBR Total Deliv/Max 3		SWP 4	Local 5	Local Source 6	Trsfr / Rtrn / Recycle In 7	Trsfr / Out 8	Groundwater Supply: District 9	Private 10	Safe Yield 11	Recharge 12	Total Supply 13
1989 WC Plan	120,261		106,092		0	0		13,038	1,864	0	10,000		0	127,266
1998 WC Plan	125,080	*	70,409		0	0		4,458	2,894	0	10,000		0	81,973
1999	0		0											0
2025	125,080	*	125,080	*	0	0		0	4,894	0	5,000		0	125,186

Contractor's Agricultural Water Demands

Maximum ProductiveAcres: 50,523

Timeframe 1	Crop Water Requirement (acre-feet) 15	District Irrig. Efficiency (%) 16	Effective Precip (acre-feet) 17	Reference Effective Precip (acre-ft) 18	Calculated Net Crop Water Req (acre-feet) 19	USBR Net Crop Water Req (acre-feet) 20	Average Irrigated Acres (acres) 21	Reference Irrigated Acres (acres) 22	Calculated FDR (AF/acre) 23	USBR FDR (AF/acre) 24	Conveyance Loss (acre-feet) 25	Total Ag Demand (acre-feet) 26
1989	128,994	75	9,289	13,385	159,607	129,389	44,764	44,617	3.57	2.90	442	160,049
1998	104,656	75	33,107		95,399		47,924		1.99		1,906	97,305
1999	103,037	75	12,880	12,880	120,210	120,210	42,932	42,932	2.80	2.80		
2025	112,883	85	13,050	13,050	117,450	117,450	43,500	43,500	2.70	2.70	1,906	119,356

Contractor's M&I Water Demands

Timeframe 1	Residential Water Demand: Population 28	Per Capita Demand (gpcd) 29	Total Demand (acre-feet) 30	Nonresidential Water Demand: Industrial (acre-feet) 31	Comm / Instit. (acre-feet) 32	Total Demand (acre-feet) 33	Loss: Unacc. / Distr. (acre-feet) 34	Ref Urban Per Capita Dmd (gpcd) 35	Calc Urban Per Capita Dmd (gpcd) 36	Total M&I Demand (acre-feet) 37	Total Ag + M&I Dmd (acre-feet) 38	Unmet Demand (acre-feet) 39
1989	0	0.0	0	0	0	0	0	0.0	0.0	0	160,049	32,783
1998						0	0			0	97,305	15,332
1999						0	0			0	0	0
2025	0	0.0	0	0	0	0	0	0.0	0.0	0	119,356	-5,830

* Represents Maximum Contract Amount

Notes: Historic transfers out include M&I deliveries. Drainage water of 3,785 for 1989 and 2,621 for 1998 not included. In 2025, 2000 AF M&I water use included in transfers out due to increase in development of I-5 businesses.