

RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

Central Valley Project Interim Renewal Contracts for the Cities of Avenal, Coalinga, Huron and the California Department of Fish and Game 2013 – 2015

FONSI-12-046

Recommended by:

_____ Date: _____
Rain Healer
Natural Resources Specialist
South-Central California Area Office

Concurred by:

_____ Date: _____
Chuck Siek
Supervisory Natural Resources Specialist
South-Central California Area Office

Concurred by:

_____ Date: _____
Randy English
Chief, Resources Management Division
South-Central California Area Office

Approved by:

_____ Date: _____
Michael P. Jackson
Area Manager
South-Central California Area Office



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 four Central Valley Project (CVP) San Luis Unit interim renewal contracts for the Cities of Avenal, Coalinga, Huron and the California Department of Fish and Game (DFG) 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-12-046, *Central Valley Project Interim Renewal Contracts for the Cities of Avenal, Coalinga, Huron and the California Department of Fish and Game 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 four San Luis Unit interim renewal contracts beginning March 1, 2013 for the Cities of Avenal, Coalinga, Huron, and DFG. The Cities of Avenal, Coalinga, Huron, and DFG are currently on their second interim renewal contract and this Proposed Action will be their third. The four 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 four proposed interim renewal contracts can only be used within each designated contract service area.

The four 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 four 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 DFG and the cities of Avenal, Coalinga, and Huron 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. 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); 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 DFG and the Cities of Avenal, Coalinga and Huron will not provide for additional water supplies that could act as an incentive for conversion of native habitat. Use of contract water for municipal and industrial (M&I) uses under the proposed interim renewal contracts will not change from the purpose of use specified in their existing contracts. 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 impacts to land use as a result of the Proposed Action.

Biological Resources

Continued delivery of CVP water under the M&I contracts (Mendota Wildlife Management Area, City of Avenal, City of Coalinga, City of Huron) sustains the residential, commercial, and industrial activities that occur within the contract service areas of the M&I contractors. Urban, industrial, or municipal development proposed within areas of natural habitat remaining in the water service area of any of these contractors could destroy, modify, fragment, or degrade habitat of San Joaquin kit fox, blunt-nosed leopard lizard, California jewelflower, or San Joaquin woolly-threads. All of these cities are small and are not currently experiencing, nor are they anticipated to experience, significant growth over the next two years based on the current economic situation in California. Based on this fact, as well as the attached commitment letters from the three Cities, Reclamation does not anticipate a change in the type and extent of development during the 24-month duration of the interim renewal contracts. Therefore, the effects of the Proposed Action on Federally listed species are expected to be very minor. Reclamation will submit a request to the U.S. Fish and Wildlife Service for an informal consultation and concurrence with a not likely to adversely affect determination for the Proposed Action.

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

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. There will be no impacts to Indian sacred sites as a result of the Proposed Action.

Indian Trust Assets

No physical changes to existing facilities are proposed and no new facilities are proposed. Continued delivery of CVP water to DFG and the Cities of Avenal, Coalinga, and Huron 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 Asset.

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 DFG or the Cities of Avenal, Coalinga, and Huron. 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 four interim renewal water service contracts between the United States and the Cities of Avenal, Coalinga, Huron and DFG. All four 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 DFG and the Cities of Avenal, Coalinga, and Huron are part of existing baseline conditions, and will therefore, not impact global climate change.

RECLAMATION

Managing Water in the West

**Administrative Draft Environmental Assessment
For Internal Use Only**

Central Valley Proejct Interim Renewal Contracts for the Cities of Avenal, Coalinga, Huron and the California Department of Fish and Game 2013-2015

EA-12-046



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

September 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.

Table of Contents

- Section 1 Introduction 1**
- 1.1 Background..... 1
 - 1.1.1 Long-Term Renewal Contracts 4
 - 1.1.2 Water Service Contracts within the San Luis Unit..... 5
- 1.2 Need for the Proposed Action..... 5
- 1.3 Scope..... 6
- 1.4 Issues Related to CVP Water Use Not Analyzed 8
 - 1.4.1 Contract Service Areas 8
 - 1.4.2 Water Transfers and Exchanges 8
 - 1.4.3 Contract Assignments 8
 - 1.4.4 Warren Act Contracts 8
 - 1.4.5 Purpose of Water Use 8
 - 1.4.6 Drainage..... 8
- 1.5 Resources of Potential Concern..... 9
- Section 2 Alternatives Including the Proposed Action 11**
- 2.1 No Action Alternative..... 11
 - 2.1.1 Other Contract Provisions of Interest 12
- 2.2 Proposed Action..... 12
 - 2.2.1 Comparison of Alternative Differences..... 13
- 2.3 Alternatives Considered but Eliminated from Further Analysis 13
 - 2.3.1 Non-Renewal of Contracts 13
 - 2.3.2 Reduction in Interim Renewal Contract Water Quantities..... 13
- Section 3 Affected Environment and Environmental Consequences..... 15**
- 3.1 Water Resources 15
 - 3.1.1 Affected Environment 15
 - 3.1.2 Environmental Consequences..... 17
- 3.2 Biological Resources 18
 - 3.2.1 Affected Environment 18
 - 3.2.2 Environmental Consequences..... 20
- 3.3 Socioeconomic Resources 22
 - 3.3.1 Affected Environment 22
 - 3.3.2 Environmental Consequences..... 22
- 3.4 Environmental Justice..... 23
 - 3.4.1 Affected Environment 23
 - 3.4.2 Environmental Consequences..... 23
- 3.5 Resources Eliminated from Further Analysis..... 24
- Section 4 Consultation and Coordination..... 29**
- 4.1 Public Review Period 29
- 4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)..... 29
- Section 5 Preparers and Reviewers 29**
- Section 6 Acronyms and Abbreviations 30**
- Section 7 References..... 31**

List of Tables and Figures

Table 1-1 Contractors, Existing Contract Amounts, and Expiration Dates	3
Table 2-1 Contracts, Contract Entitlements and Purpose of Use.....	11
Table 3-1 Demographics	22
Table 3-2 Project Area Minority and Poverty Profile.....	23
Figure 1-1 DFG and the Service Areas of the Cities of Avenal, Coalinga, and Huron.....	7

Appendices

Appendix A	Contractor service area maps
Appendix B	Letters from the Cities of Avenal, Coalinga, and Huron
Appendix C	Contractor Water Needs Assessments
Appendix D	CEQAnet Search

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 four San Luis Unit interim renewal contracts beginning March 1, 2013. The four water service contracts proposed for interim renewal in 2013 are listed in Table 1-1. These four interim renewal contracts 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
California Department of Fish and Game	14-06-200-8033A-IR2	10	2/28/2013
City of Avenal	14-06-200-4619A-IR2	3,500	2/28/2013
City of Coalinga	14-06-200-4173A-IR2	10,000	2/28/2013
City of Huron	14-06-200-7081A-IR2	3,000	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 four interim renewal contracts.

The long-term contracts for the Cities of Avenal, Coalinga, Huron and the California Department of Fish and Game (DFG) expired December 31, 2008. In 2007, 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 each of the contractors for up to two years. Previous interim renewal contract EAs, which also tiered from the PEIS, have been prepared for these contracts and approved as follows:

- EA-09-101, *San Luis Unit Water Service Interim Renewal Contracts 2010-2013* (Reclamation 2010) which covered contract years¹ 2011 through 2013
- EA-07-056, *San Luis Unit Water Service Interim Renewal Contracts – 2008-2011* (Reclamation 2007a) 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 A contract year is from March 1 of a particular year through February 28/29 of the following year.

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 renewal contracts were 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 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 remaining 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 stipulates 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 renewal contracts within the San Luis Unit (West San Joaquin Division), including the Cities of Avenal, Coalinga, Huron and DFG, 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 four interim renewal 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 four 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 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 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 City of Tracy, San Felipe Division, and 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).

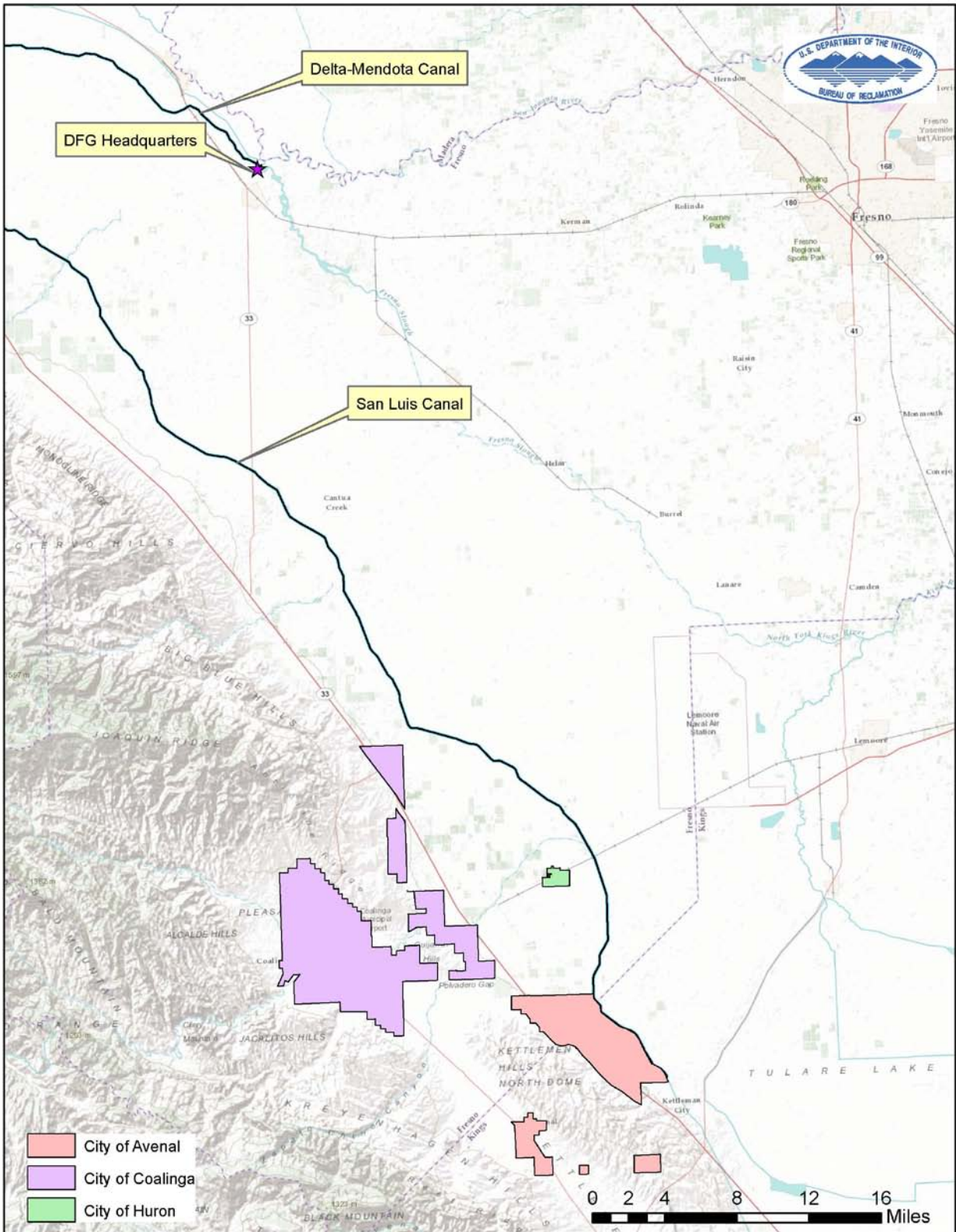


Figure 1-1 DFG Headquarters and the Service Areas of the Cities of Avenal, Coalinga, and Huron

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 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 ROD for the SLDFR-FEIS 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 preferred 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. 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 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

THIS PAGE LEFT INTENTIONALLY BLANK

Section 2 Alternatives Including the Proposed Action

The No Action Alternative and the Proposed Action include the renewal of four interim renewal contracts. The four 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	Current Contract number	Contract Quantity (acre-feet)	Purpose of Use
SAN LUIS UNIT			
California Department of Fish and Game	14-06-200-8033A-IR2	10	M&I
City of Avenal	14-06-200-4619A-IR2	3,500	M&I
City of Coalinga	14-06-200-4173A-IR2	10,000	M&I
City of Huron	14-06-200-7081A-IR2	3,000	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 summarized in EA-07-56 (Reclamation 2007a) and are incorporated by reference into EA-09-101 (Reclamation 2010) 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 four interim renewal water service contracts between the United States and the contractors listed in Table 2-1. These are the same four contracts included under the No Action Alternative. DFG and the Cities of Avenal, Coalinga, and Huron 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 four proposed interim renewal contracts can only be used within each designated contract service area (see Appendix A for service area maps). 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 2007a) and EA-09-101 (Reclamation 2010) are incorporated by reference into the Proposed Action.

The four 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 four 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.

As a requirement of previous interim renewal contract ESA consultations, the Cities of Avenal, Coalinga, and Huron have agreed to not deliver CVP water to undeveloped lands without evidence of ESA compliance (see Appendix B).

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 the Cities of Avenal, Coalinga, and Huron as well as the DFG office 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 Kings Counties. Maps of the individual contractor service areas can be found in Appendix A.

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.

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, 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 water deliveries (Reclamation 1999a), and this information has been incorporated into the modeling for the current CVP/ SWP Coordinated Operations of the Delta (Reclamation 2004b).

Contractor Water Needs Assessment

In 2007, 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 C). 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 the CVPIA stated that Reclamation cannot increase contract supply quantities. 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.

City of Avenal's Water Use

The City of Avenal's sole water supply source is CVP water from the San Luis Canal. All of Avenal's CVP water supply is used for M&I purposes. Under a formal agreement, Avenal supplies Avenal State Prison with 1,411 AF of water annually. The City also provides water service to the urbanized portions of Avenal and a limited number of connections in the northern portion of the community. CVP water is treated at Avenal's water treatment plant prior to distribution to local water users. Avenal does not pump groundwater as the poor quality of the groundwater and its high concentrations of sulfate, nitrates, and sodium preclude its use for domestic purposes.

The City of Avenal's water needs analysis completed by Reclamation in May 2006 estimated that there would be an unmet demand of 391 AF for 2025 (see Appendix C).

CVP Contracts On November 20, 1969 the City of Avenal signed a long-term contract (Contract 14-06-200-4619A) with Reclamation for up to 3,500 AF of CVP water annually (Reclamation 1969). This contract expired December 31, 2008. An interim renewal contract (Contract 14-06-200-4619A-IR1) was issued in 2007 and expired February 28, 2011 (Reclamation 2007b). A second interim renewal contract (Contract 14-06-200-4619A-IR2) was issued March 1, 2011 and remains in effect until February 28, 2013 (Reclamation 2011a).

City of Coalinga's Water Use

The City of Coalinga's sole water supply source is CVP water obtained at a single turnout from the Coalinga Canal, operated by Westlands Water District, which is fed by the San Luis Canal. The City of Coalinga supplies potable water to almost all of the residences within its service area. CVP water is treated at Coalinga's water treatment plant prior to distribution to local water users. Of the approximately one dozen farmers in and near the City of Coalinga's water service area, none receive water from the City for farming purposes, but domestic water is provided because of the very poor domestic quality of the groundwater. Coalinga does not pump groundwater as the initial long-term contract required Coalinga to abandon pumping groundwater and to depend on its CVP supply as its M&I water supply.

The City of Coalinga's water needs analysis completed by Reclamation in May 2006 estimated that there would be no unmet demand for 2025 (see Appendix C).

CVP Contracts On October 28, 1968 the City of Coalinga signed a long-term contract (Contract 14-06-200-4173A) with Reclamation for up to 10,000 AF of CVP water annually. This contract expired December 31, 2008 (Reclamation 1968). An interim renewal contract (Contract 14-06-200-4173A-IR1) was issued in 2007 and expired February 28, 2011 (Reclamation 2007c). A second interim renewal contract (Contract 14-06-200-4173A-IR2) was issued March 1, 2011 and remains in effect until February 28, 2013 (Reclamation 2011b).

City of Huron's Water Use

The City of Huron's sole water supply is CVP water received from a lateral connection to the San Luis Canal. Water is transported to Huron via Lateral 27, which is operated by Westlands

Water District. CVP water is treated at Huron's water treatment plant prior to distribution to local water users. Huron does not pump groundwater as the groundwater in the area is very deep, of poor quality, and almost non-potable.

The City of Huron's water needs analysis completed by Reclamation in May 2006 estimated that there would be no unmet demand for 2025 (see Appendix C).

CVP Contracts On September 26, 1972 the City of Huron signed a long-term contract (Contract 14-06-200-7081A) with Reclamation for a maximum of 3,000 AF of CVP water annually (Reclamation 1972). This contract expired December 31, 2008. An interim renewal contract (Contract 14-06-200-7081A-IR1) was issued in 2007 and expired February 28, 2011 (Reclamation 2007d). A second interim renewal contract (Contract 14-06-200-7081A-IR2) was issued March 1, 2011 and remains in effect until February 28, 2013 (Reclamation 2011c).

California Department of Fish and Game's Water Use

The DFG currently receives 10 AF of M&I water for domestic use at the headquarters of the Mendota Wildlife Area. The headquarters consists of five houses, a conference hall, and a workshop, located on approximately one acre of land near Mendota, California (Figure 1-1). There is an on-site water treatment facility that is used to treat the CVP water before it is used for landscaping and at the visitor's center and employee residence. The CVP supply is the DFG's only water supply used at this facility. DFG does not own or operate groundwater wells.

A water needs assessment was not developed for DFG since the quantity of water was below the threshold requirement.

CVP Contracts On January 1, 1976 the DFG signed a long-term contract (Contract 14-06-200-8033A-LTR1) with Reclamation to supply 10 AF of supply for domestic use at the Mendota Wildlife Area headquarters, near the City of Mendota (Reclamation 1976). This contract expired December 31, 2008. An interim renewal contract (Contract 14-06-200-8033A-IR1) was issued in 2007 and expired February 28, 2011 (Reclamation 2007e). 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 2011d).

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 (Reclamation 2010). For DFG and the cities of Avenal, Coalinga, and Huron, where the CVP water supply is the only water supply available, there is no opportunity to make cost comparisons and switch to alternate water supplies. The application of tiered pricing could adversely impact the DFG and the Cities due to increased costs. However, 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

Execution of interim renewal contracts for DFG and the cities of Avenal, Coalinga, and Huron 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. 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 arrangement); 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 water service contracts between the United States and DFG and the cities of Avenal, Coalinga, and Huron under either the No Action alternative or the Proposed Action. DFG and the Cities of Avenal, Coalinga, and Huron 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 only change the legal arrangements of a continuing action, they do not contribute to cumulative impacts in any demonstrable manner.

3.2 Biological Resources

3.2.1 Affected Environment

A list of Federally listed threatened and endangered species and critical habitat that occur within project area and/or may be affected as a result of the Proposed Action was obtained on June 8, 2012, by accessing the USFWS database (document number 120608073833): http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm. The list is summarized below and includes all species for the entirety of Fresno and Kings Counties. The Federally endangered blunt-nosed leopard lizard (*Gambelia sila*), California jewelflower (*Caulanthus californicus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and San Joaquin woolly-threads (*Monolopia congdonii*) are addressed in this EA as they are the only species with the potential to occur within the Proposed Action area.

Reclamation has determined that the Proposed Action either lacks habitat or is outside of the range of the following species; therefore, these species are not considered further in this document.

- California condor (*Gymnogyps californianus*), Federally Endangered
- California red-legged frog (*Rana draytonii*), Federally Threatened
- California tiger salamander (*Ambystoma californiense*), Federally Threatened
- Central Valley steelhead (*Oncorhynchus mykiss*), Federally Threatened
- delta smelt (*Hypomesus transpacificus*), Federally Threatened
- fisher (*Martes pennanti*), Federal Candidate for listing
- Fresno kangaroo rat (*Dipodomys nitratoides exilis*), Federally Endangered

- giant garter snake (*Thamnophis gigas*), Federally Threatened
- giant kangaroo rat (*Dipodomys ingens*), Federally Endangered
- hairy Orcutt grass (*Orcuttia pilosa*), Federally Endangered
- Hartweg's golden sunburst (*Pseudobahia bahiifolia*), Federally Endangered
- Keck's checker-mallow (*Sidalcea keckii*), Federally Endangered
- Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), Federally Threatened
- least Bell's vireo (*Vireo bellii pusillus*), Federally Endangered
- Mariposa pussy-paws (*Calyptridium pulchellum*), Federally Threatened
- mountain yellow-legged frog (*Rana muscosa*), Federal Candidate for listing
- palmate-bracted bird's-beak (*Cordylanthus palmatus*), Federally Endangered
- Paiute cutthroat trout (*Oncorhynchus clarki seleniris*), Federally Threatened
- San Benito evening-primrose (*Camissonia benitensis*), Federally Threatened
- San Joaquin adobe sunburst (*Pseudobahia peirsonii*), Federally Threatened
- San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), Federally Threatened
- Sierra Nevada bighorn sheep (*Ovis canadensis californiana*), Federally Endangered
- succulent owl's-clover (*Castilleja campestris* ssp. *succulenta*), Federally Threatened
- Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), Federally Endangered
- valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Federally Threatened
- vernal pool fairy shrimp (*Branchinecta lynchi*), Federally Threatened
- vernal pool tadpole shrimp (*Lepidurus packardi*), Federally Endangered
- Yosemite toad (*Bufo canorus*), Federal Candidate for listing

The Proposed Action area does not fall within any proposed or designated critical habitat.

Contactor's Service Areas

The service area for CVP water at the Mendota Wildlife Area does not contain any listed species habitat, as the water is only used at the headquarters. The City of Huron's service area for CVP water consists of urban and agricultural lands and thus this area provides habitat for the San Joaquin kit fox, which can use agricultural lands to some degree (Warrick et al. 2007); however, the City of Huron is not known to have an urban kit fox population. The Cities of Avenal and Coalinga have native lands that may provide habitat for the blunt-nosed leopard lizard, California jewelflower, San Joaquin kit fox, and San Joaquin woolly-threads; there are a number of records of these species in the area (CNDDDB 2012). There is an urban population of San Joaquin kit foxes in Coalinga (Bjurlin et al. 2005).

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. 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.

The National Marine Fisheries Service (NMFS) issued its Biological Opinion analyzing the effects of the coordinated long-term operation of the CVP and SWP on listed salmonids, green sturgeon and Southern resident killer whale in June 2009. 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 distinct population segment (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 critical habitat for Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead and the Southern DPS of North American green sturgeon. 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.

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 provide a new BA to the USFWS and NMFS and request consultation.

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 on February 17, 2005 (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, vernal pool fairy shrimp, valley elderberry longhorn beetle, blunt-nosed leopard lizard, vernal pool tadpole shrimp, San Joaquin wooly-threads, California red-legged frog, giant garter snake, 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

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. Therefore, the impacts to Federally listed species would not be expected to differ from those described below under the Proposed Action and cumulative effects.

Proposed Action

Continued delivery of CVP water under the M&I contracts (Mendota Wildlife Management Area, City of Avenal, City of Coalinga, City of Huron) sustains the residential, commercial, and industrial activities that occur within the contract service areas of the M&I contractors. Urban,

industrial, or municipal development proposed within areas of natural habitat remaining in the water service area of any of these contractors could destroy, modify, fragment, or degrade habitat of San Joaquin kit fox, blunt-nosed leopard lizard, California jewelflower, or San Joaquin woolly-threads. All of these cities are small and are not currently experiencing, nor are they anticipated to experience, significant growth over the next two years based on the current economic situation in California. Based on this fact, as well as the attached commitment letters from the three Cities, Reclamation does not anticipate a change in the type and extent of development during the 24-month duration of the interim renewal contracts. Therefore, the effects of the Proposed Action on Federally listed species are expected to be very minor. Reclamation will submit a request to the USFWS for an informal consultation and concurrence with a not likely to adversely affect determination for the Proposed Action.

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.

Within the Cities of Avenal, Coalinga, and Huron, a CEQAnet search of actions between March 2010 and June 2012 (see Appendix D) revealed that only a few development projects were approved during that time (one in 2010 and three in 2012), and that the approved projects appeared to have little or no impact on natural lands. However, two photovoltaic solar projects were approved, one for Huron and one for Avenal. This is a relatively new activity in the area that has the potential to adversely affect habitat of the species addressed in this EA. These two projects were located on agricultural lands, which would mean that in this case, only San Joaquin kit fox habitat would be impacted, and the habitat therefore is not of high value. As this activity is generally independent of a water supply (except perhaps with trucked water being used to periodically wash panels), it would constitute a cumulative impact, rather than an indirect impact. This impact would be relatively minor due to the low suitability of the habitat.

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 in Section 2, 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

Demographic information for the three cities as well as Fresno² and Kings County are summarized in Table 3-1. All three cities unemployment rates were greater than the County and State unemployment rates. In June 2012, unemployment rates for Fresno and Kings Counties were five percent greater than the State's; however, the City of Avenal and the City of Huron were more than double the State's unemployment rates (Table 3-1). The City of Coalinga was also six percent higher than the State for the same time period (Table 3-1).

Table 3-1 Demographics

Demographics	City of Avenal	Kings County	City of Coalinga	City of Huron	Fresno County	California
Total Population (2011 estimate)	15,560	153,765	13,543	6,838	942,904	37,691,912
White, non-Hispanic	15.4%	35.0%	37.7%	1.5%	32.4%	40.1%
Black or African American	10.5%	7.9%	4.1%	1.0%	5.9%	6.2%
American Indian	1.2%	2.9%	1.3%	1.1%	3.0%	1.0%
Asian	0.7%	4.2%	3.0%	0.6%	10.3%	13.0%
Native Hawaiian/Pacific Islander	*	0.3%	0.3%	0.1%	0.3%	0.4%
Hispanic	71.8%	51.4%	53.5%	96.6%	50.9%	37.6%
June 2012 Unemployment rate	23.8%	15.5%	16.5%	32.9%	15.3%	10.7%

Source: U.S. Census Bureau 2012; California Employment Development Department 2012
 *Value greater than zero but less than half unit of measure shown.

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 DFG and the Cities of Avenal, Coalinga, and Huron when tiered pricing is required. M&I users would be impacted by changes in water supply costs placing increased pressure on low income households. However, 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.

² DFG's contract is specifically for their headquarters and would not impact socioeconomic resources or be impacted by changes in socioeconomic resources within Fresno County.

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

Table 3-2 provides population percentages for the minority and poverty populations of the Cities of Avenal, Coalinga, and Huron. As shown in Table 3-2, the City of Avenal’s percent minority population was 84.6 percent in 2010 and 37.7 percent of the population was living below the poverty level between 2006 and 2010. The City of Coalinga’s percent minority population was 62.3 percent in 2010 and 23.3 percent of the population was living below the poverty level between 2006 and 2010. The City of Huron had the greatest percent minority population of the cities at 98.5 percent with the greatest amount of their population, 54.5 percent, living below the poverty level between 2006 and 2010 (Table 3-2).

Table 3-2 Project Area Minority and Poverty Profile

Place	2010 Total Population	Percent of Total Population Identified as Minority in 2010	Percent of Total Population Below Poverty Level (2006-2010)
City of Avenal	15,505	84.6	37.7
City of Coalinga	13,380	62.3	23.3
City of Huron	6,754	98.5	54.5

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 DFG and the Cities of Avenal, Coalinga, and Huron when tiered pricing is required. M&I users would be impacted by changes in water supply costs placing increased pressure on low income, minority households. Therefore, the No Action alternative could adversely impact minority and disadvantaged populations when tiered pricing is required. 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 DFG and the Cities of Avenal, Coalinga and Huron under either alternative would not provide for additional water supplies that could act as an incentive for conversion of native habitat. Use of contract water for M&I under the proposed interim renewal contracts would not change from the purpose of use specified in their existing contracts. 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 impacts 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. 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. There would be no impacts to Indian sacred sites as a result of the Proposed Action.

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 DFG and the Cities of Avenal, Coalinga, and Huron 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 DFG or the Cities of Avenal, Coalinga, and Huron. 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.

THIS PAGE LEFT INTENTIONALLY BLANK

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.

Reclamation has determined that the Proposed Action would insignificantly affect the blunt-nosed leopard lizard, California jewelflower, San Joaquin kit fox, and San Joaquin woolly-threads. A request for informal consultation will be submitted to the USFWS for concurrence with Reclamation's not likely to adversely affect determination. This EA will not be finalized until their written concurrence is received.

Section 5 Preparers and Reviewers

Rain Healer, Natural Resources Specialist, SCCAO

Shauna McDonald, Wildlife Biologist, SCCAO

William Soule, Archaeologist, MP-153

Patricia Rivera, ITA, MP-400

Erma Leal, Repayment Specialist, SCCAO-445 – reviewer

Valerie Curley, Supervisory Repayment Specialist, SCCAO-440 – reviewer

Chuck Siek, Supervisory Natural Resources Specialist, SCCAO – reviewer

Section 6 Acronyms and Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
BDCP	Bay Delta Conservation Plan
CARB	California Air Resources Board
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin River Delta
DFG	California Department of Fish and Game
DPS	Distinct Population Segment
DWR	California Department of Water Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Feasibility Report	San Luis Drainage Feature Re-Evaluation Feasibility Report
GHG	Greenhouse gases
ITA	Indian Trust Asset
MBTA	Migratory Bird Treaty Act
M&I	Municipal and Irrigation
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
O&M	Operation and maintenance
PEIS	Programmatic Environmental Impact Statement
Reclamation	Bureau of Reclamation
ROD	Record of Decision
RPA	Reasonable and Prudent Alternative
SLDFR-FEIS	San Luis Drainage Feature Re-Evaluation Final EIS
SWP	State Water Project
USFWS	U.S. Fish and Wildlife Service
WRDP	Westside Regional Drainage Plan

Section 7 References

Bjurlin, C.D., B.L. Cypher., C.M. Wingert, and C.L. Van Horn Job. 2005. Urban roads and the endangered San Joaquin kit fox. California State University-Stanislaus, Endangered Species Recovery Program, Fresno, California.

Bureau of Reclamation (Reclamation). 1968. Contract Between the United States and the City of Coalinga Providing for Water Service. Contract 14-06-200-4173A. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 1969. Contract Between the United States and the Avenal Community Services District Providing for Water Service. Contract 14-06-200-4619. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 1972. Contract Between the United States and the City of Huron Providing for Water Service and Repayment of a Portion of the Cost of Distribution System Construction and Operation and Maintenance. Contract 14-06-200-7081. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 1976. Contract Between the United States and the California Department of Fish and Game Providing for Water Service. Contract 14-06-200-7773. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 1999. Central Valley Project Improvement Act, Final Programmatic Environmental Impact Statement and Record of Decision. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2000a. Final Environmental Assessment for the Friant Division Long-term Contract Renewal. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2000b. Draft Biological Opinion on Operation of the CVP and Implementation of the CVPIA. Mid-Pacific Region South-Central California Area Office. Fresno, California. Available at <http://www.usbr.gov/mp/cvpia/>.

Bureau of Reclamation (Reclamation). 2001b. Final Environmental Assessment for the Friant Division Long-term Contract Renewal. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2002. Central Valley Project Improvement Act: 10 Years of Progress. Mid-Pacific Region Regional Office. Sacramento, California.

Bureau of Reclamation (Reclamation). 2004a. Sacramento River Settlement Contractors Final Environmental Impact Statement. Mid-Pacific Region Northern California Area Office. Shasta

Lake, California and Mid-Pacific Region South Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2004b. Long-Term Central Valley Project Operations Criteria and Plan, CVP-OCAP. Sacramento, California. Website: http://www.usbr.gov/mp/cvo/ocap/OCAP_6_30_04.pdf.

Bureau of Reclamation (Reclamation). 2005a. Revised Environmental Assessment for Renewal of the Long-term Contract for the Feather Water District, Central Valley Project, California. Mid-Pacific Region Northern California Area Office. Shasta Lake, California.

Bureau of Reclamation (Reclamation). 2005b. Final Environmental Assessment for the Long term Contract Renewal Shasta Division and Trinity River Divisions. Mid-Pacific Region Northern California Area Office. Shasta Lake, California.

Bureau of Reclamation (Reclamation). 2005c. Final Environmental Assessment for Long-term Renewal of Water Service Contracts in the Black Butte Unit, Corning Canal Unit, and Tehama-Colusa Canal Unit of the Sacramento River Division, Central Valley Project. Mid-Pacific Region Northern California Area Office. Shasta Lake, California.

Bureau of Reclamation (Reclamation). 2005d. Final Environmental Assessment for the Delta-Mendota Canal Unit Environmental Assessment for Long-term Contract Renewal. Mid-Pacific Region South Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2005e. Final Environmental Assessment for U.S. Department of Veterans affairs, San Joaquin Valley National Cemetery, Central Valley Project, Long-term Water Service Contract Renewal. Mid-Pacific Region South Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2005f. Final Environmental Assessment for Long-term Renewal Contract, Contra Costa Water District, Contra Costa Unit, Central Valley Project. Mid-Pacific Region South Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2005g. Long-term Central Valley Project Water Service Contract Renewals, American River Division Environmental Impact Statement. Mid-Pacific Region Central California Area Office. Folsom, California.

Bureau of Reclamation (Reclamation). 2005h. San Luis Drainage Feature Re-evaluation Draft Environmental Impact Statement. Mid-Pacific Region South-Central California Area Office. Fresno, California. Website: <http://www.usbr.gov/mp/sccao/sld/docs/index.html>.

Bureau of Reclamation (Reclamation). 2007a. Final Environmental Assessment for the San Luis Unit Water Service Interim Renewal Contracts (EA-07-56). Central Valley Project, California. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2007b. Interim Renewal Contract Between the United States and the City of Avenal Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-4619A-IR1. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2007c. Interim Renewal Contract Between the United States and the City of Coalinga Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-4173A-IR1. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2007d. Interim Renewal Contract Between the United States and the City of Huron Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-7081A-IR1. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2007e. Interim Renewal Contract Between the United States and the State of California Providing for Project Water Service to the Mendota Waterfowl Management Area Headquarters from San Luis Unit and Delta Division. Contract No. 14-06-200-8033A-IR1. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2009. Grassland Bypass Project, 2010-2019. Record of Decision and Final Environmental Impact Statement/Environmental Impact Report. August. Prepared by Entrix for Mid-Pacific Region, South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2010. Final Environmental Assessment for the San Luis Unit Water Service Interim Renewal Contracts 2010-2013 (EA-09-101). Central Valley Project, California. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2011a. Interim Renewal Contract Between the United States and the City of Avenal Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-4619A-IR2. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2011b. Interim Renewal Contract Between the United States and the City of Coalinga Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-4173A-IR2. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2011c. Interim Renewal Contract Between the United States and the City of Huron Providing for Project Water Service San Luis Unit and Delta Division. Contract No. 14-06-200-7081A-IR2. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2011d. Interim Renewal Contract Between the United States and the State of California Providing for Project Water Service to the Mendota Waterfowl

Management Area Headquarters from San Luis Unit and Delta Division. Contract No. 14-06-200-8033A-IR2. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2012. Final Environmental Assessment for the San Luis Drainage Feature Reevaluation Demonstration Treatment Facility at Panoche Drainage District (EA-10-030). Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=8295.

California Employment Development Department. 2012. Labor Force and Unemployment Rates for Cities and Census Designated Places. Website: <http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133>. Accessed: August 2012.

Environmental Protection Agency (EPA). 2009. Mandatory Reporting of Greenhouse Gases, Final Rule (40 CFR Parts 86, 87, 89 et al.) *Federal Register*. 74(209): 56260-56519.

Environmental Protection Agency (EPA). 2011. Climate Change – Regulatory Initiatives. Website: <http://www.epa.gov/climatechange/initiatives/index.html>.

California Natural Diversity Database (CNDDB). 2012. RareFind 3 electronic database. Government version. Updated April 29, 2012.

U.S. Census Bureau. 2012. State and County QuickFacts. Website: <http://quickfacts.census.gov/qfd/states/06000.html>. Accessed: August 2012.

U.S. Fish and Wildlife Service (USFWS). 2005. Formal Endangered Species Consultation on the Operations and Maintenance Program Occurring on Bureau of Reclamation Lands within the South-Central California Area Office (1-1-04-0368). Sacramento Fish and Wildlife Office.

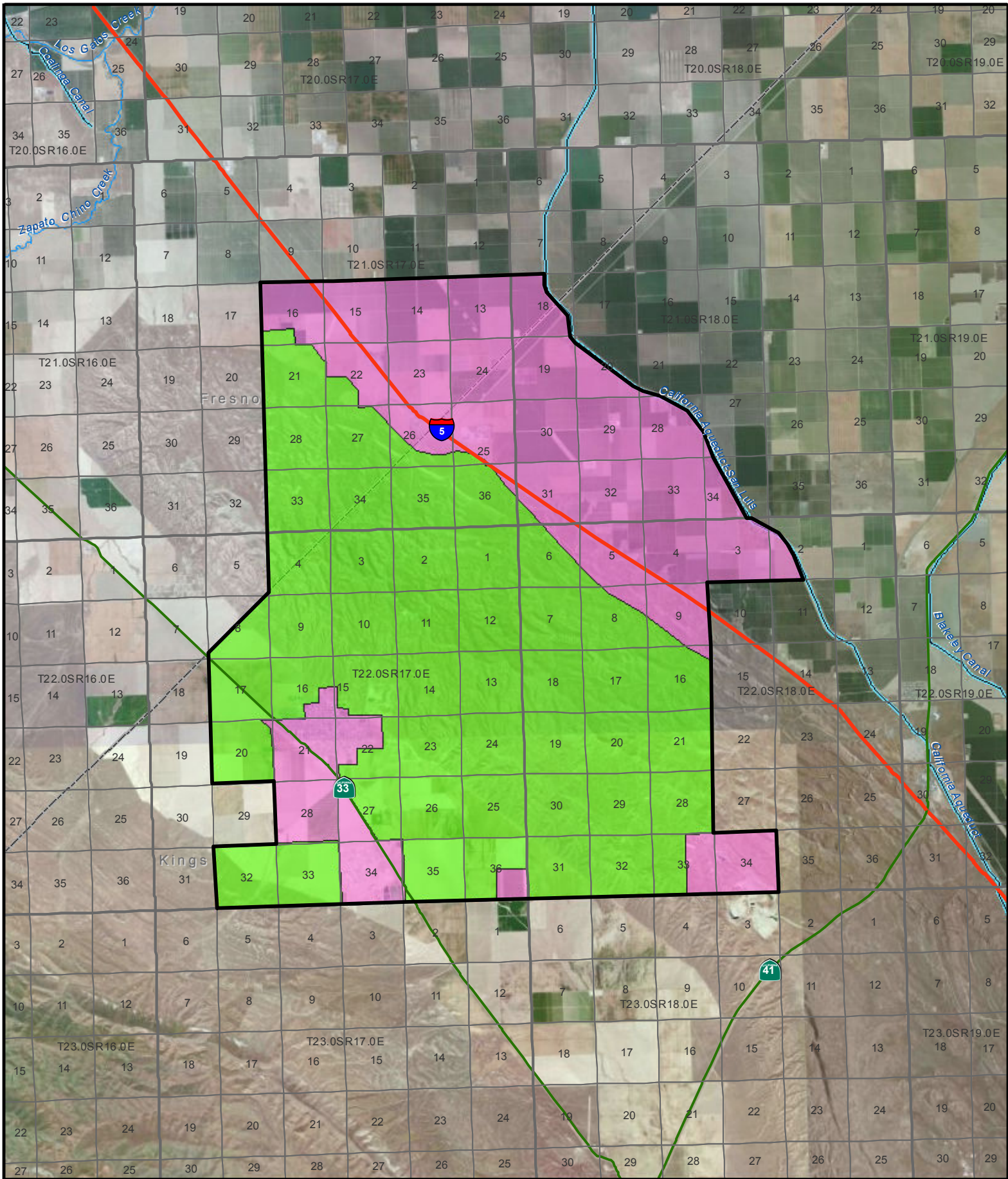
Warrick, G.D., H.O. Clark, Jr., P.A. Kelly, D.F. Williams, and B.L. Cypher . 2007. Use of agricultural lands by San Joaquin kit foxes. *Western North American Naturalist* 67:270- 277.




DRAFT ENVIRONMENTAL ASSESSMENT (12-046)

*CENTRAL VALLEY PROJECT INTERIM RENEWAL CONTRACTS FOR THE CITIES
OF AVENAL, COALINGA, HURON AND THE CALIFORNIA DEPARTMENT OF FISH
AND GAME 2013-2015*

Appendix A
Contractor's Service Area

October 2012

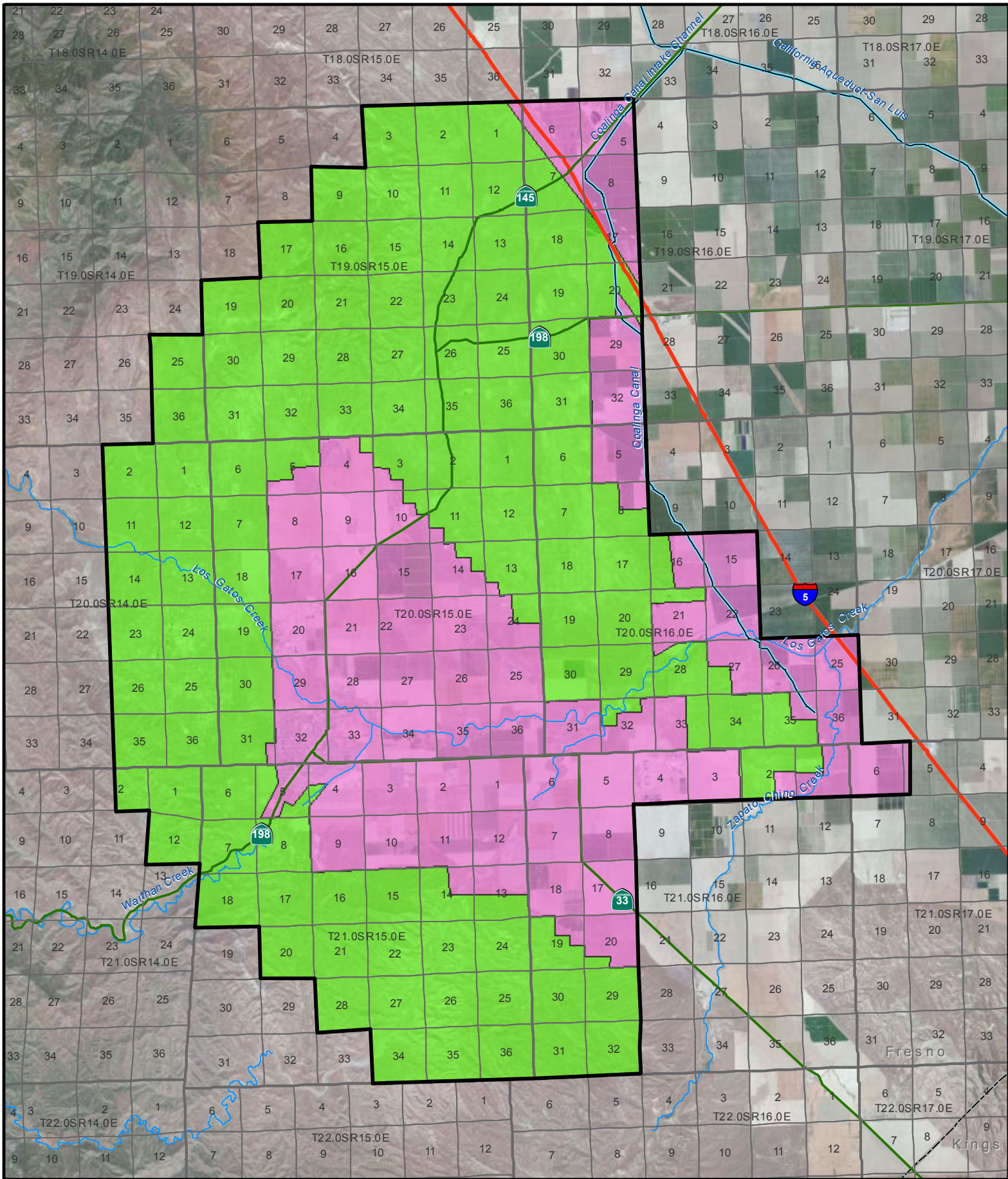





-  City Boundary
-  Lands Eligible to Receive CVP Water
-  Lands Ineligible to Receive CVP Water

City of Avenal

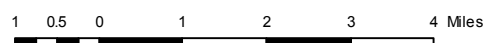


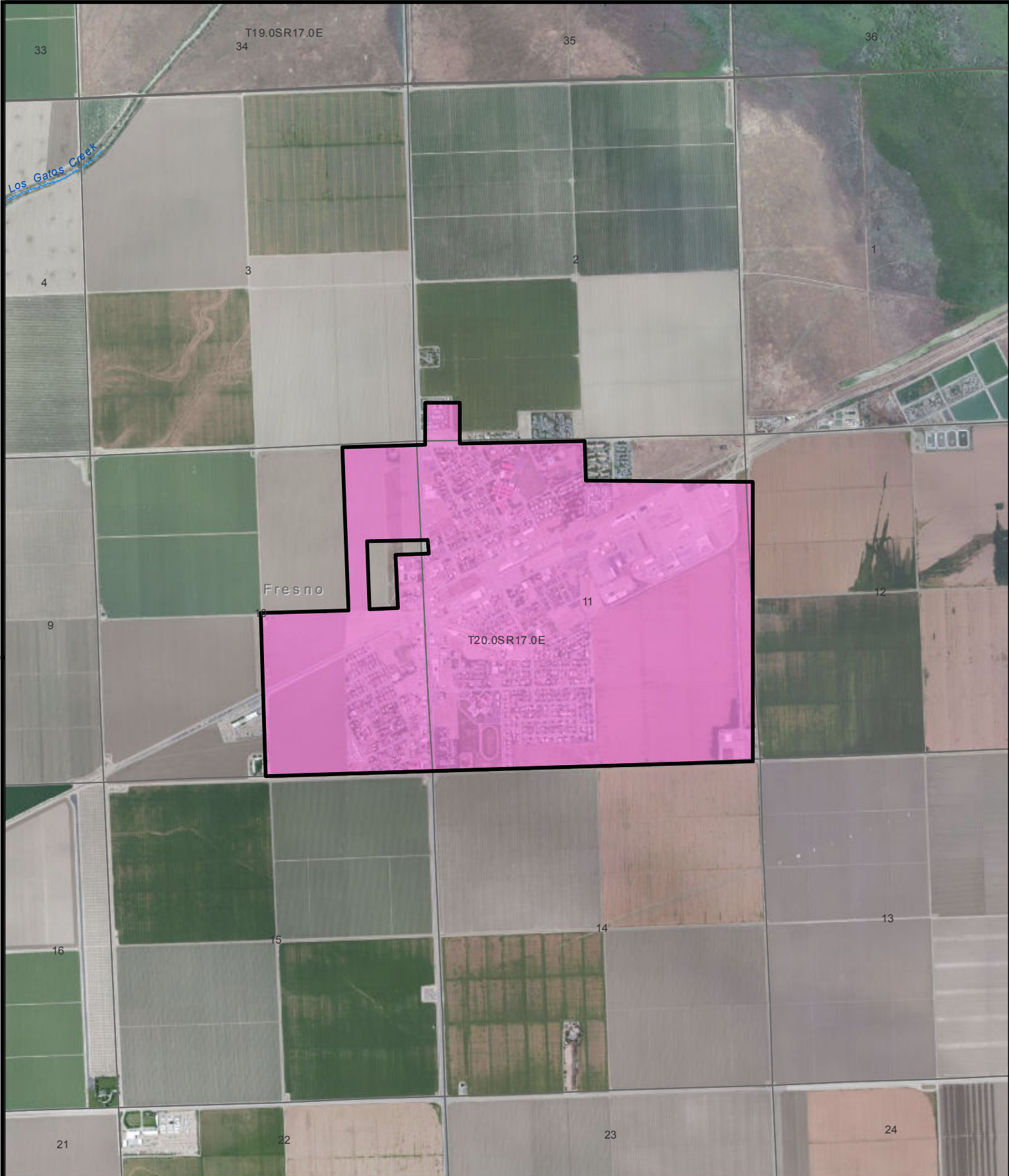
1 0.5 0 1 2 3 Miles





-  City Boundary
-  Lands Eligible to Receive CVP Water
-  Lands Ineligible to Receive CVP Water

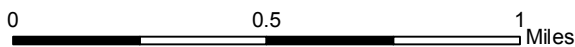
City of Coalinga





-  City Boundary
-  Lands Eligible to Receive CVP Water

City of Huron



DRAFT ENVIRONMENTAL ASSESSMENT (12-046)

*CENTRAL VALLEY PROJECT INTERIM RENEWAL CONTRACTS FOR THE CITIES
OF AVENAL, COALINGA, HURON AND THE CALIFORNIA DEPARTMENT OF FISH
AND GAME 2013-2015*

Appendix B
Letters from the Cities of Avenal, Coalinga, and Huron

October 2012



155 W. Durian Avenue
Coalinga, CA 93210



Phone (559) 935-1533
FAX (559) 935-5912
www.coalingo.com

July 31, 2012

Erma Leal
Repayment Specialist
USBR – SCCAO
1243 N. Street
Fresno, CA 93721-1813

Dear Ms. Leal:

The Interim Renewal Contract No. 14-06-200-4173A-IR2 for the City of Coalinga expires on February 28, 2013. Subsection (a) of Article 2 of the Existing Interim Renewal Contract states (in part): "..., this Interim Renewal Contract will be renewed, upon request of the Contractor, for successive interim periods each of which shall be no more than two (2) years in length".

Please accept this letter as our official request to renew our Interim Renewal Contract, No. 14-06-200-4173A-IR2, for a period of two years beginning March 1, 2013 through February 28, 2015.

Please also accept this letter as our assurance that the City of Coalinga will not deliver Central Valley Project Water to development or converted habitat without confirmation from Reclamation or other evidence that compliance with the Endangered Species Act has occurred with respect to the subject land either through Section 7 or Section 10 of the Act, by the City of Coalinga.

If any additional information is requested, please do not hesitate to contact me by phone or e-mail.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Darrel L. Pyle". The signature is stylized and cursive.

Darrel L. Pyle
City Manager
City of Coalinga



City of Avenal

919 Skyline Blvd.
Avenal, CA 93204
Phone (559) 386-5766
Fax (559) 386-0629

August 1, 2012

Ms. Erma Leal, Repayment Specialist
USBR – SCCAO
1243 "N" Street
Fresno, CA 93721

Dear Ms. Leal:

As per your e-mail received on July 31, 2012 (dated July 16, 2012), the City of Avenal does hereby desire to renew the Interim Renewal Water Contract Number 14-06-200-4619A-IR2 for a period of two (2) years beginning March 1, 2013 – February 28, 2015.

As per your request, it is the intention of the City of Avenal to comply with the Endangered Species Act. Further, the City will not deliver Central Valley Project Water to development (as defined and discussed during our conversation today) or converted habitat without confirmation from the Bureau of Reclamation.

Thank you.

Sincerely,

CITY OF AVENAL

A handwritten signature in cursive script that reads "Melissa G. Whitten".

Melissa G. Whitten
City Manager

mgw/

cc: Avenal City Council
Michael Farley, City Attorney
Rick Cunningham, Utilities Supervisor
Jerry Watson, Public Works Director
Steve Sopp, Community Development Director
Esther Strong, Administrative Analyst



RECEIVED

2012 JUL 23 PM 1 23

BUREAU OF RECLAMATION
SCCAO, FRESNO, CA

City of Huron/ P.O. Box 339/ 36311 Lassen Ave., Huron, CA. 93234-0339 •PH (559) 945-3020• FAX (559) 945-2609

July 20, 2012

Erma Leal
USBR-SCCAO
1243 N. Street
Fresno CA 93721-1813

Dear Ms. Leal,

The City of Huron would like to renew interim renewal contract 14-06-200-7081A-IR2 for a period of two years beginning March 1, 2013 through February 28, 2015.

City of Huron will attest that it will not deliver Central Valley Project water to development or converted habitat without conformation from Reclamation or other evidence that compliance with the Endangered Species Act has occurred with respect to the subject land either through Section 7 or Section 10 of the Act, by the City of Huron.

Thanks,

Jack Castro
Finance Director
City of Huron
36311 S. Lassen Ave.
P.O. Box 339
Huron, CA 93234
Tel: (559) 945-2241

OFFICIAL FILE COPY		
CODE	ACTION	INIT & DATE
	HL	
DATE ACTION TAKEN		
COPIES TO		
Classification		
Project		
Control No.		
Folder I.D.		
Date Input & Initials		

Handwritten in blue ink:
 Classification: WTR-foo
 Project: CVP-Huron City of
 Control No: 12046911
 Folder I.D.: 1195336
 Date Input & Initials: JUL 23 2012



City of Avenal

919 Skyline Blvd.
Avenal, CA 93204
Phone (559) 386-5766
Fax (559) 386-0629

August 1, 2012

Ms. Erma Leal, Repayment Specialist
USBR – SCCAO
1243 "N" Street
Fresno, CA 93721

Dear Ms. Leal:

As per your e-mail received on July 31, 2012 (dated July 16, 2012), the City of Avenal does hereby desire to renew the Interim Renewal Water Contract Number 14-06-200-4619A-IR2 for a period of two (2) years beginning March 1, 2013 – February 28, 2015.

As per your request, it is the intention of the City of Avenal to comply with the Endangered Species Act. Further, the City will not deliver Central Valley Project Water to development (as defined and discussed during our conversation today) or converted habitat without confirmation from the Bureau of Reclamation.

Thank you.

Sincerely,

CITY OF AVENAL

Melissa G. Whitten
City Manager

mgw/

cc: Avenal City Council
Michael Farley, City Attorney
Rick Cunningham, Utilities Supervisor
Jerry Watson, Public Works Director
Steve Sopp, Community Development Director
Esther Strong, Administrative Analyst



155 W. Durian Avenue
Coalinga, CA 93210



Phone (559) 935-1533
FAX (559) 935-5912
www.coalingo.com

July 31, 2012

Erma Leal
Repayment Specialist
USBR – SCCAO
1243 N. Street
Fresno, CA 93721-1813

Dear Ms. Leal:

The Interim Renewal Contract No. 14-06-200-4173A-IR2 for the City of Coalinga expires on February 28, 2013. Subsection (a) of Article 2 of the Existing Interim Renewal Contract states (in part): "... this Interim Renewal Contract will be renewed, upon request of the Contractor, for successive interim periods each of which shall be no more than two (2) years in length".

Please accept this letter as our official request to renew our Interim Renewal Contract, No. 14-06-200-4173A-IR2, for a period of two years beginning March 1, 2013 through February 28, 2015.

Please also accept this letter as our assurance that the City of Coalinga will not deliver Central Valley Project Water to development or converted habitat without confirmation from Reclamation or other evidence that compliance with the Endangered Species Act has occurred with respect to the subject land either through Section 7 or Section 10 of the Act, by the City of Coalinga.

If any additional information is requested, please do not hesitate to contact me by phone or e-mail.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Darrel L. Pyle". The signature is stylized and cursive.

Darrel L. Pyle
City Manager
City of Coalinga



RECEIVED

2012 JUL 23 PM 1 23

BUREAU OF RECLAMATION
SCCAO, FRESNO, CA

City of Huron/ P.O. Box 339/ 36311 Lassen Ave., Huron, CA. 93234-0339 •PH (559) 945-3020• FAX (559) 945-2609

July 20, 2012

Erma Leal
USBR-SCCAO
1243 N. Street
Fresno CA 93721-1813

Dear Ms. Leal,

The City of Huron would like to renew interim renewal contract 14-06-200-7081A-IR2 for a period of two years beginning March 1, 2013 through February 28, 2015.

City of Huron will attest that it will not deliver Central Valley Project water to development or converted habitat without conformation from Reclamation or other evidence that compliance with the Endangered Species Act has occurred with respect to the subject land either through Section 7 or Section 10 of the Act, by the City of Huron.

Thanks,

Jack Castro
Finance Director
City of Huron
36311 S. Lassen Ave.
P.O. Box 339
Huron, CA 93234
Tel: (559) 945-2241

OFFICIAL FILE COPY		
CODE	ACTION	INIT & DATE
	HL	
DATE ACTION TAKEN		
COPIES TO		
Classification		
Project		
Control No.		
Folder I.D.		
Date Input & Initials		

WTR-foo
CVP-Huron City of
12046911
1195336
JUL 23 2012

DRAFT ENVIRONMENTAL ASSESSMENT (12-046)

CENTRAL VALLEY PROJECT INTERIM RENEWAL CONTRACTS FOR THE CITIES OF AVENAL, COALINGA, HURON AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME 2013-2015

Appendix C
Water Needs Assessments for the Cities of Avenal, Coalinga, and Huron

October 2012

Water Needs Assessment

AVENAL, CITY OF

Contractor ID: 203181

West San Joaquin

Date: 5/25/2006 9:14:45

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

Timeframe	Surface Water Supply					Groundwater Supply					Total Supply	
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Tsfr / Rtm / Recycle In	Tsfr / Out	District	Private	Safe Yield		Recharge
1997	3,500	2,432	0	0	0	0	0	0	0	0	0	2,432
2025	3,500	3,500	0	0	0	0	0	0	0	0	0	3,500

Maximum Productive Acres: 11,099

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1997	15	16	17	18	19	20	21	22	23	24	25	26
2025	15	16	17	18	19	20	21	22	23	24	25	26

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Total Demand	Unmet Demand (acre-feet)	
	Population	Per Capita Demand (gpcc)	Total Demand (acre-feet)	Comm / Inslit. (acre-feet)	Industrial (acre-feet)	Comm / Inslit. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)				
1997	28	29	30	31	32	33	34	35	36	37	38	39
2025	28	29	30	31	32	33	34	35	36	37	38	39

* Represents Maximum Contract Amount

Note: Unaccounted beneficial use is added to distribution system loss; the total is shown under Distribution system loss.

Water Needs Assessment

AVENAL, CITY OF

Contractor ID: 203181

West San Joaquin

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

Date: 10/14/2004 3:30:26

Timeframe	Surface Water Supply				Groundwater Supply				Total Supply			
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trisfr / Recycle In	Trisfr / Out	District		Private	Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1997	3,500 *	2,432	0	0	0	0	0	0	0	0	0	2,432
2025	3,500 *	3,500	0	0	0	0	0	0	0	0	0	3,500

Maximum Productive Acres: 11,099

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1997												
2025												

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Total Demand (acre-feet)	Per Capita Demand (gpcd)	Unmet Demand (acre-feet)
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Industrial (acre-feet)	Comm / Instit. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)	Total Demand (acre-feet)				
1	28	29	30	31	32	33	34	35	36	37	38	39
1997	6,495	106.1	772	33	1,300	1,333	328	311.0	334.4	2,433	2,433	1
2025	12,000	97.2	1,306	57	2,143	2,200	385	274.0	289.5	3,891	3,891	391

* Represents Maximum Contract Amount

Notes: Unaccounted beneficial use is added to distribution system loss; the total is shown under Distribution system loss.

Water Needs Assessment

AVENAL, CITY OF

Contractor ID: 203181

West San Joaquin

Date: 6/2/2003 8:27:13 A

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

Timeframe	Surface Water Supply				Groundwater Supply				Total Supply			
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsfir / Rtn / Recycle In	Trsfir / Out	District		Private	Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1997representative	3,500 *	2,432	0	0	0	0	0	0	0	0	0	2,432
2025	3,500 *	3,500	0	0	0	0	0	0	0	0	0	3,500

Maximum Productive Acres: 11,099

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated		USBR Net		Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
					Net Crop Water Req (acre-feet)	Water Req (acre-feet)	Crop Water Req (acre-feet)	Water Req (acre-feet)						
1	15	16	17	18	19	20	21	22	23	24	25	26		

1997

2025

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)	Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Industrial (acre-feet)	Comm / Insit. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)							
1	28	29	30	31	32	33	34	35	36	37	38	39		
1997	6,495	106.1	772	33	1,300	1,333	328	311.0	334.4	2,433	2,433	1		
2025	12,000	97.2	1,306	57	2,143	2,200	385	274.0	289.5	3,891	3,891	391		

* Represents Maximum Contract Amount

Notes: Unaccounted beneficial use is added to distribution system loss; the total is shown under Distribution system loss.

Timeframe	Surface Water Supply						Groundwater Supply				Total Supply	
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsfir/Return /Recycle In Out	Trsfir/Out	District	Private	Safe Yield		Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1995	3,500 *	2,432	0	0	0	0	0	0	0	0	0	2,432
1997 representative	3,500 *	2,432	0	0	0	0	0	0	0	0	0	2,432
2025	3,500 *	3,500	0	0	0	0	0	0	0	0	0	3,500

Contractor's Agricultural Water Demands Maximum Productive Acres= 0

Timeframe	District Irrig. Requirement (acre-foot)	District Irrig. Efficiency (%)	Reference Effective Precip (acre-foot)	Reference Effective Precip (acre-ft)	Calculated Net Water Req (acre-foot)	USBR Net Crop Water Req (acre-foot)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-foot)	Total Ag Demand (acre-foot)
1	15	16	17	18	19	20	21	22	23	24	25	26
1995												
1997												
2025												

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss		Total Demand (acre-foot)	
	Population	Per Capita Demand (gpcd)	Total Demand (acre-foot)	Industrial (acre-foot)	Comm/Instit (acre-foot)	Total Demand (acre-foot)	Unacc/Distr (acre-foot)	Loss	Unmet Demand (acre-foot)			
1	28	29	30	31	32	33	34				38	39
1995	6,495	106.1	772	33	1,300	1,333	328	311.0	334.4	2,433	2,433	1
1997	6,495	106.1	772	33	1,300	1,333	328	311.0	334.4	2,433	2,433	1
2025	12,000	97.2	1,306	57	2,143	2,200	385	274.0	289.5	3,891	3,891	391

Notes: Unaccounted beneficial use is added to distribution system loss; the total is shown under Distribution system loss.
 * Represents Maximum Contract Amount
 Water supply and demand information is for a normal hydrologic year. Crop Water Requirement includes leaching req. and cultural water but not irrigation efficiency.
 Information from contractor's water management plan or data submitted for historical years. USBR reference information for future years
 Quality control check; information is either calculated by USBR staff, or from reference.

Water Needs Assessment

COALINGA, CITY OF

Contractor ID: 203182

West San Joaquin

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

Date: 5/25/2006 9:14:45

Timeframe	Surface Water Supply						Groundwater Supply				Total Supply	
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsr / Rtm / Recycle In	Trsr / Out	District	Private	Safe Yield		Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	10,000	4,321	0	0	0	0	0	0	0	0	0	4,321
1998	10,000	3,995	0	0	0	0	0	0	0	0	0	3,995
2025	10,000	10,000	0	0	0	0	0	0	0	0	0	10,000

Maximum Productive Acres: 34,538

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1996												
1998												
2025												

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)	Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)	
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Industrial (acre-feet)	Comm / Instit. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)	34							35
1	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
1996	14,990	257.3	4,321	0	0	0	0	311.0	257.3	4,321	4,321	0	4,321	0	
1998	15,400	108.7	1,875	600	1,295	1,895	225	311.0	231.6	3,995	3,995	0	3,995	0	
2025	27,000	279.6	8,455	0	0	0	563	274.0	298.2	9,018	9,018	-982	9,018	-982	

* Represents Maximum Contract Amount

Unaccounted beneficial uses are added to distribution system losses and shown under Distribution system loss. 2025 system losses based on 1998 system loss rate. The City's population includes 5,000 inmates at the Pleasant Valley State Prison.

Water Needs Assessment

COALINGA, CITY OF

Contractor ID: 203182

West San Joaquin

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

Date: 10/14/2004 3:30:26

Timeframe	Surface Water Supply				Groundwater Supply				Total Supply			
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsr / Rtm / Recycle In	Trsr / Out	District		Private	Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	10,000	4,321	0	0	0	0	0	0	0	0	0	4,321
1998	10,000	3,995	0	0	0	0	0	0	0	0	0	3,995
2025	10,000	10,000	0	0	0	0	0	0	0	0	0	10,000

Maximum Productive Acres: 34,538

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1996												
1998												
2025												

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss		Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)	
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Industrial (acre-feet)	Comm / Instit. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)	Loss (acre-feet)	Calc Urban Per Capita Dmd (gpcd)	Ref Urban Per Capita Dmd (gpcd)				
1	28	29	30	31	32	33	34	35	36	37	38	39		
1996	14,990	257.3	4,321	0	0	0	0	311.0	257.3	4,321	4,321	4,321	0	0
1998	15,400	108.7	1,875	600	1,295	1,895	225	311.0	231.6	3,995	3,995	3,995	0	0
2025	27,000	279.6	8,455	0	0	0	563	274.0	298.2	9,018	9,018	9,018	-982	-982

* Represents Maximum Contract Amount

Notes: Unaccounted beneficial uses are added to distribution system losses and shown under Distribution system loss. 2025 system losses based on 1998 system loss rate. The City's population includes 5,000 inmates at the Pleasant Valley State Prison.

Water Needs Assessment

COALINGA, CITY OF

Contractor ID: 203182

West San Joaquin

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

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

Timeframe	Surface Water Supply						Groundwater Supply				Total Supply	
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsfir / Rtm / Recycle In	Trsfir / Out	District	Private	Safe Yield		Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	10,000 *	4,321	0	0	0	0	0	0	0	0	0	4,321
1998	10,000 *	3,995	0	0	0	0	0	0	0	0	0	3,995
2025	10,000 *	10,000	0	0	0	0	0	0	0	0	0	10,000

Maximum Productive Acres: 34,538

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	USBR Net		Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
					Calculated Net Crop Water Req (acre-feet)	Crop Water Req (acre-feet)						
1	15	16	17	18	19	20	21	22	23	24	25	26
1996												
1998												
2025												

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Total Ag * M&I Dmd (acre-feet)	Unmet Demand (acre-feet)	
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Comm / Inslt. (acre-feet)	Industrial (acre-feet)	Unacc. / Distr (acre-feet)	Total Demand (acre-feet)	Ref Urban Per Capita Dmd (gpcd)				
1	28	29	30	31	32	33	34	35	36	37	38	39
1996	14,990	257.3	4,321	0	0	0	0	311.0	257.3	4,321	4,321	0
1998	15,400	108.7	1,875	600	1,295	1,895	225	311.0	231.6	3,995	3,995	0
2025	27,000	279.6	8,455	0	0	0	563	274.0	298.2	9,018	9,018	-982

* Represents Maximum Contract Amount
 Unaccounted beneficial uses are added to distribution system losses and shown under Distribution system loss. 2025 system losses based on 1998 system loss rate
 Note: The City's population includes 5,000 inmates at the Pleasant Valley State Prison.

Division: **West San Joaquin** Water Needs Assessment District: **COALINGA. CITY OF** Date: **3/8/01**
 Agricultural and M&I Water Supply

Timeframe	Contractor's Water Supply Sources and Quantities (acre-feet)						Groundwater Supply			Total Supply		
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsf/Retn /Recycle In Out	District	Private	Safe Yield		Recharge	
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	10,000 *	4,321	0	0	0	0	0	0	0	0	0	4,321
1998	10,000 *	3,995	0	0	0	0	0	0	0	0	0	3,995
2025	10,000 *	10,000	0	0	0	0	0	0	0	0	0	10,000

Maximum Productive Acres= 34,538

Contractor's Agricultural Water Demands

Timeframe	Crop Requirement (acre-foot)	District Irrig. Efficiency (%)	Reference Effective Precip (acre-foot)	Calculated Net Crop Water Req (acre-foot)	USBR Net Crop Water Req (acre-foot)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-foot)	Total Ag Demand (acre-foot)	
												15
1	15	16	17	18	19	20	21	22	23	24	25	26

1996
1998
2025

Contractor's M&I Water Demands

Timeframe	Residential Water Demand			Nonresidential Water Demand			Loss		Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)	Total MCI Demand (acre-foot)	Total MCI Demand (acre-foot)	Unmet Demand (acre-foot)
	Population	Per Capita Demand (gpcd)	Total Demand (acre-foot)	Industrial (acre-foot)	Comm/Instit (acre-foot)	Total Demand (acre-foot)	Unacc /Distr (acre-foot)	Loss (acre-foot)					
1	28	28	30	31	32	33	34	35	36	37	38	39	39
1996	14,990	257.3	4,321	0	0	0	0	311.0	257.3	4,321	4,321	4,321	0
1998	15,400	108.7	1,875	600	1,295	1,895	225	311.0	231.6	3,995	3,995	3,995	0
2025	27,000	279.6	8,455	0	0	0	0	274.0	279.6	8,455	8,455	8,455	-1,545

Notes: Unaccounted beneficial uses are added to distribution system losses and shown under Distribution system loss.

* Represents Maximum Contract Amount

Water supply and demand information is for a normal hydrologic year. Crop Water Requirement includes leaching req. and cultural water but not irrigation efficiency. Information from contractor's water management plan or data submitted for historical years. USBR reference information for future years Quality control check; information is either calculated by USBR staff, or from reference.

Water Needs Assessment

HURON, CITY OF

Contractor ID: 203186

West San Joaquin

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

Date: 5/25/2006 9:14:45

Timeframe	Surface Water Supply					Groundwater Supply				Total Supply		
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsr / Rlm / Recycle In	Trsr / Out	District	Private		Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	3,000	982	0	0	0	0	0	0	0	0	0	982
2025	3,000	3,000	0	0	0	0	0	0	0	0	0	3,000

Maximum Productive Acres:

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1996	0	0	0	0	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0	0	0	0	0

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)	Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)	
	Population	Per Capita Demand (gpcd)	Total Demand (acre-feet)	Industrial (acre-feet)	Comm / Instil. (acre-feet)	Total Demand (acre-feet)	Unacc. / Distr. (acre-feet)	80							206
1	28	29	30	31	32	33	34	35	36	37	38	39	39	39	39
1996	5,608	75.9	477	311	114	425	80	311.0	156.3	982	982	0	982	982	0
2025	12,810	76.0	1,090	710	260	970	206	274.0	157.9	2,266	2,266	-734	2,266	2,266	-734

* Represents Maximum Contract Amount

Unaccounted beneficial use is totaled with the distribution system loss. The total for both is shown under Distribution system losses in 2025 estimated to be 10%.

Water Needs Assessment

HURON, CITY OF
 Contractor ID: 203186
 West San Joaquin

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

Date: 10/14/2004 3:30:26

Timeframe	Surface Water Supply				Groundwater Supply				Total Supply			
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsf / R/Im / Recycle In	Trsf / Out	District		Private	Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	3,000	982	0	0	0	0	0	0	0	0	0	982
2025	3,000	3,000	0	0	0	0	0	0	0	0	0	3,000

Maximum Productive Acres:

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1996	0	0	0	0	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0	0	0	0	0

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Total Demand (acre-feet)	Per Capita Demand (gpcd)	Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)		
	Population	Per Capita Demand	Industrial	Comm / Instit.	Industrial	Comm / Instit.	Unacc. / Distr.	Calc Urban Per Capita Dmd (gpcd)							Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)
1	28	29	31	32	31	32	34	35	31	32	34	35	36	37	38	39
1996	5,608	75.9	477	114	425	80	311.0	156.3	982	982	982	982	982	982	982	0
2025	12,810	76.0	1,090	260	970	206	274.0	157.9	2,266	2,266	2,266	2,266	2,266	2,266	2,266	-734

* Represents Maximum Contract Amount

Notes: Unaccounted beneficial use is totaled with the distribution system loss. The total for both is shown under Distribution system loss. Distribution system losses in 2025 estimated to be 10%.

Water Needs Assessment

HURON, CITY OF

Contractor ID: 203186

West San Joaquin

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

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

Timeframe	Surface Water Supply					Groundwater Supply				Total Supply		
	Reference Delivery	USBR Total Deliv/Max	SWP	Local	Local Source	Trsr / Rtm / Recycle In	Trsr / Out	District	Private		Safe Yield	Recharge
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	3,000	982	0	0	0	0	0	0	0	0	0	982
2025	3,000	3,000	0	0	0	0	0	0	0	0	0	3,000

Maximum Productivity: Acres:

Contractor's Agricultural Water Demands

Timeframe	Crop Water Requirement (acre-feet)	District Irrig. Efficiency (%)	Effective Precip (acre-feet)	Reference Effective Precip (acre-ft)	Calculated Net Crop Water Req (acre-feet)	USBR Net Crop Water Req (acre-feet)	Average Irrigated Acres (acres)	Reference Irrigated Acres (acres)	Calculated FDR (AF/acre)	USBR FDR (AF/acre)	Conveyance Loss (acre-feet)	Total Ag Demand (acre-feet)
1	15	16	17	18	19	20	21	22	23	24	25	26
1996	0	0	0	0	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0	0	0	0	0

Contractor's M&I Water Demands

Timeframe	Residential Water Demand				Nonresidential Water Demand				Loss	Total Demand (acre-feet)	Per Capita Demand (gpcd)	Ref Urban Per Capita Dmd (gpcd)	Calc Urban Per Capita Dmd (gpcd)	Total M&I Demand (acre-feet)	Total Ag + M&I Dmd (acre-feet)	Unmet Demand (acre-feet)	
	Population	Per Capita Demand	Total Demand	Industrial	Comm / Instit.	Unacc. / Distr.	Total Demand	Unacc. / Distr.									
1	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1996	5,608	75.9	477	311	114	425	80	311.0	156.3	982	982	0	311.0	156.3	982	982	0
2025	12,810	76.0	1,090	710	260	970	206	274.0	157.9	2,266	2,266	-734	274.0	157.9	2,266	2,266	-734

* Represents Maximum Contract Amount

Notes: Unaccounted beneficial use is totaled with the distribution system loss. The total for both is shown under Distribution system loss. Distribution system loss estimated to be 10%.

Timeframe	Contractor's Water Supply Sources and Quantities (acre-feet)											
	Surface Water Supply					Groundwater Supply						
	Reference Delivery	USBR Total Deliv/Max	SWP	Local Source	Trsf/Retn /Recycle	Trsf/Out	District	Private	Safe Yield	Recharge	Total Supply	
1	2	3	4	5	6	7	8	9	10	11	12	13
1996	3,000 *	982	0	0	0	0	0	0	0	0	0	982
2025	3,000 *	3,000	0	0	0	0	0	0	0	0	0	3,000

Timeframe	Contractor's Agricultural Water Demands										Maximum Productive Acres=	
	Reference					Average Reference						
	District	Reference Effective Precip	Calculated Net Crop Water Req	USBR Net Crop Water Req	Irrigated Acres	District	Reference Effective Precip	Calculated Net Crop Water Req	USBR Net Crop Water Req	Irrigated Acres		Total Ag Demand
1	15	16	17	18	19	20	21	22	23	24	25	26
1996	0											0
2025												

Timeframe	Contractor's M&I Water Demands										
	Residential Water Demand					Nonresidential Water Demand					
	Population	Per Capita Demand	Industrial Demand	Comm/Inst	Total Demand	Loss	Unacc/Distr	Ref Urban Per Capita Dmd	Calc Urban Per Capita Dmd	Total M&I Demand	Unmet Demand
1	28	28	30	31	32	33	34	35	36	37	38
1996	5,608	75.9	477	311	114	425	80	311.0	156.3	982	982
2025	12,810	76.0	1,090	710	260	970	0	274.0	143.6	2,060	2,060

Notes: Unaccounted beneficial use it totaled with the distribution system loss. The total for both is shown under Distribution system loss.
 * Represents Maximum Contract Amount
 Water supply and demand information is for a normal hydrologic year. Crop Water Requirement includes leaching req. and cultural water but not irrigation efficiency.
 Information from contractor's water management plan or data submitted for historical years. USBR reference information for future years
 Quality control check; information is either calculated by USBR staff, or from reference.