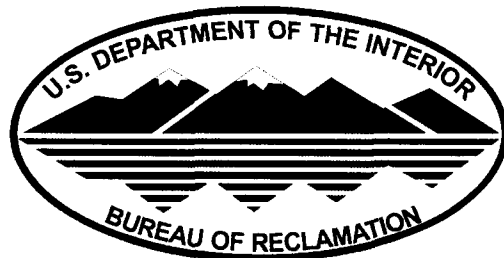


Supplemental Environmental Assessment for the 2004 Renewal of Interim Water Service Contracts through February 28, 2006

Central Valley Project, California

February 27, 2003

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Mid-Pacific Region
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CHAPTER 1

PURPOSE AND NEED

1.1 INTRODUCTION

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to execute up to 59 interim water service contracts for a period of up to two years, from March 1, 2004 through February 28, 2006. Interim renewal contracts (IRCs) are undertaken under the authority of the CVPIA to provide a bridge between the expiration of existing long-term water contracts and the execution of new long-term water contracts. These interim contracts will be renewed for a two-year period from March 1, 2004 through February 28, 2006. However, in the event that a new long-term water contract is executed with an effective date of March 1, 2005, that interim water service contract would then expire on February 28, 2005. Interim renewal of these water service contracts is necessary to continue delivery of Central Valley Project (CVP) water until the long-term contracts are executed. Water service contracts proposed for interim renewal in 2004 are listed in Table 1.

Reclamation has prepared this supplemental Environmental Assessment (EA) to determine if any actions occurring from an extended interim period of up to two years from March 1, 2004 until February 28, 2006 will result in any potential impacts not analyzed in the 1994 EA (Bureau of Reclamation 1994a and 1994b), the 1998 Supplemental EA (Bureau of Reclamation 1998), the 2000 Supplemental EA (Bureau of Reclamation 2000), the 2001 Supplemental EA (Bureau of Reclamation 2001), or the 2002 Supplemental EA (Bureau of Reclamation 2002). These six previous documents are incorporated by reference into this analysis. The 2002, 2001, and 2000 IRC Supplemental EAs are included in Appendix C. The December 1994 EA, and February 1998 Supplemental EA are incorporated by reference and available by request.

This 2004 Supplemental EA provides the sections that have updated information, additional discussions, or table changes from the 2002, 2001 or 2000 Final Supplemental EAs. In addition to the 42 CVP interim renewal contracts analyzed in the previous Supplemental EAs, this 2004 Supplemental EA includes 17 additional CVP contractors that also require IRCs at this time. These 17 contractors have long-term water service contracts that expired or will expire within the next year, and therefore these contractors will also require an interim renewal contract until new long-term contracts can be executed in 2005 or 2006. These 17 interim renewal contracts are identified in Table 1 of this document.

This environmental analysis was developed consistent with regulations and guidance from the Council on Environmental Quality, and in conformance with the analysis provided in *NRDC 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 supplemental EA and the incorporated EAs finds in large part that the interim renewal of the contracts is in essence a continuation of the "status quo," that is, they continue the existing use and allocation of resources (i.e., the same amount of water is being provided to the same lands for existing/ongoing purposes).

1.2 BACKGROUND OF INTERIM CONTRACTS

Section 3409 of the CVPIA stipulates that Reclamation must prepare a programmatic environmental impact statement (PEIS) before renewing long-term CVP water service contracts. The complexity of the analysis associated with the CVPIA PEIS extended its completion until October 1999 with a Record of Decision approved on January 9, 2001.

The PEIS evaluated CVP-wide impacts of long-term contract renewal. Regional LTCCR environmental-compliance documents tiered from the PEIS are at various stages of completion. NEPA documentation was completed in early 2001 for the Friant Division, and the Cross Valley Canal (CVC) Unit, Hidden Unit, and Buchanan Unit LTCCRs. Twenty-five of the 28 Friant Division long-term contracts were executed in January of 2001. The Hidden Unit long-term contract and the Buchanan Unit long-term contract were approved in February 2001. The CVC Unit's contract negotiations are essentially complete. Final execution of CVC Unit long-term contracts is pending.

Reclamation is completing the contract negotiations and site-specific environmental documentation for long-term contracts with contractors in the American River Division, the Corning and Tehama-Colusa Canal Units (Sacramento River Division), the Sacramento River Water Rights Settlement Contractors (Sacramento Division), the Feather River Division, the Contra Costa Unit (Delta Division), the Mercy Springs Water District (Delta Division), the US. Department of Veteran Affairs (Delta Division), the City of Fresno (Fria Division), the San Felipe Division, the San Luis Unit (West San Joaquin Division), the Delta Mendota Canal Unit (West San Joaquin Division), the Shasta-Trinity River Divisions, and the Cross Valley Canal Unit. Reclamation is aggressively pursuing completion of environmental compliance and execution of remaining long-term water service contracts within this interim period.

1.3 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to execute interim contracts for up to two years, beginning March 1, 2004 and ending February 28, 2006. Execution of interim contracts is needed to continue delivery of CVP water to interim contractors until the long-term contracts can be executed.

1.4 ISSUES RELATED TO CVP WATER USE UNDER THE PROPOSED INTERIM CONTRACTS

1.4.1 Interim Water Contract Service Areas

No changes to any water service area are part of the proposed action. Appropriate environmental compliance and documentation will be completed for any request from interim contractors for Reclamation approval of service area boundary changes.

1.4.2 Water Transfers

No water transfers are part of the proposed action. Any water transfers would be separate independent actions. Pursuant to Section 3405 of the CVPIA, appropriate environmental compliance and documentation will be completed for any request from an interim contractor for Reclamation approval of a water transfer.

1.4.3 Water Assignments

Potential future assignments of CVP water are not included in the proposed action. Any changes in CVP water assignments would be separate independent actions and would require their own environmental compliance and documentation.

1.4.4 Other Issues

The following actions are also not included in the Proposed Action:

- Warren Act contracts for conveyance of non-federal water using federal facilities;
- The Mendota Pool Pumpers Exchange Agreement and other non-Central Valley Project Waters that are pumped into the Mendota Pool;
- Inclusions and exclusions to Interim Renewal Contract service area boundaries.
- Future changes in use from agricultural irrigation only to Ag/M&I involving these interim renewal contractors.
- Changes to the existing Operations Criteria and Plan (OCAP).

1.5 PUBLIC INVOLVEMENT

The public was invited to review and comment on the *Draft Supplemental EA for the 2002 Renewal of Interim Water Service Contracts* for a 30-day review period that began on December 23, 2003 and ended January 23, 2004. A press release announcing the Draft EA/FONSI publication was sent to all interested parties, announced and made available for viewing on the Mid-Pacific Region web page, and announced at meetings conducted by Reclamation for proposed renewal of the long-term water service contracts. Three written comments were received during the public review period. Appendix G provides a copy of each letter with Reclamation's responses.

Public participation requirements for water service, repayment, and other water-related contracts are established in Section 9(f) of the Reclamation Project Act of 1939, 43 U.S.C. 485h, and by RRA rules and regulation (43 CFR 426.22). Public participation procedures are composed of two basic elements: 1) publicize proposed contract actions, and 2) provide an opportunity for public comment. Reclamation provides public notices of proposed contract actions at least 60 days prior to execution of any contract with a term greater than 1 year. Negotiations have been completed for the draft form of the 2004 contracts, and a press release announcing their availability was sent to all interested parties on December 12, 2003. The draft forms of the contract are available for a 60-day public review and comment period and can be viewed on-line at www.usbr.gov/mp/cvpia/3404c/2004InterimCts/index.html.

Table 1. Central Valley Project 2004 Interim Renewal Contractors, IRC contract quantities, the existing contract number, and the existing contract expiration date.

CVP Contractor	Contract Quantity (A/F)	Existing Contract No.	Contract Expiration Date
<u>AMERICAN RIVER DIVISION</u>			
<u>Folsom Lake Unit:</u>			
El Dorado Irrigation District*	7,500	14-06-200-1357A	12/31/2004
El Dorado Irrigation District (Lake Hills Estates)	50	14-06-200-7312-IR6	2/29/2004
San Juan Water District	11,200	14-06-200-152A-IR7	2/29/2004
<u>Slv Park Unit:</u>			
El Dorado Irrigation District <i>(Transferring title to EID, but will include in this impact analysis)</i>	23,000	14-06-200-949-IR7	2/29/2004
<u>DELTA DIVISION</u>			
<u>Delta-Mendota Canal:</u>			
Banta-Carbona Irrigation District	20,000	14-06-200-4305A-IR7-A	2/29/2004
Broadview Water District	27,000	14-06-200-8092-IR7	2/29/2004
Centinella Water District	2,500	7-07-20-W0055-IR7	2/29/2004
Coelho Family Trust* (Formerly Traction Ranch)	2,080	14-06-200-7859A-IR1	2/29/2004
Del Puerto Water District	140,210	14-06-200-922-IR9	2/29/2004
Eagle Field Water District	4,550	14-06-200-7754-IR7	2/29/2004
Fresno Slough Water District*	4,000	14-06-200-4019A-IR1	2/29/2004
James Irrigation District*	35,300	14-06-200-700-A-IR1	2/29/2004
Laguna Water District	800	2-07-20-W0266-IR7	2/29/2004
Mercy Springs Water District	2,842	14-06-200-3365A-IR7-A	2/29/2004
Pajaro Valley Water Management Area, Westlands Water District (District # 1), Santa Clara Valley Water District	6,260	14-06-200-3365A-IR7-B	2/29/2004
Westlands Water District (District # 2)* (assignment final)	4,198	14-06-200-3365A-IR7-C (assign from MercySprings WD)	2/29/2004
Oro Loma Water District	4,600	14-06-200-7823-IR7	2/29/2004
Patterson Irrigation District	16,500	14-06-200-3598A-IR7	2/29/2004
Plain View Water District	20,600	14-06-200-785-IR9	2/29/2004
Reclamation District 1606*	228	14-06-200-3802A-IR1	2/29/2004
The West Side Irrigation District	5,000	7-07-20-W0045-IR7-A	2/29/2004
Tracy, City Of* (assignment pending)	5,000	14-06-200-4305A-IR7-B (partial assign. from Banta Carbona ID)	2/29/2004
Tracy, City Of* (assignment pending)	2,500	7-07-20-W0045-IR7-B (partial assign. from The West Side ID)	2/29/2004
Tranquillity Irrigation District*	13,800	14-06-200-701-A-IR1	2/29/2004
Tranquillity Public Utility District* (Formerly Hughes, Melvin)	70	14-06-200-3537A-IR1	2/29/2004
US Department of Veterans Affairs* (San Joaquin National Cemetery)	450	3-07-20-W1124-IR0	2/29/2004
West Stanislaus Irrigation District	50,000	14-06-200-1072-IR9	2/29/2004
Widren Water District	2,990	14-06-200-8018-IR7	2/29/2004
<u>FRIANT DIVISION</u>			
<u>Friant-Kern Canal:</u>			
Lewis Creek Water District* (Did not renew, but will	1,450	14-06-200-1911A-IR1	2/29/2000

CVP Contractor	Contract Quantity (A/F)	Existing Contract No.	Contract Expiration Date
<i>include action in this impact analysis)</i>			
<u>SACRAMENTO RIVER DIVISION</u>			
<u>Corning Canal Unit:</u>			
Corning Water District	23,000	14-06-200-6575-IR7	2/29/2004
Proberta Water District	3,500	14-06-200-7311-IR7	2/29/2004
Thomes Creek Water District	6,400	14-06-200-5271A-IR7	2/29/2004
<u>Tehama-Colusa Canal Unit:</u>			
Colusa County Water District	62,200	14-06-200-304-A-IR7	2/29/2004
Colusa, County Of (Subs: Colusa County WD, Cortina WD, 4-M WD, Glenn Valley WD, Holthouse WD, La Grande WD, Myers-Marsh MWC)	60,000	14-06-200-8310A-IR7	2/29/2004
Davis Water District	4,000	14-06-200-6001A-IR7	2/29/2004
Dunnigan Water District	19,000	14-06-200-399A-IR7	2/29/2004
Glide Water District	10,500	7-07-20-W0040-IR7	2/29/2004
Kanawha Water District	45,000	14-06-200-466-A-IR7	2/29/2004
Kirkwood Water District	2,100	7-07-20-W0056-IR7	2/29/2004
La Grande Water District	5,000	7-07-20-W0022-IR7	2/29/2004
Orland-Artois Water District	53,000	14-06-200-8382A-IR7	2/29/2004
Westside Water District	25,000	14-06-200-8222-IR7	2/29/2004
Westside Water District* (assignment final)	40,000	14-06-200-8310X-IR1 assignment from Co. of Colusa	2/29/2004
<u>Feather River:</u>			
Feather Water District	20,000	14-06-200-171A-IR8	2/29/2004
<u>SHASTA DIVISION</u>			
Shasta Lake, City Of	4,400*	4-07-20-W1134-IR9	2/29/2004
Mountain Gate County Service District*	350	14-06-200-6998-IR1	2/29/2004
Shasta County Water Authority*	5,000	14-06-200-3367A	12/31/2004
<u>TRINITY RIVER DIVISION</u>			
Bella Vista Water District	24,000	14-06-200-851A-IR8	2/29/2004
Clear Creek County Service District	15,300	14-06-200-489-A-IR8	2/29/2004
Shasta County Service District*	1,000	14-06-200-862A-IR1	2/29/2004
<u>Miscellaneous</u>			
<u>Colusa Basin Drain:</u>			
Colusa Drain MWC (New Contract - 1988) *	100,000	8-07-20-W0693	12/31/2004
<u>Cross Valley Canal:</u>			
Fresno, County Of	3,000	14-06-200-8292A-IR7	2/29/2004
Hills Valley Irrigation District-Amendatory	3,346	14-06-200-8466A-IR7	2/29/2004
Kern-Tulare Water District	40,000	14-06-200-8601A-IR7	2/29/2004
Lower Tule River Irrigation District	31,102	14-06-200-8237A-IR7	2/29/2004
Pixley Irrigation District	31,102	14-06-200-8238A-IR7	2/29/2004
Rag Gulch Water District	13,300	14-06-200-8367A-IR7	2/29/2004
Tri-Valley Water District	1,142	14-06-200-8565A-IR7	2/29/2004
Tulare, County Of	5,308	14-06-200-8293A-IR7	2/29/2004
* IRC was not included in the 2002 Supplemental EA			

CHAPTER 2

ALTERNATIVES

2.1 PROPOSED ACTION ALTERNATIVE

The Proposed Action alternative evaluated in this document is the execution of up to 59 interim renewal water-service contracts between the United States and the CVP contractors listed in Table 1. Forty-two of the CVP contractors listed on Table 1 entered into interim renewal contracts on February 28, 2002. The Proposed Action would continue these existing interim contracts, with only minor, administrative changes to the contract provisions. Seventeen CVP contractors on Table 1 have long-term water-service contracts expiring now or within the next year, and will also require an interim contract in 2004 to allow continued delivery of CVP water until long-term water-service contracts can be executed. The Proposed Action would continue their existing water service contracts, with only minor, administrative changes to the contract provisions.

Sample Existing Interim Contracts are provided in Appendix B [The Existing Interim Contract used for six contractors in the Delta-Mendota Canal Unit (Coelho Family Trust, Fresno Slough WD, James ID, RD 1606, Tranquillity ID, and Tranquillity PUD) is slightly different, and is presented in Appendix B(2)]. The terms and conditions of the Existing Interim Renewal Contract are incorporated by reference into the Proposed Action contract except for these revisions:

- (a) The first sentence in Subdivision (a) of Article 1 is modified as follows: “This renewal contract shall be effective from March 1, 2004, and shall remain in effect through February 28, 2006, and thereafter will be renewed as described in Subdivision (a) of Article 2 of the Interim Renewal Contract if a long-term renewal contract has not been executed with an effective commencement date of March 1, 2006; Provided, that if a long-term renewal contract has been executed with an effective commencement date of March 1, 2005, this interim renewal contract shall expire on February 28, 2005”.
- (b) Subdivision (b)(1) of Article 2 of the Existing Interim Renewal Contract is amended by deleting the date “November 30, 2001,” and replacing same with the date “February 15, 2006.”
- (c) Subdivision (b) of Article 1 of the Existing Interim Renewal Contract is amended by deleting the dates “February 1, 2004,” “February 15, 2004,” and “February 28, 2006,” and replacing same with the dates “February 1, 2006,” “February 15, 2006,” and “February 28, 2006,” respectively.

These revisions would take effect on the date of the execution of the 2004 interim

contract. Except for these date changes and minor administrative changes, the 2004 interim contracts will remain the same as the existing interim contracts, with one exception. The contract amount for the City of Shasta Lake (City) will be 4,400 acre-feet/year rather than the 2,750 acre-feet/year in the existing interim contract.

The Proposed Action alternative is comparable to Alternative 1, continuation of existing interim contracts, analyzed in the 2000 Supplemental EA. The period of renewal for each 2004 contract would be for two years, as permitted under subsection 3404(c)(1) of CVPIA. Subsection 3404(c)(1) specifies that interim renewal contracts will not exceed three years in length, and be for successive interim periods of not more than two years in length. The current contract provisions are those that are included in the existing interim renewal contracts and specified in the 2002 Supplemental EA. They contain only minor variations from the provisions described in the 1994 EA, the 1998 Supplemental EA, and the 2000, and 2001 Supplemental EAs.

All other existing contract provisions such as contract supply, payment, water quality, water measurement, water conservation, water shortage, discretionary provisions of the Reclamation Reform Act, Endangered Species Act compliance, and standard articles are not changed (see Section 2.1.1 of the 2000 Supplemental EA, presented in Appendix C).

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

2.2.1 No Renewal of Interim Contracts

Nonrenewal of existing contracts is considered infeasible based on Section 3404(c) of the CVPIA. Section 3404(c) states "...the Secretary **shall**, upon request, renew any existing long-term repayment of water service contract for the delivery of water from the CVP...." 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.

2.2.2 Reduction in Interim Contract Amounts

Reduction in contract water amounts due to the current delivery constraints on the CVP system (identified in the PEIS) was considered in certain cases, but rejected from analysis for several reasons:

First, the Reclamation Project Act of 1956 and the Reclamation Project Act of 1963 mandate renewal of existing contract amounts when beneficially used. Water-needs analyses have been completed for all CVP contracts to identify the amount of water that could be beneficially used by each water service contractor. In almost all cases, the needs exceed or equal the current total contract amount. The contract amounts

are constrained not to exceed the beneficial use or the existing contract amount, whichever is less.

Second, the shortage provision of the water service contract protects Reclamation's Contracting Officer 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. Such legal or regulatory actions include, for example, actions to implement the CVPIA, which has dedicated significant amounts of CVP water to environmental uses and which provides funding from the CVP contractors to improve habitat and to acquire water for environmental purposes. The CVPIA required the CVP to institute environmental management as part of the CVP operations, such as allocation of 800,000 acre-feet for fish and wildlife purposes, refuge water supply, and acquisition of water from willing sellers. These legal requirements, in addition to existing Federal and State requirements of CVP operations provide regulatory/environmental use of CVP water and constrain the actual water delivery amounts.

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

2.2.3 Other Alternatives

Other alternatives, including tiered pricing, are being addressed through the negotiations process for long-term contracts. Appropriate alternatives will be evaluated as part of the environmental compliance process for long-term contract renewals. Reclamation is aggressively pursuing completion of long-term contract renewal. Reclamation anticipates completing the environmental compliance and the execution of long-term water service contracts within this interim period (2004 to 2006).

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The Affected Environment and Environmental Consequences in this 2004 Supplemental EA presents only those sections that have updated information, additional discussions, or table changes from the 2002, 2001 and 2000 Final Supplemental EAs. The Proposed Action alternative is comparable to Alternative 1, continuation of existing interim contracts, analyzed in the 2000 Supplemental EA.

As described in Chapters 1 and 2, this 2004 Supplemental EA includes 17 interim renewal contracts that were not included in the previous IRC environmental assessments. The contract water amount for each of these 17 interim renewal contractors is shown on Table 1. These 17 contractors are located inside the same geographical area analyzed in the original IRC Environmental Assessment (Reclamation 1994) and in the subsequent Supplemental IRC Environmental Assessments (Reclamation 1998, 2000, 2001, 2002). Location maps for the 17 water service contractors are presented in Appendix D.

The existing affected environment conditions are essentially the same as those described in the initial 1994 EA and subsequent Supplemental EAs. Consistent with existing CVP and CVPIA biological opinions, Reclamation implemented a Central Valley Habitat Monitoring Program (CVHMP) in 1999 to map and monitor habitat inside CVP water service areas. The CVHMP uses satellite imagery and aerial photography to identify natural habitats and monitor habitat changes that may be occurring inside CVP water service areas. The CVHMP database benchmark year is 1993, and that 1993 data reflects land-use and habitat conditions described in the affected environment sections of the 1994 EA (Reclamation 1994). Comparisons of the 1993 benchmark-year to the most recent available satellite imagery (2000) show that habitat conditions inside the IRC water service areas have changed very little since the first IRC environmental analysis in 1994, which further supports conclusions presented in the 2002, 2001, and 2000 Supplemental IRC Environmental Assessments. Summaries of land-use and habitat changes inside each IRC service area since 1993 are presented in Appendix E.

3.3 BIOLOGICAL RESOURCES

3.3.1 Proposed Action Alternative

The fifth paragraph from the 2001 Supplemental IRC Environmental Assessment is revised as follows:

CVP-wide impacts to biological resources have been evaluated in the PEIS, and a FWS Biological Opinion to address potential CVP-wide impacts was completed on November 21, 2000. Cross Valley Canal (CVC) Unit Contractors' potential impacts to biological resources have been evaluated in the CVC Unit Contractors Long-Term Contract Renewal Environmental Assessment (January 2001), the CVC Unit Contractors Long-Term Contract Renewal Regional Biological Assessment (January 17, 2001), the Biological Opinion on U.S. Bureau of Reclamation Long Term Contract Renewal of Friant Division and CVC Unit Contracts (FWS-January 19, 2001), and the Biological Opinion for the Long-Term Renewal of CVP Water Service Contracts for the Friant Division and CVC Unit Contractors (NOAA Fisheries -January 20, 2001). The programmatic biological opinion and Essential Fish Habitat Conservation Recommendations prepared by NOAA Fisheries for the CVPIA was completed on November 14, 2000.

The following paragraphs are included at the end of this section:

The FWS Biological Opinion for 2002 interim contracts is incorporated by reference in this 2004 Supplemental EA. The FWS Biological Opinion for these 2004 interim contracts is attached in Appendix H, and presents the commitments that Reclamation will undertake during the proposed 2004 interim renewal period.

Restore City of Shasta Lake contract amount. City of Shasta Lake (City) is currently receiving 2,700 acre-feet/year of CVP water under the existing interim renewal contract, and 50-acre-feet/year from a subcontract with the Shasta County Water Agency, for a total of 2,750 acre-feet/year. The proposed interim contract would renew the City's water service contract for 4,400 acre-feet/year. With out the proposed change in the contract amount, acre-feet/year rather than the 2,750 acre-feet/year described in the existing interim contract. This change would restore the City's contract amount to the same amount (4,400 acre-feet/years) received under the City's original long-term water service contract that expired in 1994. Reclamation believes that this restoration of the City's full contract amount would have no significant or demonstrable effects on the environment for the following reasons:

(1) Although the contract amount is being restored to 4,400 acre-feet/year, the actual use of water within the CVP Service Area will not change significantly from recent usage. Over the last 3 years, the City has utilized the following quantities of water:

2000 - 2615 ac-ft
2001 - 2775 ac-ft
2002 - 2930 ac-ft
2003 - 3000 ac-ft (projected to date)

These figures represent an annual increase in use of about 4 ½ percent. Amounts over the interim contract amount of 2,750 ac-ft have been obtained via transfers of other CVP water. If this proposed change in the contract is not implemented, the City is expected to continue to meet its needs via continued transfers over the next 2 years. Projected use for the next 2 years assuming a continuation of an annual increase of 4 ½ percent would result in the following use of CVP water:

2004 - 3,135 ac-ft
2005 - 3,276 ac-ft

Expressed as a diversion rate, this projected 2005 usage would be about 0.66 cfs greater than the amount allowed under the prior and existing interim contracts.

(2) There likely would be no adverse effect on listed terrestrial species within the City's CVP Service Area because the City's CVP Service Area lacks either designated critical habitat or known occurrences of listed species.

Bald eagles occasionally occur along the shores of Shasta Lake, 2-6 miles north of the City, but the City's CVP Service Area does not provide foraging habitat for bald eagles, so bald eagles are not expected inside the Service Area. There are 43 acres of vernal pools in the southeastern portion of the Service Area, but none are designated by the USFWS as critical vernal pool habitat. No FESA or CESA listed species occur in these vernal pools. Although vernal pools are habitat of concern, and are protected by State and Federal laws concerning wetlands, the presence of vernal pools in the Service Area poses no endangered or threatened species issues.

(3) There would likely be no adverse effects on listed aquatic species.

All diversions occur at Shasta Dam, which is upstream of the first impassable barrier on the Sacramento River. Hence, entrainment of juvenile salmonids is not an issue. Nor would the flows in the Sacramento River be measurably altered by the proposed action because the water involved is only 0.02% of the 3,000 cfs minimum releases from Shasta/Keswick.

Flows in the small, intermittent drainages within the City's CVP Service Area would not be altered by the proposed action, with the probable exception of Newtown Creek, an intermittent tributary of upper Churn Creek. Newtown Creek receives effluent from the waste water treatment plant, but the increment in its flow (<0.66 cfs) would not be large enough to affect the downstream reaches of Churn Creek which might contain steelhead or juvenile Chinook.

From an operational standpoint, the contract amount of 4,400 acre-feet/year represents no demonstrable change in CVP operation because transfers of this magnitude between CVP contractors are a routine part of CVP operations.

(4) The restoration of the City of Shasta Lake's contract amount from 2,750 acre-feet/year to 4,400 acre-feet/year will have no real affect on the City's usage of water. The interim contract's restoration of the original long-term contract quantity will merely allow the City to suspend the series of temporary water transfers it has relied upon in recent years.

(5) This increase in City of Shasta Lake interim contract amount will not affect ongoing regional settlement/development patterns.

The rates of land-use change have been modest in the City's service area during the past ten years. The Central Valley Habitat Monitoring Program's 1993 to 2000 land-cover change data indicates a conversion of 19 acres, or only 0.1% of the land changed from natural vegetation to other uses. Of the 19 acres of the Service Area that changed from natural to urban land cover, 11 acres changed from woodland to urban use, and 8 acres changed from grassland to urban use.

CHAPTER 4

CONSULTATION AND COORDINATION

Reclamation has consulted and coordinated with the US Fish and Wildlife Service, National Oceanic and Atmospheric Administration – Fisheries, and the IRC contractors (Table 1) in the preparation of the environmental documents for this proposed interim renewal action. The public was invited to review and comment on the *Draft Supplemental EA for the 2002 Renewal of Interim Water Service Contracts* for a 30-day review period that began on December 23, 2003 and ended January 23, 2004. A press release announcing the Draft EA/FONSI publication was sent to all interested parties, announced and made available for viewing on the Mid-Pacific Region web page, and announced at meetings conducted by Reclamation for proposed renewal of the long-term water service contracts.

4.1 ENDANGERED SPECIES ACT

In 2000, Reclamation completed formal ESA consultation on IRCs, and the FWS issued a biological opinion dated February 29, 2000. On February 28, 2001, the FWS issued a memorandum extending that 2000 biological opinion through February of 2002. In February 2002, the FWS issued a biological opinion amending the February 2000 biological opinion, which extended the 2000 biological opinion through February of 2004.

Reclamation consulted formally on the CVC Unit long-term water service contracts and received a biological opinion on January 19, 2001. Relative to the CVC Unit Contractors in the interim contract period, Reclamation and the CVC Unit Contractors have committed to comply with their requirements of the long-term contract biological opinion.

In 2002, Reclamation completed ESA consultation on interim contracts with NOAA Fisheries for a period of up to two years. NOAA Fisheries, by letter dated February 22, 2002, concurred with Reclamation's determination that the renewal of 2-year interim water service contracts will not likely adversely affect Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon, Southern Oregon/Northern California Coast coho salmon, Central Valley steelhead, or their designated critical habitat. Formal consultation on the CVC Unit's long-term water service contracts was completed in January 2001. Reclamation and the CVC Unit Contractors have committed to comply with the NOAA Fisheries long-term contract BO as part of the approval of these interim contracts.

Reclamation formally re-initiated ESA consultation with USFWS on November 5, 2003

and with NOAA Fisheries on November 14, 2003 regarding the proposed contract renewal action. Reclamation has completed section 7 consultations with NOAA Fisheries and the Fish and Wildlife Service (FWS) pursuant to the Endangered Species Act (ESA) on the proposed action of renewing interim water service contracts (IRCs) for the term of March 1, 2004 through February 28, 2006. The Supplemental Biological Opinions from the FWS and the letter of concurrence from NOAA are presented in Appendix H and I respectively.

CHAPTER 5

REFERENCES

Bureau Of Reclamation. 1994. Interim Renewal Contracts Final Environmental Assessment. Mid-Pacific Regional Office. September 1994.

_____. 1998. Finding Of No Significant Impact And Supplemental Environmental Assessment for the Renewal of 54 Interim Water Service Contracts through February 29, 2000. Mid-Pacific Regional Office. February 1998.

_____. 2000. Final Supplemental Environmental Assessment for the Renewal of 54 Interim Water Service Contracts through February 28, 2001, Central Valley Project, California. Mid-Pacific Regional Office. Mid-Pacific Regional Office. February 2000.

_____. 2001. Supplemental Environmental Assessment for the 2001 Renewal of Interim Water Service Contracts Through February 28, 2002, Central Valley Project, Mid-Pacific Regional Office. Mid-Pacific Regional Office. California. February 2001.

_____. 2002. Supplemental Environmental Assessment for the 2002 Renewal of Interim Water Service Contracts Through February 29, 2004, Central Valley Project, Mid-Pacific Regional Office. Mid-Pacific Regional Office. California. February 2002.

APPENDIX A

PROPOSED

2004 INTERIM RENEWAL CONTRACT SAMPLES

R.O. Draft 12/12-2003

R.O. Draft 11/06-2003

Irrigation and/or M&I

Contract No. _____

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

INTERIM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND
NAME OF ENTITY/DISTRICT
PROVIDING FOR PROJECT WATER SERVICE

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

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the United States and the Contractor entered into an interim renewal contract identified as Contract No. _____-IR__ (use last long-form IR), hereinafter referred to as the Interim Renewal Contract, which provided for the continued water service to the Contractor following expiration of Contract No. _____(insert original contract number); and

31 WHEREAS, the United States and the Contractor have entered into successive renewals of
32 the Interim Renewal Contract, the most recent of which is Contract No. _____ -
33 IR____(use most recent interim renewal contract) hereinafter referred to as the Existing Interim Renewal
34 Contract from March 1, 2003, through February 29, 2004; and

35 WHEREAS, the United States and the Contractor have made significant progress in their
36 negotiations of a long-term renewal contract, believe that further negotiations on the long-term renewal
37 contract would be beneficial, and mutually commit to continue to negotiate to seek to reach agreement,
38 but anticipate that the environmental documentation necessary for execution of any long-term renewal
39 contract will be delayed at least an additional 7 months, and may be delayed further for reasons beyond
40 the control of the parties; and

41 WHEREAS, the Contractor has requested a subsequent interim renewal contract pursuant
42 to Subdivision (b)(1) of Article 2 of the Interim Renewal Contract and Article 1 of the Existing Interim
43 Renewal Contract; and

44 WHEREAS, the United States has determined that the Contractor has to date fulfilled all
45 of its obligations under the Existing Interim Renewal Contract; and

46 WHEREAS, the United States is willing to renew the Existing Interim Renewal Contract
47 pursuant to the terms and conditions set forth below;

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

50 INCORPORATION AND REVISION OF EXISTING INTERIM RENEWAL CONTRACT

51 1. The terms and conditions of the Existing Interim Renewal Contract are hereby
52 incorporated by reference into this Contract with the same force and effect as if they were included in full
53 text with the exception of Article 1 thereof, which is revised as follows:

54 (a) The first sentence in Subdivision (a) of Article 1 of the Existing Interim
55 Renewal Contract is modified as follows: "This interim renewal contract shall be effective from March 1,

56 2004, and shall remain in effect through February 28, 2006, and thereafter will be renewed as described in
57 Subdivision (a) of Article 2 of the Interim Renewal Contract if a long-term renewal contract has not been
58 executed with an effective commencement date of March 1, 2006; Provided, that if a long-term renewal
59 contract has been executed with an effective commencement date of March 1, 2005, this interim renewal
60 contract shall expire on February 28, 2005.”

61 (b) Subdivision (b) of Article 1 of the Existing Interim Renewal Contract is
62 amended by deleting the date “February 15, 2004,” and replacing same with the date
63 “February 15, 2006.”

64 (c) Subdivision (c) of Article 1 of the Existing Interim Renewal Contract is
65 amended by deleting the dates “February 1, 2004,” “February 15, 2004,” and “February 29, 2004,” and
66 replacing same with the dates “February 1, 2006,” “February 15, 2006,” and “February 28, 2006,”
67 respectively.

68 IN WITNESS WHEREOF, the parties hereto have executed this interim renewal contract
69 as of the day and year first above written.

70 THE UNITED STATES OF AMERICA

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

74 (SEAL) **NAME OF ENTITY/DISTRICT**

75 By: _____
76 President

77 Attest:

78 _____
79 Secretary

APPENDIX B

EXISTING

INTERIM RENEWAL CONTRACT SAMPLE

DRAFT -- DRAFT -- DRAFT

Irrigation and M&I
R.O. Draft 05/27-1994
Rev. R.O. 06/21-1994
Rev. R.O. 07/11-1994
Rev. R.O. 07/19-1994
Rev. R.O. 08/09-1994
Rev. R.O. 08/15-1994
Rev. R.O. 08/19-1994
Rev. R.O. 02/17-1995
Rev. R.O. 08/13-1997
Rev. R.O. 09/29-1999
Rev. R.O. 09/30-1999
Rev. R.O. 11/03-1999
Rev. R.O. 08/25-2000
Rev. R.O. 09/14-2000
Rev. R.O. 12/08-2000
R.O. 01/30-2001

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

INTERIM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND

PROVIDING FOR PROJECT WATER SERVICE

THIS CONTRACT, made this ____ day of _____ 2001, in
pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or
supplementary thereto, including, but not limited to, the acts of August 26, 1937 (50 Stat. 844),
as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented,
July 2, 1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1261), as

1 amended and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively
2 hereinafter referred to as the Federal Reclamation law, between THE UNITED STATES OF
3 AMERICA, hereinafter referred to as the United States, and _____,
4 hereinafter referred to as the Contractor, a public agency of the State of California, duly
5 organized, existing, and acting pursuant to the laws thereof, with its principal place of business in
6 _____, California;

7 WITNESSETH, That:

8 EXPLANATORY RECITALS

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

15 [DIVISIONAL ISSUE] WHEREAS, the United States constructed
16 _____, hereinafter collectively referred to as the _____ facilities, which
17 will be used in part for the furnishing of water to the Contractor pursuant to the terms of this
18 interim renewal contract; and

19 [DISTRICT ISSUE] WHEREAS, the Contractor and the United States entered
20 into Contract No. _____ as amended, which provided the Contractor, Central Valley

1 Project water from the _____ from _____ to
2 _____ and

3 WHEREAS, the Contractor and the United States entered into interim renewal
4 contract(s) identified as Contract No(s). _____, the latter of which is
5 hereinafter referred to as the Existing Interim Renewal Contract, which provided Project Water
6 to the Contractor from _____ through _____; and

7 WHEREAS, the Contractor has requested a subsequent interim renewal contract
8 pursuant to the Existing Interim Renewal Contract, Federal Reclamation law and the laws of the
9 State of California, for water service from the Central Valley Project; and

10 WHEREAS, the United States and the Contractor believe that either further
11 negotiations on a long-term renewal contract for the Contractor would be beneficial and mutually
12 commit to continue to negotiate to seek to reach agreement or the Contractor's proposed long-
13 term renewal contract's required environmental review necessary to execute a long-term renewal
14 contract has not been completed, and the Contractor has requested a subsequent interim renewal
15 contract pursuant to Article 2 (b)(1) of the existing Interim Renewal Contract; and

16 WHEREAS, the United States has determined that the Contractor has to date
17 fulfilled all of its obligations under the Existing Interim Renewal Contract; and

18 WHEREAS, The Contracting Officer has determined that the Contractor has the
19 capability to fully utilize for reasonable and beneficial use, or shown projected future reasonable
20 and beneficial use for, the quantity of Project Water to be made available to it pursuant to this
21 interim renewal contract; and

1 [DISTRICT ISSUE] WHEREAS, rights of renewal of Contract No.
2 _____ and to convert said contract to a contract as provided by subsection (d),
3 Section 9 of the Act of August 4, 1939 (53 Stat. 1187), are set forth in said contract; and

4 WHEREAS, Section 3404 of the CVPIA, precludes long-term renewal of water
5 service contracts until the completion of appropriate environmental documentation, including a
6 programmatic environmental impact statement ("PEIS") pursuant to the National Environmental
7 Policy Act analyzing the direct and indirect impacts and benefits of implementing the CVPIA
8 and the potential renewal of all existing contracts for Project Water; and

9 WHEREAS, in order to continue water service provided under Project water
10 service contracts that expire prior to the completion of the PEIS, the United States intends to
11 execute interim renewal contracts for a period not to exceed three (3) Years in length, and for
12 successive interim periods of not more than two (2) Years in length, until appropriate
13 environmental documentation, including the PEIS, is finally completed, at which time the
14 Secretary shall, pursuant to Federal Reclamation law, upon request of the Contractor, enter into a
15 long-term renewal contract for a period of twenty-five (25) Years; and may thereafter renew such
16 long-term renewal contracts for successive periods not to exceed twenty-five (25) Years each;
17 and

18 WHEREAS, the Secretary intends to assure uninterrupted water service and
19 continuity of contract through the process set forth in Article 2 hereof; and

1 WHEREAS, the United States is willing to renew the Existing Interim Renewal
2 Contract pursuant to Section 3404(c)(1) of the CVPIA on the terms and conditions set forth
3 below;

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

6 DEFINITIONS

7 1. When used herein unless otherwise distinctly expressed, or manifestly
8 incompatible with the intent hereof, the term:

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

11 (b) "Charges" shall mean the payments in addition to the Rates determined
12 annually by the Contracting Officer, required by the Federal Reclamation law, including
13 Section 3407 of the CVPIA;

14 (c) [District Issue] "Contractor's Service Area/boundaries" shall mean the
15 area to which the Contractor is permitted to provide Project Water under this interim
16 renewal contract;

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

19 (e) "Delivered Water" shall mean Project Water made available to
20 the Contractor and diverted at the point(s) of delivery approved by the Contracting
21 Officer;

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

4 (g) "Excess Lands" shall mean all lands defined as excess in
5 Section 204 of the RRA, other than those lands exempt from acreage limitation under
6 Federal Reclamation law;

7 (h) "Full Cost Rate" shall mean that water rate described in Sections 205(a)(3)
8 or 202(3) of the RRA, whichever is applicable;

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

11 (j) "Irrigation Water" shall mean Project Water which is used primarily
12 in the production of agricultural crops or livestock, including domestic use
13 incidental thereto, and watering of livestock;

14 (k) "Landholder" shall mean an individual or entity attributed with the total
15 irrigable acreage of one or more tracts of land situated in one or more districts owned
16 and/or operated under a lease which is served with Irrigation Water pursuant to a contract
17 with the United States;

18 (l) "M&I Water" shall mean water made available from the Project other than
19 Irrigation Water. M&I Water shall include water used for purposes such as the watering
20 of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment
21 or water delivered to landholding operated in units of less than _____ acres unless the

1 Contractor establishes to the satisfaction of the Contracting Officer that the use of water
2 delivered to any such landholding is a use described in subdivision (j) of this Article;

3 (m) "O&M" shall mean normal and reasonable care, control, operation, repair,
4 replacement, and maintenance of Project facilities;

5 (n) "Operating Non-Federal Entity" shall mean a Non-Federal entity which
6 has the obligation to operate and maintain all or a portion of the [Division] facilities
7 pursuant to an agreement with the United States;

8 (o) "Project" shall mean the Central Valley Project owned by the
9 United States and operated by the Department of the Interior, Bureau of Reclamation;

10 (p) "Project Water" shall mean all water that is developed, diverted, stored, or
11 delivered by the United States in accordance with the statutes authorizing the Project and
12 in accordance with the terms and conditions of applicable water rights permits and
13 licenses acquired by and/or issued to the United States pursuant to California law;

14 (q) "Rates" shall mean the payments determined annually by the Contracting
15 Officer in accordance with the then current applicable water ratesetting policies for the
16 Project;

17 (r) "Secretary" or "Contracting Officer" shall mean the Secretary of the
18 United States Department of the Interior or his duly authorized representative;

19 (s) "Year" shall mean the period from and including March 1 of
20 each Calendar Year through the last day of February of the following Calendar Year;

21 TERM OF CONTRACT - RIGHT TO USE OF WATER

1 2. (a) This interim renewal contract shall be effective from March 1, 2001
2 shall remain in effect through February 28, 2002, and thereafter will be renewed as described in
3 this article. Except as provided in subdivision (b) of this Article, until completion of all
4 appropriate environmental review, and provided that the Contractor has complied with all the
5 terms and conditions of the interim renewal contract in effect for the period immediately
6 preceding the requested successive interim renewal contract, this interim renewal contract will be
7 renewed, upon request of the Contractor, for successive interim periods each of which shall be no
8 more than two (2) Years in length. Also, except as provided in subdivision (b) of this Article, in
9 order to promote orderly and cost effective contract administration, the terms and conditions in
10 subsequent interim renewal contracts shall be identical to the terms and conditions in the interim
11 renewal contract immediately preceding the subsequent interim renewal contract: Provided,
12 however, That each party preserves the right to propose modification(s) in any interim renewal
13 contract other than those described in subdivision (b) of this Article, in which case the parties
14 shall negotiate in good faith appropriate modification(s) to be included in any successive interim
15 renewal contracts. Said modification(s) of each successive interim renewal contract shall be
16 agreed upon within a reasonable time prior to the expiration of the then existing interim renewal
17 contract. Nothing in this Article shall in any way alter the obligation that, upon final completion
18 of the PEIS and any necessary supplemental environmental documentation, the Secretary shall,
19 pursuant to Federal Reclamation law, upon request of the Contractor, enter into a long-term
20 renewal contract for a period of twenty-five (25) Years and may thereafter renew such long-term
21 renewal contracts for successive periods not to exceed twenty-five (25) Years each. The
22 Contractor asserts that Contract No. _____ and existing law go beyond the preceding

1 sentence to give it enforceable rights to successive long-term renewal contracts. The Contracting
2 Officer disagrees with that assertion. The parties agree that this interim renewal contract
3 preserves the rights and positions of the parties and that the omission of language in this interim
4 renewal contract setting out the rights asserted by the Contractor to successive renewals is not
5 intended to be, nor shall it be interpreted as, a waiver of any such rights to the extent any such
6 rights are later determined to exist by a court of competent jurisdiction or by mutual agreement
7 of the parties. If a court of competent jurisdiction or the parties by mutual agreement determine
8 that incorporation of such language in this interim renewal contract is necessary to preserve such
9 rights, this interim renewal contract shall be construed as incorporating such language as though
10 fully set forth herein as of the effective date hereof.

11 (b) The parties anticipate that they will engage in good faith negotiations
12 intended to permit the execution of a twenty-five (25) Year long-term renewal contract
13 contemplated by Section 3404 (c) of the CVPIA, hereinafter referred to as a "long-term renewal
14 contract", by the end of the term hereof. The parties recognize the possibility that this schedule
15 may not be met. Accordingly:

16 (1) In the event (i) the Contractor and Contracting Officer have
17 reached agreement on the terms of the Contractor's long-term renewal contract or (ii) the
18 Contractor and Contracting Officer have not completed the negotiations on the Contractor's
19 long-term renewal contract, believe that further negotiations on that contract would be beneficial,
20 and mutually commit to continue to negotiate to seek to reach agreement, but (iii) all
21 environmental documentation required to allow execution of the Contractor's long-term renewal

1 contract by both parties has not been completed in time to allow execution of the Contractor
2 long-term renewal contract by November 30, 2001, then (iv) the parties will expeditiously
3 complete the environmental documentation required of each of them in order to execute the
4 Contractor's long-term renewal contract at the earliest practicable date. In addition, the
5 Contractor's then current interim renewal contract will be renewed without change upon the
6 request of either party through the agreed-upon effective date of the Contractor's long-term
7 renewal contract or, in the absence of agreement on the terms of the Contractor's long-term
8 renewal contract, through the succeeding February 28.

9 (2) Provided that this interim renewal contract is not subject to
10 renewal under the terms described in subdivision (1) of this Article, if a party determines that the
11 parties have reached an impasse which they have been unable to resolve and which precludes
12 agreement on the long-term renewal contract, that party may notify the other that it has
13 concluded that there is no reasonable likelihood of reaching agreement on the terms of a
14 long-term renewal contract prior to November 1, 2001. In the event of such notice, the parties
15 will immediately agree to a schedule and process for negotiating the terms (other than any terms
16 that would impair continuity of water supply or continuity of contract) of and executing an
17 interim renewal contract; provided that neither party will propose for inclusion in the interim
18 renewal contract any provision not previously included in an existing interim renewal contract
19 which it had previously proposed for inclusion in the long-term renewal contract and which was
20 the subject of an impasse in the long-term renewal contract negotiations. The schedule will
21 provide for completion of the negotiations of the terms of that contract by February 1, 2002, and

1 for execution of the contract on or about February 15, 2002. The parties each acknowledge the
2 right of either party to seek judicial relief in connection with any impasse reached in connection
3 with negotiation of the long-term renewal contract and/or an interim renewal contract that would
4 become effective on or after February 28, 2002.

5 (c) The parties acknowledge that the Contractor asserts that it is entitled as a
6 matter of law to an interim renewal contract of longer duration than twelve (12) months, and that
7 the Contracting Officer asserts that it is under no obligation to provide the Contractor with an
8 interim renewal contract of any particular duration. Accordingly, the parties further
9 acknowledge that (i) the foregoing process represents a mutual accommodation to facilitate their
10 joint desire to proceed with the development of a long-term renewal contract in an expeditious
11 and orderly manner, (ii) they each preserve their respective rights and positions relative to the
12 entitlement of the Contractor to subsequent interim renewal contracts should they become
13 necessary, and the terms thereof, and (iii) their agreement to the process and interim renewal
14 contract terms described above is in no way intended to be, nor will it be interpreted as, a waiver
15 of any such rights or positions, all of which are and will be expressly preserved.

16 (d) [DISTRICT ISSUE] The omission of language in this interim renewal
17 contract providing for conversion of this interim renewal contract or any subsequent renewals
18 thereof to a repayment contract, pursuant to the Act of July 2, 1956 (70 Stat. 483), shall not
19 prejudice the Contractor's right to assert a right to have such language included in subsequent
20 renewals of this interim renewal contract or to exercise such conversion, all as provided by law,

1 or to negotiate the language regarding such conversion to be included in subsequent renewa'
2 contracts.

3 WATER TO BE MADE AVAILABLE AND DELIVERED TO THE CONTRACTOR

4 3. (a) Subject to the provisions set forth in Articles 11 and 12 hereof, and
5 consistent with applicable State water rights, permits and licenses, the Contractor is entitled to,
6 and the Contracting Officer shall be obligated to make available to the Contractor up to _____
7 acre-feet of Project Water for irrigation and/or municipal and industrial purposes during the term
8 of this interim renewal contract. The quantity of Project Water delivered to the Contractor in
9 accordance with this Article 3(a) in any Year shall be scheduled and paid for pursuant to the
10 provisions of Articles 4 and 7 hereof, and shall not exceed the quantity of Project Water the
11 Contractor intends to put to reasonable beneficial use within the Contractor's Service
12 Area/boundaries or sold, transferred, or exchanged pursuant to Article 9 during the term of thi.
13 interim renewal contract.

14 (b) The Contractor shall utilize the Project Water made available to it pursuant
15 to this interim renewal contract in accordance with all applicable requirements of any Biological
16 Opinion addressing the execution of this interim renewal contract developed pursuant to Section
17 7 of the Endangered Species Act of 1973 as amended, and in accordance with environmental
18 documentation as may be required for specific activities, including conversion of Irrigation
19 Water to M&I Water.

20 (c) The Contractor shall make reasonable and beneficial use of Project Water
21 or other water furnished pursuant to this interim renewal contract. [Divisional Issue] In addition,

1 use of Project Water in a ground-water recharge program shall be permitted under this contract to
2 the extent that it is carried out in accordance with California law; Provided, however, that such
3 ground-water recharge program cannot be undertaken unless and until the Contractor submits a
4 ground-water management plan pursuant to California law that demonstrates that such ground-
5 water recharge program will result in a reasonable and beneficial use of such water.

6 (d) If the Contracting Officer determines that Project Water, or other water
7 available to the Project, can be made available to the Contractor in addition to the quantity of
8 Project Water made available to the Contractor pursuant to subdivision (a) of this Article, the
9 Contracting Officer shall so notify the Contractor. If the Contractor requests the delivery of any
10 quantity of such water, the Contracting Officer shall make such water available to the Contractor
11 in accordance with applicable statutes, regulations, guidelines, and policies.

12 (e) [DIVISIONAL ISSUE] If the Contractor requests permission to
13 reschedule for use during the subsequent Year some or all of the Project Water made available to
14 the Contractor during the current Year or to use, during the current Year, that quantity of Project
15 Water the United States has agreed to make available to the Contractor during the subsequent
16 Year, the Contracting Officer may permit such uses in accordance with applicable statutes,
17 regulations, guidelines, and policies.

18 (f) The Contractor's right pursuant to Federal Reclamation law and applicable
19 State law to the beneficial use of water furnished pursuant to this interim renewal contract, any
20 subsequent interim renewal contract and, as described in Article 2(a), any long-term renewal
21 contract, shall not be disturbed so long as the Contractor shall fulfill all of its obligations under

1 this interim renewal contract and any such renewal thereof. Nothing in the preceding sentence
2 shall affect the Contracting Officer's ability to impose shortages under subdivision (b) of Article
3 12 of this interim renewal contract and the applicable provisions of any such renewal thereof.

4 (g) Notwithstanding subdivisions (j) and (l) of Article 1, Project Water
5 furnished to the Contractor pursuant to this interim renewal contract may be delivered for
6 purposes other than those described in subdivisions (j) and (l) of Article 1 upon written approval
7 by the Contracting Officer in accordance with the terms and conditions of such approval.

8 TIME FOR DELIVERY OF WATER

9 4. (a) On or about February 15, of each Calendar Year, the Contracting Officer
10 shall declare the amount of Project Water estimated to be made available to the Contractor
11 pursuant to this interim renewal contract for the upcoming Year. The declaration will be updated
12 monthly, as necessary, based on current hydrologic conditions. The Contracting Officer shall
13 make available the forecast of Project operations, with relevant supporting information, upon the
14 written request of the Contractor or its representatives. Upon written request of the Contractor,
15 the Contracting Officer shall provide the basis of the estimate which shall include, but not be
16 limited to, a monthly pumping forecast for the O'Neill Pumping Plant, the projected carryover of
17 Project reservoirs, projected CVPLA impacts, projected Endangered Species Act, and all other
18 regulatory impacts.

19 (b) On or before each March 1, the Contractor shall submit to the Contracting
20 Officer and at such other times as necessary, a written schedule, satisfactory to the Contracting
21 Officer, showing the times, and quantities of Project Water to be delivered by the United States

1 to the Contractor during the upcoming Year pursuant to this interim renewal contract, and,
2 consistent with subdivision (a) of Article 3 herein.

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

8 POINT OF DIVERSION AND RESPONSIBILITY FOR DISTRIBUTION OF WATER

9 5. (a) The Project Water to be furnished to the Contractor pursuant to this
10 interim renewal contract shall be made available to the Contractor at _____ and
11 any additional point or points of delivery either on Project facilities or another location or
12 locations mutually agreed to in writing by the Contracting Officer and the Contractor.

13 (b) [DISTRICT ISSUE] The Contracting Officer shall make all reasonable
14 efforts to maintain sufficient flows and levels of water in the _____ Canal to
15 furnish Project Water to the Contractor at the turnout(s) established as a delivery point(s)
16 pursuant to (a) of this Article.

17 (c) Irrigation Water furnished to the Contractor pursuant to this interim
18 renewal contract shall be delivered by the Contractor in accordance with any applicable land
19 classification provisions of Federal Reclamation law and the associated regulations. Project
20 Water shall not be delivered to land outside the Contractor's Service Area/boundaries unless
21 approved in advance by the Contracting Officer.

1 (d) All Project Water delivered to the Contractor pursuant to this interim
2 renewal contract shall be measured and recorded with equipment furnished, installed, operated,
3 and maintained by the United States or the responsible Operating Non-Federal Entity at the point
4 or points of delivery established pursuant to subdivision (a) of this Article. Upon the request of
5 either party to this interim renewal contract, the Contracting Officer shall investigate the
6 accuracy of such measurements and shall take any necessary steps to adjust any errors appearing
7 therein. The Contractor shall advise the Contracting Officer on or before the 10th calendar day
8 of each month of the quantity of M&I Water taken during the preceding month.

9 (e) Neither the United States nor any Operating Non-Federal Entity shall be
10 responsible for the control, carriage, handling, use, disposal, or distribution of Project Water
11 made available to the Contractor pursuant to this interim renewal contract beyond the delivery
12 points specified in subdivision (a) of this Article. The Contractor shall indemnify the United
13 States its officers, employees, agents, and assigns on account of damage or claim of damage of
14 any nature whatsoever for which there is legal responsibility, including property damage,
15 personal injury, or death arising out of or connected with the control, carriage, handling, use,
16 disposal, or distribution of such Project Water beyond such delivery points, except for any
17 damage or claim arising out of (i) acts performed by the United States or any of its officers,
18 employees, agents, or assigns, including any responsible Operating Non-Federal Entity, with the
19 intent of creating the situation resulting in any damage or claim, (ii) willful misconduct of the
20 United States or any of its officers, employees, agents, or assigns, including any responsible

1 Operating Non-Federal Entity, or (iii) negligence of the United States or any of its officers,
2 employees, agents, or assigns including any responsible Operating Non-Federal Entity.

3 MEASUREMENT OF WATER WITHIN THE DISTRICT

4 6. (a) [Contract Unique Issue] The Contractor shall ensure that, unless the
5 Contractor has established an alternative measurement program satisfactory to the Contracting
6 Officer, all surface water delivered for irrigation purposes within the Contractor's Service
7 Area/boundaries is measured at each agricultural turnout and such water delivered for municipal
8 and industrial purposes is measured at each municipal and industrial service connection. All
9 water measuring devices or water measuring methods of comparable effectiveness must be
10 acceptable to the Contracting Officer. The Contractor shall be responsible for installing,
11 operating, and maintaining and repairing all such measuring devices and implementing all such
12 water measuring methods at no cost to the United States. The Contractor shall use the
13 information obtained from such water measuring devices or water measuring methods to ensure
14 proper management of the water; to bill water users for water delivered by the Contractor; and, if
15 applicable, to record water delivered for municipal and industrial purposes by customer class as
16 defined in its water conservation plan. Nothing herein contained, however, shall preclude the
17 Contractor from establishing and collecting any charges, assessments, or other revenues
18 authorized by California law. The Contractor shall include a summary of its annual surface
19 water deliveries in the annual report described in subdivision (d) of Article 25.

20 (b) [Contract Unique Issue] To the extent the information has not otherwise
21 been provided, upon execution of this interim renewal contract, the Contractor shall provide to

1 the Contracting Officer a written report describing the measurement devices or water measur
2 methods used or to be used to implement subdivision (a) of this Article and identifying the
3 agricultural turnouts and the municipal and industrial service connections or alternative
4 measurement programs approved by the Contracting Officer, at which such measurement devices
5 or water measuring methods are being used, and, if applicable, identifying the locations at which
6 such devices and/or methods are not yet being used including a time schedule for implementation
7 at such locations. The Contracting Officer shall advise the Contractor in writing within ninety
8 (90) days as to the adequacy of, and necessary modifications, if any, of the measuring devices or
9 water measuring methods identified in the Contractor's report and if the Contracting Officer does
10 not respond in such time, they shall be deemed adequate. Within six (6) months following the
11 Contracting Officer's response, the parties shall negotiate in good faith the earliest practicable
12 date by which the Contractor shall modify said measuring devices and/or measuring methods a
13 required by the Contracting Officer to ensure compliance with subdivision (a) of this Article.

14 (c) All new surface water delivery systems installed within the Contractor's
15 Service Area/boundaries after the effective date of this interim renewal contract shall also
16 comply with the measurement provisions described in subdivision (a) of this Article.

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

20 RATES AND METHOD OF PAYMENT FOR WATER

1 7. (a) The Contractor shall pay the United States in monthly payments as
2 provided in this Article for the quantities of Delivered Water furnished to the Contractor pursuant
3 to this interim renewal contract. Such payments shall consist of the applicable Rates and
4 Charges determined annually in accordance with applicable Federal law and associated
5 regulations. The Rates and Charges applicable upon execution of this interim renewal contract
6 are set forth in Exhibit "A."

7 (b) The Contracting Officer shall notify the Contractor of the Rates and
8 Charges as follows:

9 (1) Prior to July 1, of each Calendar Year, the Contracting Officer
10 shall provide the Contractor the preliminary calculation of the Charges that will be applied for
11 the period October 1 of the current Calendar Year, through September 30, of the following
12 Calendar Year, and identify the statutes, regulations and guidelines used as the basis for such
13 calculations. On or before September 15 of each Calendar Year, the Contracting Officer shall
14 notify the Contractor in writing of the Charges to be in effect during the period October 1 of the
15 current Calendar Year, through September 30 of the following Calendar Year, and such
16 notification shall revise Exhibit "A."

17 (2) Prior to October 1 of each Calendar Year, the Contracting Officer
18 shall make available to the Contractor an estimate of the Rates of payment for the following Year
19 and the computations and cost allocations upon which those Rates are based. The Contractor
20 shall be allowed not less than two months to review and comment on such computations and cost
21 allocations. By December 31 of each Calendar Year, the Contracting Officer shall provide the

1 Contractor with the final Rates to be in effect for the upcoming Year, and such notification
2 revise Exhibit "A."

3 (c) At the time the Contractor submits the initial schedule for the delivery of
4 Project Water for each Year pursuant to subdivision (b) of Article 4 of this interim renewal
5 contract, the Contractor shall pay the United States the total amount payable pursuant to the
6 applicable Rate(s) for all Project Water scheduled to be delivered pursuant to this interim
7 renewal contract during the first two (2) calendar months of the Year. Before the end of the first
8 month or part thereof of the Year, and before the end of each calendar month thereafter, the
9 Contractor shall pay pursuant to the applicable Rate(s) for all Project Water scheduled to be
10 delivered pursuant to this interim renewal contract during the second month immediately
11 following. Adjustments between the payments for the scheduled amount of Project Water and
12 the appropriate payments for quantities of Delivered Water furnished pursuant to this interim
13 renewal contract each month shall be made before the end of the following month: Provided,
14 That any revised schedule submitted by the Contractor pursuant to Article 4 which increases the
15 amount of Project Water to be delivered pursuant to this interim renewal contract during any
16 month shall be accompanied with appropriate payment for Rates to assure that Project Water is
17 not furnished to the Contractor in advance of such payment. In any month in which the quantity
18 of Delivered Water furnished to the Contractor pursuant to this interim renewal contract equals
19 the quantity of Project Water scheduled and paid for by the Contractor, no additional Project
20 Water shall be made available to the Contractor unless and until payment of Rates for such
21 additional Project Water is made. Final adjustment between the payments of Rates for the

1 Project Water scheduled and the quantities of Delivered Water furnished during each Year
2 pursuant to its contract shall be made as soon as possible but no later than April 30th of the
3 following Year.

4 (d) The Contractor shall pay all Charges owing for Delivered Water before the
5 end of the month following the month of delivery. Such amounts shall be consistent with the
6 quantities of Irrigation Water and M&I Water shown in the United States' water delivery report
7 for the subject month. The water delivery report shall be regarded by the Contractor as a bill for
8 the payment of appropriate Charges. Any monthly adjustment for overpayment or underpayment
9 of Charges shall be accomplished through the adjustment of Charges due to the United States in
10 the next month. By March 31, of each Year, the Contractor shall make any additional payment
11 of Charges it is obligated to make for Delivered Water furnished to the Contractor pursuant to its
12 contract for the previous Year. The amount to be paid for past due payment of Charges shall be
13 computed pursuant to Article 19 of this interim renewal contract.

14 (e) The Contractor shall pay for any Project Water provided under subdivision
15 (d) or (e) of Article 3 as determined by the Contracting Officer pursuant to applicable statutes,
16 regulations, guidelines, and policies.

17 (f) Payments to be made by the Contractor to the United States under this
18 interim renewal contract may be paid from any revenues available to the Contractor.

19 (g) Revenues received by the United States pursuant to this interim renewal
20 contract shall be allocated and applied in accordance with Federal Reclamation law, including
21 but not limited to, subsection 3 of Section 1 of the Act of July 2, 1956 (70 Stat. 483), and

1 subsection (f) of Section 3405, subsection (c)(1) of Section 3406 and subsection (d)(2)(A) c
2 Section 3407 of the CVPIA, and the associated regulations, including but not limited to, the
3 Project Irrigation Water ratesetting policy and the Project M&I ratesetting policy promulgated
4 pursuant to the Administrative Procedures Act.

5 (h) At the Contractor's request, the Contracting Officer shall provide to the
6 Contractor an accounting of all of the expenses allocated and the disposition of all revenues
7 received pursuant to this interim renewal contract in sufficient detail to allow the Contractor to
8 determine that the allocation of expenses and disposition of all revenues received was
9 accomplished in conformance with Federal Reclamation law and the associated regulations. The
10 Contracting Officer and the Contractor shall enter into good faith negotiations to resolve any
11 discrepancies or disputes arising out of said accounting of the Contractor's review thereof.

12 (i) The parties acknowledge and agree that the efficient administration of this
13 interim renewal contract is their mutual goal. Recognizing that experience has demonstrated that
14 mechanisms, policies, and procedures used for establishing Rates and Charges, and/or for
15 making and allocating payments, other than those set forth in this Article would be in the mutual
16 best interest of the parties, it is expressly agreed that the parties may enter into agreements for
17 alternative mechanisms, policies, and procedures for any of those purposes while this interim
18 renewal contract is in effect without amending this contract.

19 NON-INTEREST BEARING OPERATION AND MAINTENANCE DEFICITS

20 8. [Contract Unique Issue] The Contractor and the Contracting Officer have entered
21 into a written agreement specifying a mutually acceptable mechanism through which the

1 Contractor will retired its outstanding non-interest bearing operation and maintenance deficits.
2 [Alternative Language] The Contractor and the Contracting Officer concur that at the time of
3 execution of this interim renewal contract, the Contractor has no non-interest bearing operation
4 and maintenance deficits and shall have no further liability therefor.

5 TRANSFERS OR EXCHANGES OF WATER

6 9. The right to Project Water provided for in this interim renewal contract may be
7 sold, transferred, or exchanged to others for beneficial uses within the State of California if such
8 sale, transfer or exchange is authorized by applicable Federal laws, State laws, and applicable
9 guidelines or regulations then in effect. The right to sell, transfer, or exchange Project Water
10 shall include, and the Contracting Officer shall apply this Article in a manner that does not
11 impede or restrict, lawful short-term sales, transfers, or exchanges of the type the Contractor
12 historically carried out with approval of the Contracting Officer under Contract No.
13 _____. No sale, transfer, or exchange of the right to Project Water under this
14 interim renewal contract may take place without the prior written approval of the Contracting
15 Officer.

16 APPLICATION OF PAYMENTS AND ADJUSTMENTS

17 10. (a) The amount of any overpayment by the Contractor shall be applied first to
18 any accrued indebtedness arising out of this interim renewal contract then due and payable by the
19 Contractor. Any amount of such overpayment then remaining shall, at the option of the
20 Contractor, be refunded to the Contractor or credited upon amounts to become due to the United
21 States from the Contractor under the provisions hereof in the following months. With respect to

1 overpayment, such adjustment shall constitute the sole remedy of the Contractor or anyone
2 having or claiming to have the right to the use of any of the water supply provided for herein.

3 (b) All advances for miscellaneous costs incurred for work requested by the
4 Contractor pursuant to Article 24 shall be adjusted to reflect the actual costs when the work has
5 been completed. If the advances exceed the actual costs incurred, the difference will be refunded
6 to the Contractor. If the actual costs exceed the Contractor's advances, the Contractor will be
7 billed for the additional costs pursuant to Article 24.

8 TEMPORARY REDUCTIONS--RETURN FLOWS

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

13 (b) The United States may temporarily discontinue or reduce the quantity of
14 Project Water to be delivered to the Contractor as herein provided for the purposes of
15 investigation, inspection, maintenance, repair, or replacement of any of the Project facilities or
16 any part thereof necessary for the delivery of Project Water to the Contractor, but so far as
17 feasible the Contracting Officer will give the Contractor due notice in advance of such temporary
18 discontinuance or reduction, except in case of emergency, in which case no notice need be given:
19 Provided, That the United States shall use its best efforts to avoid any discontinuance or
20 reduction in such service. Upon resumption of service after such reduction or discontinuance,
21 and if requested by the Contractor, the United States will, if possible, deliver the quantity of

1 Project Water, which would have been delivered hereunder in the absence of such discontinuance
2 or reduction: Provided further, That with respect to any quantity of Project Water not delivered
3 after a discontinuance or reduction the Contractor shall be relieved of its scheduling and payment
4 obligations for such quantity of Project Water.

5 (c) The United States reserves the right to all seepage and return flow water
6 derived from water delivered to the Contractor hereunder which escapes or is discharged beyond
7 the Contractor's Service Area/boundaries: Provided, That this shall not be construed as claiming
8 for the United States any right to seepage or return flow being put to reasonable and beneficial
9 use pursuant to this interim renewal contract within the Contractor's Service Area/boundaries by
10 the Contractor or those claiming by, through, or under the Contractor.

11 WATER SHORTAGE AND APPORTIONMENT

12 12. (a) In its operation of the Project, the Contracting Officer will use all
13 reasonable means to guard against a condition of shortage in the quantity of water to be made
14 available to the Contractor pursuant to this contract. Insofar as determined by the Contracting
15 Officer to be practicable, the Contracting Officer will, in the event a shortage appears probable,
16 notify the Contractor of such determinations as soon as possible.

17 (b) If there is a reduction in the total water supply available to the Contractor
18 during any Year because of errors in physical operations of the Project, drought, other physical
19 causes beyond the control of the Contracting Officer or actions taken by the Contracting Officer
20 to meet legal obligations, no liability shall accrue against the United States or any of its officers,
21 agents, or employees for any damage, direct or indirect, arising therefrom, so long as actions

1 based upon the opinions or determinations of the Contracting Officer are consistent with the
2 standards in Article 18.

3 (c) In any Year in which there may occur a shortage for any of the reasons
4 specified in subdivision (b) above, the Contracting Officer shall apportion the available Project
5 Water supply among the Contractor and others entitled, under existing contracts and future
6 contracts (to the extent such future contracts are permitted under subsections (a) and (b) of
7 Section 3404 of the CVPIA) and renewals thereof, to receive Project Water consistent with the
8 contractual obligations of the United States.

9 (d) [Divisional Issue].

10 UNAVOIDABLE GROUND-WATER PERCOLATION

11 13. The Contractor shall not be deemed to have furnished Irrigation Water to Excess
12 Lands or Ineligible Lands within the meaning of this interim renewal contract if such lands are
13 irrigated with ground water that reaches the underground strata as an unavoidable result of the
14 furnishing of Irrigation Water by the Contractor to Eligible Lands.

15 COMPLIANCE WITH FEDERAL RECLAMATION LAW

16 14. This interim renewal contract shall be implemented in accordance with all
17 applicable provisions of Federal Reclamation law, as-amended and supplemented.

18 WATER AND AIR POLLUTION CONTROL

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

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17. Water or water rights now owned or hereafter acquired by the Contractor other than from the United States and Irrigation Water furnished pursuant to the terms of this interim renewal contract may be simultaneously transported through the same distribution facilities of the Contractor subject to the following: (i) if the facilities utilized for commingling Irrigation Water and non-Project water were constructed without funds made available pursuant to Federal Reclamation law, the provisions of Federal Reclamation law will be applicable only to the Landholders of lands which receive Irrigation Water; (ii) the eligibility of land to receive Irrigation Water must be established through the certification requirements as specified in the Acreage Limitation Rules and Regulations (43 CFR Part 426); (iii) the water requirements of Eligible Lands within the Contractor's Service Area/boundaries can be established and the quantity of Irrigation Water to be utilized is less than or equal to the quantity necessary to irrigate such Eligible Lands; and (iv) if the facilities utilized for commingling Irrigation Water and non-Project water are constructed with funds made available pursuant to Federal Reclamation law, the non-Project water will be subject to Federal Reclamation law, until such funds have been repaid.

OPINIONS AND DETERMINATIONS

17 18. (a) Where the terms of this interim renewal contract provide for actions to be
18 based upon the opinion or determination of either party to this contract, said terms shall not be
19 construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable
20 opinions or determinations. Both parties, notwithstanding any other provisions of this contract,
21 expressly reserve the right to seek relief from and appropriate adjustment, including monetary

1 damages, for any such arbitrary, capricious, or unreasonable opinion or determination. Each
2 opinion or determination by either party shall be provided in a timely manner.

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

8 CHARGES FOR DELINQUENT PAYMENTS

9 19. (a) The Contractor shall be subject to interest, administrative, and penalty
10 charges on delinquent installments or payments. When a payment is not received by the due
11 date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond
12 the due date. When a payment becomes 60 days delinquent, the Contractor shall pay an
13 administrative charge to cover additional costs of billing and processing the delinquent payment.
14 When a payment is delinquent 90 days or more, the Contractor shall pay an additional penalty
15 charge of 6 percent per year for each day the payment is delinquent beyond the due date.
16 Further, the Contractor shall pay any fees incurred for debt collection services associated with a
17 delinquent payment.

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

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

26 EQUAL OPPORTUNITY

27 20. During the performance of this contract, the Contractor agrees as follows:

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

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

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

21 (4) The Contractor will comply with all provisions of Executive Order
22 No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and
23 relevant orders of the Secretary of Labor.

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

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

1 (7) The Contractor will include the provisions of paragraphs (1) through (7) in
2 every subcontract or purchase order unless exempted by the rules, regulations, or orders
3 of the Secretary of Labor issued pursuant to Section 204 of said amended Executive
4 Order, so that such provisions will be binding upon each subcontractor or vendor. The
5 Contractor will take such action with respect to any subcontract or purchase order as may
6 be directed by the Secretary of Labor as a means of enforcing such provisions, including
7 sanctions for noncompliance: Provided, however, That in the event the Contractor
8 becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a
9 result of such direction, the Contractor may request the United States to enter into such
10 litigation to protect the interests of the United States.

11 GENERAL OBLIGATION--BENEFITS
12 CONDITIONED UPON PAYMENT

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

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

23 COMPLIANCE WITH CIVIL RIGHTS LAWS
24 AND REGULATIONS

25 22. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964
26 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the
27 Age Discrimination Act of 1975 (42 U.S.C. 6101, et.seq.) and any other applicable civil rights
28 laws, as well as with their respective implementing regulations and guidelines imposed by the
29 U.S. Department of the Interior and/or Bureau of Reclamation.

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

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

9 PRIVACY ACT COMPLIANCE

10 23. (a) The Contractor shall comply with the Privacy Act of 1974 (5 U.S.C. 552a)
11 (the Act) and the Department of the Interior rules and regulations under the Act (43 CFR 2.45 et
12 seq.) in maintaining landholder acreage certification and reporting records, required to be
13 submitted to the Contractor for compliance with Sections 206 and 228 of the Reclamation
14 Reform Act of 1982 (96 Stat. 1266), and pursuant to 43 CFR 426.10.

15 (b) With respect to the application and administration of the criminal penalty
16 provisions of the Act (5 U.S.C. 552a(I)), the Contractor and the Contractor's employees
17 responsible for maintaining the certification and reporting records referenced in (a) above are
18 considered to be employees of the Department of the Interior. See 5 U.S.C. 552a(m).

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

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

28 (e) The Contractor shall forward promptly to the System Manager each
29 proposed denial of access under 43 CFR 2.64; and each request for amendment of records filed
30 under 43 CFR 2.71; notify the requester accordingly of such referral; and provide the System
31 Manager with information and records necessary to prepare an appropriate response to the
32 requester. These requirements do not apply to individuals seeking access to their own
33 certification and reporting forms filed with the Contractor pursuant to 43 CFR 426.10, unless the
34 requester elects to cite the Privacy Act as a basis for the request.

35 CONTRACTOR TO PAY CERTAIN MISCELLANEOUS COSTS

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

WATER CONSERVATION

25. (a) Prior to the delivery of water provided from or conveyed through Federally constructed or Federally financed facilities pursuant to this contract, the Contractor shall be implementing an effective water conservation program based on the Contractor's water conservation plan that has been determined by the Contracting Officer to meet the conservation and efficiency criteria established under Federal law. The water conservation program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives.

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

1 (c) As part of the water conservation program, the Contractor shall develop
2 and be implementing a tiered block water pricing program that promotes conservation and t'
3 efficient management of Project Water during the term of this contract. Such pricing program
4 for Project Water shall take into account all relevant circumstances, including without limitation,
5 water shortages imposed under this interim renewal contract and the availability and cost of the
6 Contractor's and individual water user's non-Project alternative sources of supply, including
7 ground water and other non-Project water supplies, so that the Contractor's pricing structure
8 provides incentives for conservation and the efficient management of overall water supply
9 available to water users served by the Contractor. Provided, That no such tiered block water
10 pricing program need be implemented by the Contractor if the Contracting Officer determines,
11 based on information provided by the Contractor, that (i) such a pricing structure will not result
12 in significant conservation of water available for use within the Contractor's service area,
13 including ground water or (ii) other pricing program, conservation or management measures are
14 more appropriate and/or will result in comparable or better conservation of the water supplies
15 available within the Contractor's boundaries. Provided further, If the Contractor fails to, or elects
16 not to, comply with this subdivision of Article 25, then any subsequent interim renewal contract
17 shall contain a tiered pricing contractual provision pursuant to subsection (d) of Section 3405 of
18 the CVPIA.

19 (d) The Contractor shall submit to the Contracting Officer by
20 December 31, of each Calendar Year, an annual report on the status of its implementation of the
21 water conservation program.

22 EXISTING OR ACQUIRED WATER OR WATER RIGHTS

1 26. Except as specifically provided in Article 17 of this contract, the provisions of this
2 interim renewal contract shall not be applicable to or affect water or water rights now owned or
3 hereafter acquired by the Contractor or any user of such water within the Contractor's Service
4 Area/boundaries from other than the United States by the Contractor. Any such water shall not
5 be considered Project Water under this contract. In addition, this interim renewal contract shall
6 not be construed as limiting or curtailing any rights which the Contractor or any water user
7 within the Contractor's Service Area/boundaries acquires or has available under any other
8 contract pursuant to the Federal Reclamation law.

9 OPERATION AND MAINTENANCE BY NON-FEDERAL ENTITY

10 27.. [DIVISIONAL ISSUE] (a) The responsibility for performing and, in some cases
11 funding the operation and/or maintenance (O&M) of all or any portion or portions of the
12 [division] facilities may be transferred to an Operating-Non-Federal Entity by one or more
13 separate agreements between the United States and the Operating Non-Federal Entity. Any such
14 agreements shall require the Operating Non-Federal Entity to perform the O&M in compliance
15 with the provisions of this Contract and shall not interfere with the rights and obligations of the
16 Contractor or the United States hereunder.

17 (b) If so notified in writing by the Contracting Officer, the Contractor shall
18 pay directly to such Operating Non-Federal Entity in accordance with such notice, (1) that
19 portion of the Rate (s) to be paid the United States pursuant to this Contract which the
20 Contracting Officer determines is the Contractor's appropriate share of the costs of the O&M of
21 the [division] facilities transferred to the Operating Non-Federal Entity for O&M; and (2) all
22 appropriate additional amounts charged or assessed by the Operating Non-Federal Entity for the
23 O&M of the [division] facilities. Such direct payments to such Operating Non-Federal Entity

1 shall not relieve the Contractor of its obligation to pay directly to the United States its allocated
2 share of the remaining costs for the O&M of the Project.

3 CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

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

9 BOOKS, RECORDS, AND REPORTS

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

19 ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

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

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

26 SEVERABILITY

27 31. In the event that a person or entity who is neither (i) a party to a Project interim
28 renewal contract, nor (ii) a person or entity that receives Project Water from a party to a Project
29 interim renewal contract, nor (iii) an association or other form of organization whose primary
30 function is to represent parties to Project interim renewal contracts, brings an action in a court o

1 competent jurisdiction challenging the legality or enforceability of a provision included in this
2 interim renewal contract and said person, entity, association, or organization obtains a final court
3 decision holding that such provision is legally invalid or unenforceable and the Contractor has
4 not intervened in that lawsuit in support of the plaintiff(s), the parties to this interim renewal
5 contract shall use their best efforts to (i) within thirty (30) days of the date of such final court
6 decision identify by mutual agreement the provisions in this interim renewal contract which must
7 be revised, and (ii) within three (3) months thereafter promptly agree on the appropriate
8 revision(s). The time periods specified above may be extended by mutual agreement of the
9 parties. Pending the completion of the actions designated above, to the extent it can do so
10 without violating any applicable provisions of law, the United States shall continue to make the
11 quantities of Project Water specified in this interim renewal contract available to the Contractor
12 pursuant to the provisions of this interim renewal contract, which were not found to be legally
13 invalid or unenforceable in the final court decision.

14 OFFICIALS NOT TO BENEFIT

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

18 CHANGES IN CONTRACTOR'S BOUNDARIES

19 33. While this contract is in effect, no change may be made in the Contractor's
20 boundaries, by inclusion or exclusion of lands, dissolution, consolidation, merger or otherwise,
21 except upon the Contracting Officer's written consent.

22 NOTICES

23 34. Any notice, demand, or request authorized or required by this contract shall be
24 deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or
25 delivered to the Area Manager _____, and on
26 behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors
27 of the _____. The designation of the addressee or the address may
28 be changed by notice given in the same manner as provided in this Article for other notices.

1 IN WITNESS WHEREOF, the parties hereto have executed this interim renewal
2 contract as of the day and year first above written.

3 THE UNITED STATES OF AMERICA

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

7 (SEAL) NAME OF DISTRICT/ENTITY

8 By: _____
9 President

10 Attest:

11 _____
12 Secretary

APPENDIX B(2)

EXISTING

INTERIM RENEWAL CONTRACT SAMPLE

for six Mendota Pool contractors in the Delta-Mendota Canal Unit
(Coelho Family Trust, Fresno Slough WD, James ID, RD 1606,
Tranquillity ID, and Tranquillity PUD)

Irrigation and/or M&I
R.O. Draft 12/12-2003
R.O. Draft 11/06-2003

Contract No. _____

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

INTERIM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND
NAME OF ENTITY/DISTRICT
PROVIDING FOR PROJECT WATER SERVICE

THIS CONTRACT, made this _____ day of _____, 20____, in
pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or
supplementary thereto, including, but not limited to, the acts of August 26, 1937 (50 Stat. 844),
as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented,
July 2, 1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1263), as
amended and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively
hereinafter referred to as Federal Reclamation law, between THE UNITED STATES OF
AMERICA, hereinafter referred to as the United States, and ,
_____ hereinafter referred to as the Contractor, a public
agency of the State of California, duly organized, existing, and acting pursuant to the laws
thereof, with its principal place of business in _____ (City), California;

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the United States and the Contractor entered into an interim renewal
contract identified as Contract No. _____-IR1, from _____ (insert beginning date,
e.g., December 23, 2003) through February 29, 2004, hereinafter referred to as the Existing

Interim Renewal Contract, which provided for the continued water service to the Contractor following expiration of Contract No _____ (insert original contract number);

WHEREAS, the United States and the Contractor have made significant progress in their negotiations of a long-term renewal contract, believe that further negotiations on the long-term renewal contract would be beneficial, and mutually commit to continue to negotiate to seek to reach agreement, but anticipate that the environmental documentation necessary for execution of any long-term renewal contract will be delayed at least an additional 7 months, and may be delayed further for reasons beyond the control of the parties; and

WHEREAS, the Contractor has requested a subsequent interim renewal contract pursuant to Subdivision (b) of Article 2 of the Existing Interim Renewal Contract; and

WHEREAS, the United States has determined that the Contractor has to date fulfilled all of its obligations under the Existing Interim Renewal Contract; and

WHEREAS, the United States is willing to renew the Existing Interim Renewal Contract pursuant to the terms and conditions set forth below;

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

INCORPORATION AND REVISION OF EXISTING INTERIM RENEWAL CONTRACT

1. The terms and conditions of the Existing Interim Renewal Contract are hereby incorporated by reference into this Contract with the same force and effect as if they were included in full text with the exception of Article 2 thereof, which is revised as follows:

(a) The first sentence in Subdivision (a) of Article 2 of the Existing Interim Renewal Contract is modified as follows: "This interim renewal contract shall be effective from March 1, 2004, and shall remain in effect through February 28, 2006, and thereafter will be renewed as described in Subdivision (a) of Article 2 of the Existing Interim Renewal Contract

53 if a long-term renewal contract has not been executed with an effective commencement date of
54 March 1, 2006; Provided, that if a long-term renewal contract has been executed with an effective
55 commencement date of March 1, 2005, this interim renewal contract shall expire on February 28,
56 2005."

57 (b) Subdivision (b) of Article 2 of the Existing Interim Renewal Contract is
58 amended by deleting the date "February 15, 2004," and replacing same with the date
59 "February 15, 2006."

60 (c) Subdivision (c) of Article 2 of the Existing Interim Renewal Contract is
61 amended by deleting the dates "February 1, 2004," "February 15, 2004," and "February 29, 2004,"
62 and replacing same with the dates "February 1, 2006," "February 15, 2006," and "February 28,
63 2006," respectively.

64 IN WITNESS WHEREOF, the parties hereto have executed this interim renewal
65 contract as of the day and year first above written.

66 THE UNITED STATES OF AMERICA

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

70 (SEAL) NAME OF ENTITY/DISTRICT

71 By: _____
72 President

73 Attest:

74

75

Secretary

76 (I:\Interim Renewal Contracts - Drafts, charts, etc.\12 Month IRC 2004 (3-1-04 - 2-28-05).doc)

Supplemental Environmental Assessment for the 2002 Renewal of Interim Water Service Contracts through February 29, 2004

Central Valley Project, California

February 2002

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



CHAPTER 1

PURPOSE AND NEED

1.1 INTRODUCTION

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to execute interim water service contracts for up to a two year period from March 1, 2002 through February 29, 2004. Initial interim contracts will be for a one year period from March 1, 2002 through February 28, 2003. If negotiations and the required environmental review necessary to execute long-term renewals to replace interim contracts is not completed by March 1, 2003, some or all of these interim water service contracts will be renewed for a second year through February 29, 2004. Reclamation has prepared this supplemental Environmental Assessment (EA) to determine if any actions occurring from an extended interim period of up to two years from March 1, 2002 until February 29, 2004 will result in any potential impacts not analyzed in the 1994 EA, the 1998 Supplemental EA, the 2000 Supplemental EA, and the 2001 Supplemental EA. These four previous documents are incorporated by reference into this analysis. Interim renewal of these contracts is necessary to continue delivery of Central Valley Project (CVP) water until the long-term contracts are executed. Contracts proposed for interim renewal are listed in Table 1.

The environmental analysis was developed consistent with regulations and guidance from the Council on Environmental Quality, and in conformance with the analysis provided in *NRDC v. Patterson*, Civ. No. S-88-1658

Table 1 - 2002 Interim Renewal Contracts - Central Valley Project

Division/Contractor	Contract Number	Contract Quantity (acre-feet)
<u>American River Division</u>		
San Juan Water District	14-06-200-152A-IR6	11,200
El Dorado Irrigation District	14-06-200-949-IR6	23,000
El Dorado Irrigation District	14-06-200-7312-IR5	50
<u>Cross Valley Canal</u>		
Fresno, County of	14-06-200-8292A-IR6	3,000
Hills Valley Irrigation District	14-06-200-8466A-IR6	3,346
Kern-Tulare Irrigation District	14-06-200-8601A-IR6	40,000
Lower Tule River Irrigation District	14-06-200-8237A-IR6	31,102
Pixley Irrigation District	14-06-200-8238A-IR6	31,102
Rag Gulch Water District	14-06-200-8367A-IR6	13,300
Tri-Valley Water District	14-06-200-8565A-IR6	1,142
Tulare, County of	14-06-200-8293A-IR6	5,308
<u>Delta Division</u>		
Banta-Carbona Irrigation District	14-06-200-4305A-IR6	25,000
Broadview Water District	14-06-200-8092-IR6	27,000
Centinella Water District	7-07-20-W0055-IR6	2,500
Del Puerto Water District	14-06-200-922-IR8	140,210
Eagle Field Water District	14-06-200-7754-IR6	4,550
Laguna Water District	2-07-20-W0266-IR6	800
Mercy Springs Water District	14-06-200-3365A-IR6-A	7,040
Oro Loma Water District	14-06-200-7823-IR6	4,600
PajaroValley WMA, Westlands WD, Santa Clara VWD	1-06-200-3365A-IR6-B	6,260
Patterson Water District	14-06-200-3598A-IR6	16,500
Plain View Water District	14-06-200-785-IR8	20,600
West Side Irrigation District, The	7-07-20-W0045-IR6	7,500
West Stanislaus Irrigation District	14-06-200-1072-IR8	50,000
Widren Water District	14-06-200-8018-IR6	2,990
<u>Sacramento River Division</u>		
Colusa, County of	14-06-200-8310A-IR6	60,000
Colusa County Water District	14-06-200-304A-IR6	62,200
Corning Water District	14-06-200-6575-IR6	23,000
Davis Water District	14-06-200-6001A-IR6	4,000
Dunnigan Water District	14-06-200-399A-IR6	19,000
Feather Water District	14-06-200-171A-IR7	20,000
Glide Water District	7-07-20-W0040-IR6	10,500
Kanawha Water District	14-06-200-466A-IR6	45,000
Kirkwood Water District	7-07-20-W0056-IR6	2,100
La Grande Water District	7-07-20-W0022-IR6	5,000
Orland-Artois Water District	14-06-200-8382A-IR6	53,000
Proberta Water District	14-06-200-7311-IR6	3,500
Thomes Creek Water District	14-06-200-5721A-IR6	6,400
Westside Water District	14-06-200-8222-IR6	25,000
<u>Shasta Division</u>		
Shasta Lake, City of	4-07-20-W1134-IR8	2,750
<u>Trinity Division</u>		
Bella Vista Water District	14-06-200-851A-IR7	24,000
Clear Creek CSD	14-06-200-489A-IR7	15,300

(Patterson). In Patterson the Court found that “[...]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 draft

supplemental and incorporated EA finds in large part that the interim renewal of the contracts is in essence a continuation of the “status quo,” that is, they continue the existing use and allocation of resources (i.e., the same amount of water is being provided to the same lands for existing/ongoing purposes).

The 2001 Supplemental EA is included in Appendix B and the 1995 EA and the 1998 Supplemental EA are incorporated by reference and available by request. This 2002 Supplemental EA provides the sections that have updated information, additional discussions, or table changes from the 2001 and 2000 Final Supplemental EAs.

1.3 BACKGROUND OF INTERIM CONTRACTS

Section 3409 of the CVPIA stipulates that Reclamation must prepare a programmatic environmental impact statement (PEIS) before renewing long-term CVP water service contracts. The PEIS was completed in October of 1999 and a Record of Decision approved on January 9, 2001. Reclamation is preparing tiered site-specific environmental documentation for long-term contract renewals (LTCR). LTCR NEPA documentation was completed in early 2001 for the Friant Division, and the Cross Valley Canal (CVC), Hidden, and Buchanan Units. Twenty-five of the 28 Friant Division long-term contracts were executed in January of 2001. The Hidden Unit long-term contract and the Buchanan Unit long-term contract were approved in March of 2001. The CVC Unit’s Federal long-term environmental compliance and contract negotiations are essentially complete. Final execution of CVC Unit long-term contracts is pending. CVC Unit Contractors will need interim contracts if long-term contracts are not executed before March 1, 2002 and are therefore included in this proposed action.

Reclamation is completing the contract negotiations and site-specific environmental documentation for long-term contracts with interim contractors in the American River, Delta, Sacramento River, San Felipe, Shasta, and Trinity Divisions.

1.4 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to execute interim contracts for up to two years between March 1, 2002 through February 29, 2004. Execution of interim contracts is needed to continue delivery of CVP water to interim contractors until the long-term contracts can be executed.

1.5 ISSUES RELATED TO CVP WATER USE UNDER THE PROPOSED INTERIM CONTRACTS

1.5.2 Interim Water Contract Service Areas

No changes to district boundaries are part of the proposed action. Appropriate environmental compliance and documentation will be completed for any request from interim contractors for Reclamation approval of boundary changes.

1.5.3 Water Transfers

No water transfers are part of the proposed action. Appropriate environmental compliance and documentation will be completed for any request from interim contractors for Reclamation approval of water transfers.

1.5.4 Water Assignments

Potential impacts arising from future assignments of water are not included in the proposed action. They are separate independent actions and would require their own environmental compliance.

1.6 PUBLIC INVOLVEMENT

The public was invited to review and comment on the draft 2002 Supplemental EA for a 30-day review period. The deadline for comments on the draft Supplemental EA ended on January 7, 2002. During the public review period, five written comment letters were received. Appendix D provides a copy of each letter with Reclamation's responses.

CHAPTER 2

ALTERNATIVES

2.1 PROPOSED ACTION ALTERNATIVE

The proposed action alternative evaluated in this document is the execution of interim renewal water service contracts between the United States and the contractors in Table 1. The terms and conditions of the Existing Interim Renewal Contract (sample 2001 draft contract provided in Appendix B, 2001 EA) are incorporated by reference into this proposed contract except for the revision of Article 2. Article 2 is revised as follows:

(a) The first sentence in Subdivision (a) of Article 2 of the Existing Interim Renewal Contract is deleted, and the following is inserted in lieu thereof: "This interim renewal contract shall be effective from March 1, 2002, and shall remain in effect through February 28, 2003, and thereafter will be renewed as described in this Article if a long-term renewal contract has not been executed with an effective commencement date of March 1, 2003."

(b) Subdivision (b)(1) of Article 2 of the Existing Interim Renewal Contract is amended by deleting the date "November 30, 2001," and replacing same with the date "February 15, 2003."

(c) Subdivision (b)(2) of Article 2 of the Existing Interim Renewal Contract is amended by deleting the dates "February 1, 2002," "February 15, 2002," and "February 28, 2002," and replacing same with the dates "February 1, 2003," "February 15, 2003," and "February 28, 2003," respectively.

These revisions would take effect on the date of the execution of the 2002 interim contract. Except for date changes, the interim contracts will remain the same as those executed in 2001. A sample 2002 draft interim contracts is provided in Appendix A.

The proposed action alternative is comparable to alternative 1, continuation of existing interim contracts, analyzed in the 2000 Supplemental EA. The period of renewal for each contract would be for one year, as permitted under subsection 3404(c)(1) of CVPIA. The current contract provisions are those that are included in the existing interim renewal contracts and specified in the 2001 Supplemental EA. They contain only minor variations from the provisions described in the 1994 EA, the 1998 Supplemental EA, and the 2000 Supplemental EA. If long-term contracts are not executed by March 1, 2003, a one year extension of these interim contracts (March 1, 2003 through February 29, 2004) may be executed. Prior to a second year extension action, that action will be evaluated to determine if additional NEPA analysis is necessary. Depending on that evaluation, either additional NEPA documentation will be prepared, or a finding made that no significant changes in actions or circumstances has occurred, or substantial new information has been obtained since this 2002 Supplemental EA.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

2.2.1 Nonrenewal of Interim Contracts

Nonrenewal of existing contracts is considered infeasible based on Section 3404(c) of the CVPIA. This alternative was considered but eliminated from analysis in this EA because Reclamation has no discretion not to renew the contracts.

2.2.2 REDUCTION IN INTERIM CONTRACT AMOUNTS

Reduction in contract amounts due to current delivery constraints on the CVP system identified in the PEIS was considered in certain cases, but rejected from analysis for several reasons. First, water needs analyses have been completed for all contracts, and in almost all cases, the needs exceed or equal the current total contract amount. Second, the shortage provision of the contract protects the Contracting Officer 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. Such action include, for example, actions to implement the CVPIA, which has dedicated significant amounts of CVP water to environmental uses and which provides funding from the contractors to improve habitat and to acquire water for environmental purposes. Third, retaining the full historic water quantities under contract provides the contractors with assurance the water will be made available in wetter years and helps to support investments for local storage, water conservation improvements and capital repairs.

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.3 BIOLOGICAL RESOURCES

3.3.1 ALTERNATIVE

The fifth paragraph from the 2001 Supplement EA is revised as follows:

CVP-wide impacts to biological resources have been evaluated in the PEIS, and a FWS Biological Opinion to address potential CVP-wide impacts was completed on November 21, 2000. CVC Unit Contractors' potential impacts to biological resources have been evaluated in the CVC Unit Contractors Long-Term Contract Renewal Environmental Assessment (January 2001), the CVC Unit Contractors Long-Term Contract Renewal Regional Biological Assessment (January 17, 2001), the Biological Opinion on U.S. Bureau of Reclamation Long Term Contract Renewal of Friant Division and CVC Unit Contracts (FWS-January 19, 2001), and the Biological Opinion for the Long-Term Renewal of CVP Water Service Contracts for the Friant Division and CVC Unit Contractors (NMFS-January 20, 2001). The programmatic biological opinion and Essential Fish Habitat Conservation Recommendations prepared by NMFS for the CVPIA was completed on November 14, 2000.

The following paragraph is included at the end of this section:

The FWS Biological Opinion for 2002 interim contracts is included in this Final 2002 Supplemental EA and presents the commitments that Reclamation will undertake during the proposed interim renewal period to address any identified potential impacts.

CHAPTER 4

CONSULTATION AND COORDINATION

The public was invited to review and comment on the draft 2002 Supplemental EA for a 30-day review period. The deadline for comments on the draft Supplemental EA ended on January 7, 2002. During the public review period, five written comment letters were received. Appendix D provides a copy of each letter with Reclamation's responses.

Reclamation consulted and coordinated with the US Fish and Wildlife Service, the National Marine Fisheries Service, and the interim water service contractors, in the preparation of the environmental documents for the proposed action.

4.1 ENDANGERED SPECIES ACT

Reclamation has completed section 7 consultations with National Marine Fisheries Service (NMFS) and Fish and Wildlife Service (FWS) pursuant to the Endangered Species Act (ESA). These consultations cover the interim contract renewals (IRC) from March 1, 2002 through February 29, 2004.

Reclamation has completed formal consultation with the FWS for the two year period of interim contract renewals or until long-term CVP water service contracts are executed with the interim contractors. In 2000, Reclamation completed formal consultation on IRCs, and the FWS issued a biological opinion dated February 29, 2000. On February 28, 2001, the FWS issued a memorandum extending the 2000 biological opinion through February of 2002. In February 2002, the FWS issued a biological opinion amending the

February 2000 biological opinion which extended the 2000 biological opinion through February of 2004.

Reclamation consulted formally on the CVC Unit long-term water service contracts and received a biological opinion on January 19, 2001. For the CVC Unit Contractors in the interim contract period, Reclamation and the CVC Unit Contractors have committed to comply with the requirements of the long-term contract biological opinion.

Reclamation completed consultation on interim contracts with NMFS for a period of up to two years. NMFS, by letter dated February 22, 2002, concurred with Reclamation's determination that the renewal of 2-year interim water service contracts will not likely adversely effect Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon, Southern Oregon/Northern California Coast coho salmon, Central Valley steelhead, or their designated critical habitat. Formal consultation on the CVC Unit's long-term water service contracts was completed in January 2001. Reclamation and the CVC Unit Contractors have committed to comply with the NMFS long-term contract BO as part of the approval of these interim contracts. Thus, Reclamation believes that this consultation process to be mainly administrative in nature.

Appendix A

2002 Interim Contract Sample

DRAFT 12-MONTH IRC

Irrigation and M&I
R.O. 10/31-2001
Rev. R.O. 11/01-2001
Rev. R.O. 11/05-2001
Rev. R.O. 11/13-2001

Contract No. _____

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

INTERIM RENEWAL CONTRACT BETWEEN THE UNITED STATES

AND

PROVIDING FOR PROJECT WATER SERVICE

THIS CONTRACT, made this _____ day of _____, 20____, in
pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or
supplementary thereto, including, but not limited to, the acts of August 26, 1937 (50 Stat. 844), as
amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented, July 2,
1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1263), as amended and
Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively hereinafter referred to
as Federal Reclamation law, between THE UNITED STATES OF AMERICA, hereinafter referred
to as the United States, and _____ (district/entity), hereinafter referred to as the
Contractor, a public agency of the State of California, duly organized, existing, and acting pursuant
to the laws thereof, with its principal place of business in _____(city), California;

WITNESSETH, That:

27 EXPLANATORY RECITALS

28 WHEREAS, the United States and the Contractor entered into interim renewal
29 contract identified as Contract No. _____, hereinafter referred to as the
30 Existing Interim Renewal Contract, which provided for the continued water service to the
31 Contractor from March 1, 2001, through February 28, 2002; and

32 WHEREAS, the United States and the Contractor believe that further negotiations on
33 the long-term renewal contract would be beneficial and mutually commit to continue to negotiate to
34 seek to reach agreement, or the required environmental review necessary to execute a long-term
35 renewal contract has not been completed, and the Contractor has requested a subsequent interim
36 renewal contract pursuant to Article 2 (b) (1) of the Existing Interim Renewal Contract; and

37 WHEREAS, the United States has determined that the Contractor has to date
38 fulfilled all of its obligations under the Existing Interim Renewal Contract; and

39 WHEREAS, the United States is willing to renew the Existing Interim Renewal
40 Contract pursuant to the terms and conditions set forth below;

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

43 INCORPORATION AND REVISION OF EXISTING INTERIM RENEWAL CONTRACT

44 1. The terms and conditions of the Existing Interim Renewal Contract are hereby
45 incorporated by reference into this Contract with the same force and effect as if they were included
46 in full text with the exception of Article 2 thereof, which is revised as follows:

47 (a) The first sentence in Subdivision (a) of Article 2 of the Existing Interim
48 Renewal Contract is deleted, and the following is inserted in lieu thereof: "This interim renewal

contract shall be effective from March 1, 2002, and shall remain in effect through February 28, 2003, and thereafter will be renewed as described in this Article if a long-term renewal contract has not been executed with an effective commencement date of March 1, 2003."

(b) Subdivision (b)(1) of Article 2 of the Existing Interim Renewal Contract is amended by deleting the date "November 30, 2001," and replacing same with the date "February 15, 2003."

(c) Subdivision (b)(2) of Article 2 of the Existing Interim Renewal Contract is amended by deleting the dates "February 1, 2002," "February 15, 2002," and "February 28, 2002," and replacing same with the dates "February 1, 2003," "February 15, 2003," and "February 28, 2003," respectively.

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

THE UNITED STATES OF AMERICA

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

(SEAL) _____ (District/Entity)

By: _____
President

Attest:

Secretary

[12mo-irc2002-rev1.wpd]

Appendix B

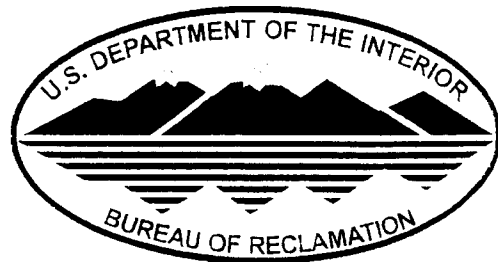
Final 2001 Supplemental EA

**Supplemental Environmental Assessment for the
2001 Renewal of Interim Water Service Contracts
Through February 28, 2002**

Central Valley Project, California

February 2001

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



CHAPTER 1

PURPOSE AND NEED

1.1 INTRODUCTION

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to execute interim water service contracts for a maximum period of one year, from March 1, 2001 through February 28, 2002. Reclamation has prepared this supplemental EA to determine if any actions occurring from an extended interim period result in any unanticipated impacts relative to the analysis in the 1994 EA, the 1998 Supplemental EA, and the 2000 Supplemental EA. Interim renewal of these contracts is necessary to continue delivery of Central Valley Project (CVP) water until the long-term contracts can be executed. Contracts proposed for interim renewal are listed in Table 1.1.

The environmental analysis was developed consistent with regulations and guidance from the Council on Environmental Quality, and in conformance with the analysis provided in *NRDC v. Patterson*, Civ. No. S-88-1658 (Patterson). In *Patterson* the Court found that "...[on]going projects and activities require NEPA 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 supplemental and incorporated EAs finds in large part that the interim renewal of the contracts is in essence a continuation of the "status quo," that is, they perpetuate the existing use and allocation of resources (i.e., the same amount of water is being provided to the same lands for existing/ongoing purposes).

The 2000 Supplemental EA is included in Appendix A and the 1995 EA and the 1998 Supplemental EA are incorporated by reference and available by

request. This 2001 Supplemental EA provides only the sections that have updated information, additional discussions, or changes to tables from the 2000 Final Supplemental EA.

1.3 BACKGROUND OF INTERIM CONTRACTS

Table 1.1
2001 Interim Renewal Contracts
Central Valley Project
February 1, 2001

Division/Unit/Contractor	Existing Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
American River Division				
San Juan Water District	14-06-200-152A-IR4	11,200		X
El Dorado Irrigation District	14-06-200-949-IR4	23,000	X	X
Cross Valley Canal				
Fresno, County of	14-06-200-8292A-IR4	3,000	X	X
Hills Valley Irrigation District	14-06-200-8466A-IR4	3,346	X	X
Kern-Tulare Irrigation District	14-06-200-8601A-IR4	40,000	X	X
Lower Tule River Irrigation District	14-06-200-8237A-IR4	31,102	X	X
Pixley Irrigation District	14-06-200-8238A-IR4	31,102	X	X
Rag Gulch Water District	14-06-200-8367A-IR4	13,300	X	X
Tri-Valley Water District	14-06-200-8565A-IR4	1,142	X	X
Tulare, County of	14-06-200-8293A-IR4	5,308	X	X
Delta Division/Delta-Mendota Canal				
Banta-Carbona Irrigation District	14-06-200-4305A-IR4	25,000	X	X
Broadview Water District	14-06-200-8092-IR4	27,000	X	X
Centinella Water District	7-07-20-W0055-IR4	2,500	X	X
Del Puerto Water District	14-06-200-922-IR6	140,210	X	X
Eagle Field Water District	14-06-200-7754-IR4	4,550	X	X
Laguna Water District	2-07-20-W0266-IR4	800	X	X
Mercy Springs Water District	14-06-200-3365A-IR4A	7,040	X	X
Oro Loma Water District	14-06-200-7823-IR4	4,600	X	X
Patterson Water District	14-06-200-3598A-IR4	16,500	X	X
Plain View Water District	14-06-200-785-IR6	20,600	X	X
West Side Irrigation District, The	7-07-20-W0045-IR4	7,500	X	X
West Stanislaus Irrigation District	14-06-200-1072-IR6	50,000	X	
Widren Water District	14-06-200-8018-IR4	2,990	X	X
Friant Division				
Lewis Creek Water District	14-06-200-1911A-IR2	1,450	X	
Madera, County of	14-06-200-2406A-IR4	200		X

Table 1.1 (Continued)
2001 Interim Renewal Contracts
Central Valley Project
February 1, 2001

Division/Unit/Contractor	Existing Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
Sacramento River Division/Corning Canal				
Corning Water District	14-06-200-6575-IR4	23,000	X	X
Proberta Water District	14-06-200-7311-IR4	3,500	X	X
Thomes Creek Water District	14-06-200-5721A-IR4	6,400	X	X
Sacramento River Division				
Feather Water District	14-06-200-171A-IR5	20,000	X	
Sacramento River Division/ Tehama-Colusa Canal				
Colusa County Water District	14-06-200-304-A-IR4	62,200	X	X
Colusa, County of	14-06-200-8310A-IR4	See Subcontractors below		
Four-M Water District		5,700	X	X
Glenn Valley Water District		1,730	X	X
Holthouse Water District		2,450	X	X
Myers Marsh Mutual Water Company		255	X	X
LaGrande Water District		2,200	X	X
Cortina Water District		1,700	X	X
Westside Water District		40,000	X	X
Colusa County Water District		5,965	X	X
Davis Water District	14-06-200-6001A-IR4	4,000	X	X
Dunnigan Water District	14-06-200-399A-IR4	19,000	X	X
Glide Water District	7-07-20-W0040-IR4	10,500	X	X
Kanawha Water District	14-06-200-466-A-IR4	45,000	X	X
Kirkwood Water District	7-07-20-W0056-IR4	2,100	X	X
La Grande Water District	7-07-20-W0022-IR4	5,000	X	X
Orland-Artois Water District	14-06-200-8382A-IR4	53,000	X	X
Westside Water District	14-06-200-8222-IR4	25,000	X	X
Shasta Division				
Shasta Lake, City of	4-07-20-W1134-IR6	2,750		X
Trinity Division				
Bella Vista Water District	14-06-200-851-A-IR5	24,000	X	X
Clear Creek CSD	14-06-200-489-A-IR5	15,300	X	X

1.4 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to execute interim contracts for a maximum of one year, from March 1, 2001 through February 28, 2002. Execution of interim contracts is needed to continue delivery of Central Valley Project (CVP) water to interim contractors until the long-term contracts can be executed.

1.5 ISSUES RELATED TO CVP WATER USE UNDER THE PROPOSED INTERIM CONTRACTS

1.5.2 Interim Water Contract Service Areas

No changes to district boundaries are part of the proposed action. Appropriate environmental compliance and documentation will be completed for any request from interim contractors for Reclamation approval of boundary changes.

1.5.3 Water Transfers

Widren Water District Assignment: Assignment of water from the Widren Water District to the City of Tracey has been considered in the past and a proposal was developed. In April 2000, however, the Widren Water District withdrew its request for the assignment, and all work regarding this assignment ceased. Should Widren Water District seek another assignment of its contract, another proposal for assignment would be presented to Reclamation and Reclamation would conduct a separate environmental review.

1.6 PUBLIC INVOLVEMENT

The public was invited to review and comment on the draft 2001 Supplemental EA for an 18-day review period. During the public review process, 3 written comment letters were received. Appendix D provides a copy of each letter with Reclamation's response.

CHAPTER 2

ALTERNATIVE

2.1 PROPOSED ACTION ALTERNATIVE

The proposed action evaluated in this document is execution of interim water service contracts identified in Table 1.1. Except for minor changes, terms and conditions of interim contracts will remain the same as those executed for 2000 to 2001. The execution of the interim contracts entails only minor administrative changes to the existing interim contract provisions as shown in Table 2.1. This alternative is comparable to alternative 1, continuation of existing interim contracts, in the 2000 Supplemental EA. The period of renewal for each contract would be for a maximum of one year, as permitted under subsection 3404(c)(1) of CVPIA.

Table 2.1
Proposed Contract Provisions Changes for the Proposed Action

Contract Provision Description		Alternative
A.	Contract term	Contract renewal period would be extended through February 2002
B.	Contract supply	No change
C.	Payment	No change
D.	Water transfer	No change
E.	Water quality	No change
F.	Water measurement	No change
G.	Water conservation	No change
H.	Water shortage	No change
I.	Discretionary provisions of the Reclamation Reform Act	No change
J.	Endangered Species Act compliance	No change
K.	Standard articles	No change

The current contract provisions are those that are included in the existing interim renewal contracts and specified in the 1994 EA, the 1998 Supplemental EA, and the 2000 Supplemental EA. Revised contract provisions for the 2001 interim contracts include the following:

1. TERM OF CONTRACT - RIGHT TO USE WATER, Article 2.(a)

The interim renewal period under the Alternative would be for the period from March 1, 2001 through February 28, 2002.

2. TERM OF CONTRACT - RIGHT TO USE WATER, Article 2.(a)

Deletion of the statement on the completion of the programmatic environmental impact statement (PEIS) required by section 3409 of the CVPIA.

3. TERM OF CONTRACT - RIGHT TO USE WATER, Article 2.(b)(1)

Editorial changes and updates to reflect new dates and contract period related to long-term contract negotiations and execution.

4. TERM OF CONTRACT - RIGHT TO USE WATER, Article 2.(b)(2)

Editorial changes and updates to reflect new dates and contract period if no reasonable likelihood of reaching agreement on the terms of a long-term contract renewal prior to November 1, 2001.

2.1.2 Alternative 2, Interim Renewal of Contracts under Revised Terms

Alternative 2 from the 2000 supplemental EA was not evaluated in the 2001 supplemental EA.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

2.2.1 Nonrenewal of Interim Contracts

Nonrenewal of existing contracts is considered infeasible based on Section 3404(c) of the CVPIA. This alternative was considered but eliminated from analysis in this EA because Reclamation has no discretion not to renew the contracts.

2.2.2 Reduction in Interim Contract Amounts

Reduction in contract amounts was considered in certain cases, but rejected from analysis. The reason for this is twofold. First, water needs analyses have been completed for all contracts, and in almost all cases, the needs exceed or equal the current total contract amount. Second, in order to implement good water management, the contractors need to be able to store or immediately use water available in wetter years when more water is available. By quantifying contract amounts in terms of the needs analyses and the CVP delivery capability, the contractors can make their own economic decisions. Allowing the contractors to retain the full water quantity gives them assurance that the water will be available to them for storage investments. In addition the CVPIA, in and of itself, achieves a balance, in part through its dedication of significant amounts of CVP water and actions to acquire water for environmental purposes.

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The second paragraph in Chapter 3 is changed to read as follows:

Potential impacts arising from future assignments of water are not included in the proposed action alternative and must comply with the National Environmental Policy Act, and therefore, are not addressed in the document.

3.3 BIOLOGICAL RESOURCES

3.3.1 ALTERNATIVE

The second paragraph from the 2000 Supplement EA is revised as follows:

Current measures to address biological concerns would continue under interim renewal. Several programs provided for in the CVPIA would continue, including land retirement, refuge water supplies, the anadromous fish restoration program, annual dedication of CVP yield under Section 3406(b)(2), and the Section 3406(b)(1) "other" program, which would protect, restore, and enhance the biological resources within the CVP service area. Reclamation and USFWS also would continue to implement the long-term CVP-wide Conservation Program (CVPCP) which, in concert with other programs, would address the needs of special status species in the affected area, including habitat. The CVPCP establishes implementing plans and priority needs before identifying ecological

needs, options, and actions for implementation. However, the CVPCP does not provide site specific ESA coverage, is not mitigation for any site specific impacts, and does not address or authorize take of listed species.

The fifth paragraph from the 2000 Supplement EA is revised as follows:

CVP-wide impacts to biological resources have been evaluated in the PEIS, and a FWS Biological Opinion to address potential CVP-wide impacts was completed on November 21, 2000. The programmatic biological opinion and Essential Fish Habitat Conservation Recommendations prepared by NMFS for the CVPIA was completed on November 14, 2000.

The following paragraph is included at the end of this section:

Appendix C of the 2001 final Supplemental EA contains the 3rd Quarterly Report for the 2000 interim contracts Biological Opinion on the various environmental commitments made and Reclamation's progress in implementing them. The current FWS Biological Opinion for 2001 interim contracts will be included in the Final 2001 Supplemental EA and presents the commitments that Reclamation will undertake during the proposed interim renewal period to address potential impacts.

CHAPTER 4

CONSULTATION AND COORDINATION

4.1 ENDANGERED SPECIES ACT

Reclamation has completed consultation with NMFS and FWS pursuant to the ESA. The Biological Opinion was extended to cover the interim renewal from February 1995 through February 2002. The 3rd quarter report for Year 2000 is included in Appendix C of this supplemental EA. Since the renewal of the interim 2000 contracts, additional species in the action area have been listed. These species include the riparian brush rabbit and riparian wood rat. Reclamation will continue to comply with commitments in the biological opinions for this action.

APPENDIX A

Final 2000 Supplemental EA

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**Final Supplemental Environmental Assessment for the
Renewal of 55 Interim Water Service Contracts
through February 28, 2001**

Central Valley Project, California



February 2000

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

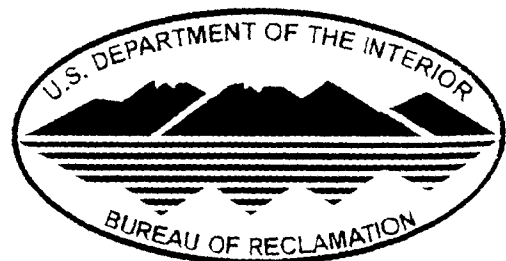


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APPENDICES

Appendix A	Interim Renewal Contracts—Biological Opinion Implementation—Annual Status Reports (1996 through 1999)
Appendix B	Responses to Comments Received on the Draft Supplemental EA
Appendix C	Bureau of Reclamation Correspondence with US Fish and Wildlife Service Concerning Interim Renewal Contracts
Appendix D	National Marine Fisheries Service, Letter to Bureau of Reclamation—Informal Consultation and Request for Concurrence with Determination of No Adverse Effect for 35 Interim Renewal Contracts
Appendix E	US Fish and Wildlife Service, Biological Opinion for Interim Contract Renewal

SUMMARY SHEET

1. Proposed Federal Action: Approve 54 interim renewal contracts, with only minor administrative changes to the contract provisions, for a maximum of one year through February 28, 2001.
2. Date Filed: February 22, 2000
3. Applicant: Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825
Attention: Michael Nepstead
Telephone: (916) 978-5204
FAX: (916) 978-5290
4. Authority: Section 3404(c) of the Central Valley Project Improvement Act (Title XXXIV of Public Law 102-575)
5. Reclamation Facility: Central Valley Project
6. Nearest City: Various in the Central Valley, California
7. County: Various in the Central Valley, California

1. INTRODUCTION

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CHAPTER 1

PURPOSE AND NEED

1.1 INTRODUCTION

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to renew 54 water service contracts for a maximum period of one year, from March 1, 2000 through February 28, 2001. Interim renewal of these contracts is necessary to continue delivery of Central Valley Project (CVP) water until the long-term contracts can be executed. Contracts proposed for interim renewal are listed in Table 1 and are shown in figures 1-1, 1-2, 1-3, and 1-4. Two alternatives that would accomplish the proposed action are evaluated in this document.

1.2 MODIFICATION OF PROJECT DESCRIPTION

In the draft supplemental EA, Reclamation had proposed the renewal of 55 interim contracts, including renewal of a contract with the El Dorado Irrigation District for future delivery of 50 acre feet/year (af/y). The US Fish and Wildlife Service (USFWS) requested that this action be removed from the supplemental EA and evaluated in a separate NEPA review. Reclamation agreed to remove this contract from consideration in this supplemental EA. This final supplemental EA therefore evaluates interim renewal of 54 water service rather than the 55 evaluated in the draft supplemental EA.

1.3 BACKGROUND OF INTERIM CONTRACTS

Section 3409 of the CVPIA stipulates that Reclamation must prepare a programmatic environmental impact statement (PEIS) before renewing long-term CVP water service contracts. In addition, site-specific environmental documentation for long-term water contract renewals must be prepared following completion of the PEIS. In accordance with Section 3404(c) of the CVPIA, water contracts expiring prior to completion of the PEIS may be renewed for an interim period not to exceed three years and for successive interim periods not to exceed two years. Previous interim renewal of water service contracts has been necessary to allow for completion of the final PEIS.

Table 1
Interim Renewal Contracts
Central Valley Project

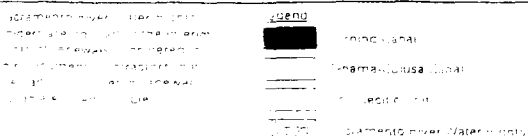
Division/Unit/Contractor*	Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
American River Division				
San Juan WD	14-06-200-152A-IR2	11,200		X
El Dorado ID	14-06-200-949-IR2	23,000	X	X
Buchanan Unit				
Chowchilla WD	14-06-200-3844A-IR4	24,000	X	
Cross Valley Canal				
Fresno, County of	14-06-200-8292A-IR2	3,000	X	X
Hills Valley ID	14-06-200-8466A-IR2	3,346	X	X
Kern-Tulare ID	14-06-200-8601A-IR2	40,000	X	X
Lower Tule River ID	14-06-200-8237A-IR2	31,102	X	X
Pixley ID	14-06-200-8238A-IR2	31,102	X	X
Rag Gulch WD	14-06-200-8367A-IR2	13,300	X	X
Tri-Valley	14-06-200-8565A-IR2	1,142	X	X
Tulare, County of	14-06-200-8293A-IR2	5,308	X	X
Delta Division/Delta-Mendota Canal				
Banta-Carbona ID	14-06-200-4305A-IR2	25,000	X	X
Broadview WD	14-06-200-8092-IR2	27,000	X	X
Centinella WD	7-07-20-W0055-IR2	2,500	X	X
Del Puerto WD	14-06-200-922-IR4	140,210	X	X
Eagle Field WD	14-06-200-7754-IR2	4,550	X	X
Laguna WD	2-07-20-W0266-IR2	800	X	X
Mergy Springs WD	14-06-20-3365A-IR2	13,300	X	X
Oro Loma WD	14-06-200-7823-IR2	4,600	X	X
Patterson WD	14-06-200-3598A-IR2	16,500	X	X
Plain View WD	14-06-200-785-IR4	20,600	X	X
The West Side ID	7-07-20-W0045-IR2	7,500	X	X
West Stanislaus ID	14-06-200-1072-IR4	50,000	X	
Widren WD	14-06-200-8018-IR2	2,990	X	X
Friant Division				
Arvin-Edison Water Storage District	14-06-200-229A-IR2	351,675	X	X
Fresno ID	14-06-200-1122A-IR2	75,000	X	X
Garfield WD	14-06-200-9421-IR2	3,500	X	
Fresno County Waterworks District No. 18	14-06-200-5904-IR2	150		X
International WD	14-06-200-585A-IR2	1,200	X	X
Lewis Creek WD	14-06-200-1911A-IR2	1,450	X	
Madera ID	75r-2891-IR2	271,000	X	
Orange Cove, City of	14-06-200-5230-IR2	1,400		X
Shafter-Wasco ID	14-06-200-4032-IR2	89,600	X	X
Tea Pot Dome WD	14-06-200-7430-IR2	7,500	X	
Gravelly Ford WD	7-07-20-W0242-IR2	14,000	X	
Madera, County of	14-06-200-2406A-IR2	200		X
Hidden Unit				
Madera ID	14-06-200-4020-IR3	24,000	X	

* WD - Water District
ID - Irrigation District

Table 1
Interim Renewal Contracts
Central Valley Project (continued)

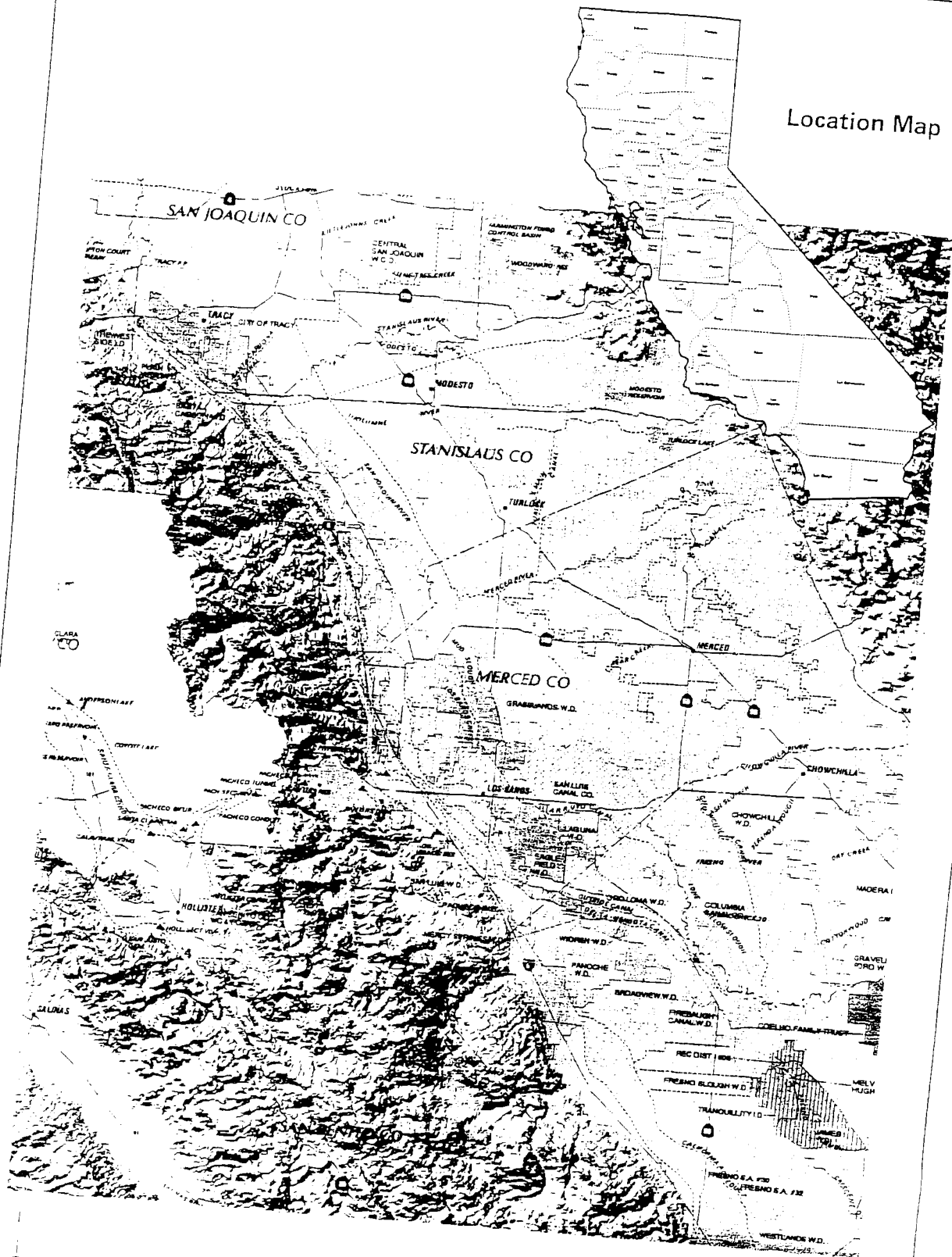
Division/Unit/Contractor ^a	Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
Sacramento River Division/Corning Canal				
Corning WD	14-06-200-6575-IR2A	23,000	X	X
Proberta WD	14-06-200-7311-IR2A	3,500	X	X
Thomes Creek WD	14-06-200-5721A-IR2A	6,400	X	X
Sacramento River Division				
Feather WD	14-06-200-171A-IR3	20,000	X	
Sacramento River Division/ Tehama-Colusa Canal				
Colusa County WD	14-06-200-304-A-IR2	62,200	X	X
Colusa, County of	14-06-200-8310A-IR2	See Subcontractors below		
Four-M WD		5,700	X	X
Glenn Valley WD		1,730	X	X
Holthouse WD		2,450	X	X
Myers Marsh Mutual Water Company		255	X	X
LaGrande WD		2,200	X	X
Cortina WD		1,700	X	X
Westside WD		40,000	X	X
Colusa County WD		5,965	X	X
Davis WD	14-06-200-6001A-IR2	4,000	X	X
Dunnigan WD	14-06-200-399A-IR2	19,000	X	X
Glide WD	7-07-20-W0040-IR2	10,500	X	X
Kanawha WD	14-06-200-466-A-IR2	45,000	X	X
Kirkwood WD	7-07-20-W0056-IR2	2,100	X	X
La Grande WD	7-07-20-W0022-IR2	5,000	X	X
Oriand-Artois WD	14-06-200-8382A-IR2	53,000	X	X
Westside WD	14-06-200-8222-IR2	25,000	X	X
Shasta-Trinity Division				
Shasta Lake, City of	4-07-20-W1134-IR4	2,750		X
Bella Vista WD	14-06-200-851-A-IR3	24,000	X	X
Clear Creek CSD	14-06-200-489-A-IR3	15,300	X	X

* WD - Water District
ID - Irrigation District



California

Location Map



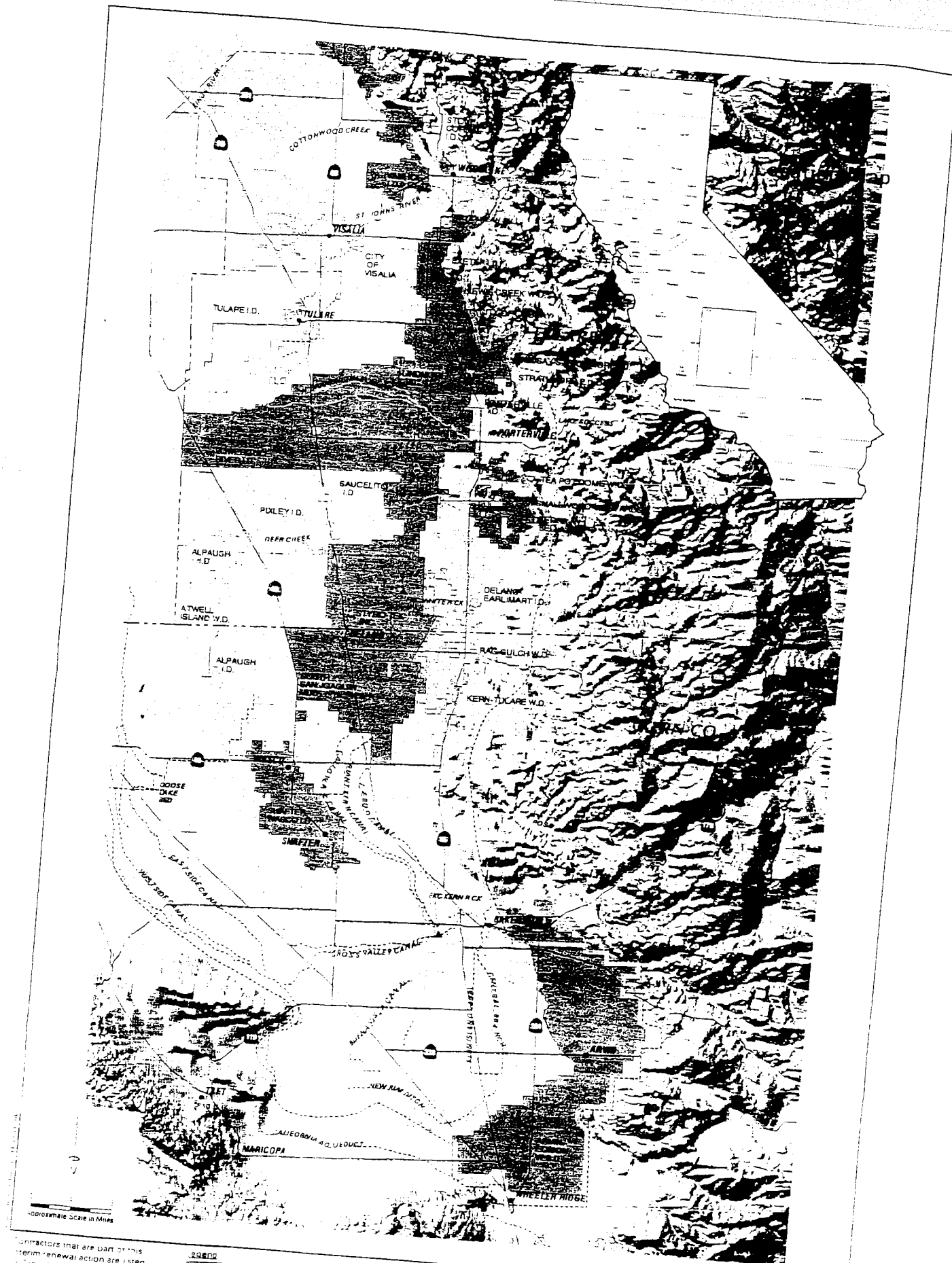
CVP Districts by Unit-West San Joaquin Valley

Source: Bureau of Reclamation 1999a

California

Contractors that are part of this
sterilization action are listed
in Table 1

Tetra Tech Inc.



CVP Districts by Unit-Tulare Basin
California

Reclamation initially prepared an environmental assessment (EA) in December 1994 (1994 EA) to examine the potential effects of interim renewal of 67 water service contracts from December 1994 through February 1998 (a period of three years and two months) (Bureau of Reclamation 1994). A finding of no significant impact (FONSI) for that EA was issued in December 1994. The 1994 EA and FONSI are hereby incorporated by reference.

Reclamation completed a supplemental EA in February 1998 (1998 supplemental EA) to address potential impacts from interim renewal of the 54 contracts for an additional two years, from March 1998 through February 2000 (Bureau of Reclamation 1998). The 67 contracts considered in the 1994 EA were reduced to 54 through consolidation, termination, or assignment. A FONSI for the 1998 supplemental EA was issued in February 1998.

The final PEIS was issued in October 1999 (Bureau of Reclamation 1999b). Because the interim contracts will expire in February 2000, before long-term contracts can be executed, another interim renewal period is necessary.

1.4 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to renew 54 interim contracts for a maximum of one year, through February 28, 2001. This action is necessary to provide continued water delivery to existing interim CVP contractors until long-term water contract renewals can be executed.

Reclamation has prepared a supplemental EA to determine if any actions occurring from an extended interim period result in any unanticipated impacts relative to the analysis in the 1994 EA or the 1998 supplemental EA. This supplemental EA has been prepared pursuant to and in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC § 4321-4370d), the Council on Environmental Quality (CEQ) regulations on implementing NEPA (40 CFR Parts 1500-1508), and Reclamation's NEPA handbook (Bureau of Reclamation 1990).

1.5 ISSUES RELATED TO CVP WATER USE UNDER THE PROPOSED INTERIM CONTRACTS

Several matters related to the use of CVP water supplies, including the agricultural or municipal and industrial (M&I) designation of CVP water contractors, the water contract service area, and water transfers, are discussed below. Although the interim renewal action evaluated in this document does not propose any changes with regard to these issues, they are discussed herein to illustrate the separate nature of these issues and the proposed action in terms of environmental analysis and consultation with USFWS. (See Appendix C for correspondence between Reclamation and USFWS regarding these issues.) Any change with regard to these issues that may be proposed during the period of interim renewal would be considered to be a separate action and would be subject to separate environmental review and consultation.

1.5.1 Contract Changes from Agricultural to Agricultural and Municipal and Industrial

Since 1995, no interim contracts have been changed from agricultural to agricultural and M&I. During this period, Reclamation and the water service contractors have been required to report to USFWS any land use changes associated with the interim water contracts that may affect listed species. All land use changes within the interim water contract areas that may affect listed species, and that were reported to Reclamation, have been reported to USFWS in the four annual reports on implementation of the biological opinion for interim renewal contracts (Appendix A).

1.5.2 Interim Water Contract Service Areas

The service areas for all interim water contracts have not changed since 1995 except for inclusions and exclusions that were separately reviewed under NEPA and the Endangered Species Act (ESA). No changes to district boundaries are part of the proposed action and the boundaries in place, as of the date of this document, will remain the same through February 28 2001. Any changes to the interim district boundaries that are proposed would be required to undergo separate environmental review.

1.5.3 Water Transfers

Intra-CVP Transfers. Intra-CVP contract transfers, which in many cases are simply scheduling changes, are part of the historic and ongoing operation of the CVP. Water transfers are being addressed in separate EAs being prepared by Reclamation in coordination with the USFWS. All such transfers will be conducted in conformance with the criteria developed during this process and are considered to be separate actions that must undergo separate environmental review, including consultation with the USFWS.

Mercy Springs Water District Assignment. On May 14, 1999, the Mercy Springs Water District, an interim contractor, assigned 6,260 af of its CVP supply to the Pajara Valley Water Management Agency (PVWMA), Santa Clara Valley Water District (SCVWD), and Westlands Water District. PVWMA entered into this assignment to help secure possible future water supplies but, at present, PVWMA does not have the physical capability to take the assigned water and is not within the CVP authorized place of use. These issues must both be addressed as separate actions, subject to separate environmental review, before PVWMA could take any of the assigned water.

Under the terms of the assignment, until PVWMA decides to use the water (a decision expected in the next 20 years), the water would be shared between the Westlands Water District and SCVWD, with SCVWD taking no more than about 1,500 af of this amount annually, and no more than 20,000 af over the period of the agreement. SCVWD took none of this water in 1999.

Since deliveries in 2000 are expected to be approximately 50 percent of contract quantity for agricultural supplies and 75 percent of contract quantity for M&I supplies, assigned water from the Mercy Springs Water District will be used to address the projected shortages. Westlands Water District is expected to receive only approximately 40 percent of its CVP contract amount in 2000. The portion of the Mercy Springs water assigned to Westlands Water District would constitute only a small percentage of Westlands own CVP allocation and would partially offset their expected CVP deficiency. An EA analyzing the potential impacts of this assignment was completed in April 1999 (Bureau of Reclamation 1999c). The EA determined that the proposed action would not result in any significant impacts, and a FONSI was issued in April 1999.

Apart from this assignment, an allocation agreement was entered into between Reclamation, Westlands Water District, and SCVWD in 1997 whereby Westlands Water District and SCVWD were able to reallocate CVP water supplies under certain conditions. Required NEPA and ESA compliance were completed on this separate action.

Widren Water District Assignment. Assignment of water from the Widren Water District to the area of Tracy has been considered in the past and a proposal was developed. As a result of on-going litigation between local, non-federal interests regarding this assignment, no final action has been taken by Reclamation. This action has been suspended until the dispute has been resolved. No action is expected in the immediate future. Should the issues under question be resolved and a proposal for assignment be presented to Reclamation, Reclamation would initiate consultation with USFWS to address concerns about potential impacts to listed species. Evaluation of this action and consultation with USFWS would be conducted as part of a separate environmental review process.

Atwell Irrigation District/Hills Valley Irrigation District Reallocation. In 1975, a contract was executed with Tulare County, a cross-valley contractor, to allow reallocation of their CVP supply to specific subcontractors within Tulare County. Reclamation approved the initial set of subcontractors and, since that time, there have been no changes in the subcontractors. Consequently, the area of water use for Tulare County's CVP supply has not changed, relative to the interim biological opinion, since 1995. Any changes in the boundaries of the area of water use, or any additions or deletions of subcontractors, would require federal approval. Tulare County's distribution of its CVP water supply between these subcontractors is not a federal action and does not require federal approval. Tulare County is required to notify Reclamation of any changes in the allocation. There have been no changes in CVP operations, the total amount of water under contract to Tulare County, or the Tulare County subcontract areas since Reclamation consulted on the interim contracts in 1995.

In 1996, consistent with the 1975 contract, 2,000 af of Atwell Irrigation District's supply of CVP water was reallocated to the Hills Valley Irrigation District.

Consistent with the 1975 contract, the 2,000 af that Hills Valley Irrigation District obtained under this reallocation must stay within the Tulare County portion of Hills Valley Irrigation District. No land use changes as a result of this reallocation have been reported to Reclamation and all information to date indicates that the 2,000 af is being used to replace less desirable ground water supplies.

Friant Division Water Deliveries. In addition to other CVP supplies, the Friant Division will also experience severe shortages in 2000 as a result of hydrologic conditions in the watershed for the Friant Dam. At present, the projected 2000 allocation for the Friant Division is 60 percent of Class 1 water and no Class 2 water, or approximately 34 percent of the average use and 22 percent of the contract amount for the Friant Division. No changes in the allocation to the Friant Division are considered as part of this action. This information is provided to address concerns that the USFWS may have about potential impacts related to water deliveries this year in the Friant Division.

1.6 PUBLIC INVOLVEMENT

The public was invited to review and comment on the draft supplemental EA. The draft supplemental EA was circulated for public and agency review from December 13, 1999, to January 10, 2000. A press release announcing the publication was sent to all interested parties on December 9, 1999. The release of the draft supplemental EA also was announced on the Bureau of Reclamation, Mid-Pacific Region web page and at meetings being conducted by Reclamation for proposed renewal of long-term water service contracts.

The public comment period provided an opportunity for the public to review the issues addressed in the impact analysis and to offer comments on any aspect of the process. During the public review process, written comment letters were received from three water districts. The majority of these comments expressed support for Alternative 1 and concern about significant impacts that may occur under Alternative 2 (see Section 2.1 for a discussion of alternatives). Comments received on the draft supplemental EA and responses to these comments are provided Appendix B.

2. ALTERNATIVES

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CHAPTER 2

ALTERNATIVES

2.1 PROPOSED ACTION AND ALTERNATIVES

The proposed action evaluated in this document is interim renewal of 54 water service contracts. Two alternatives are evaluated that would accomplish the proposed action. Alternative 1 provides for renewal of the 54 water service contracts with only minor administrative changes to the contract provisions. Alternative 2 provides for renewal of the 54 water service contracts, but with specific changes in the contract provisions. The differences in the contract provisions are summarized in Table 2 and are discussed in detail for each alternative (see sections 2.1.1 and 2.1.2). Both alternatives include renewal of the 54 water service contracts analyzed in the 1994 EA and the 1998 supplemental EA. The Mercy Spring Water District contract, which has partially assigned its CVP water supply to PVWMA, SCVWD, and Westlands Water District, is one of the 54 contracts considered under both alternatives.

For purposes of this supplemental EA, the following assumptions are made:

- A. Each interim contract renewal is considered to be a separate action;
- B. A one-year interim renewal period is considered in the analysis, though contracts may be renewed for a shorter period; and
- C. The environmental commitments in existence as a result of the 1994 EA are to continue during the extended interim period.

2.1.1 Alternative 1, No Action Alternative

Alternative 1 is the continuation of the existing interim contracts with only minor administrative changes to the contract provisions. The period of renewal for each contract would be for a maximum of one year, as permitted under subsection 34C4(c)(1) of CVPIA. Alternative 1 is considered to be the No Action Alternative.

Table 2
Proposed Contract Provisions for Alternatives 1 and 2

Contract Provision Description		Alternative 1	Alternative 2
A.	Contract term	Contract renewal period would be for no more than one year	Contract renewal period would be for no more than one year
B.	Contract supply	No change	Conditional approval for out-of-district water banking. Water supply based on Category 1 and Category 2 water.
C.	Payment	No change	80/10/10 tiered pricing based on Category 1 water supply. Annual or semiannual payment for water, in advance of delivery.
D.	Water transfer	No change	No change
E.	Water quality	No change	No change
F.	Water measurement	No change	No change
G.	Water conservation	No change	Contractors shall use incentive pricing rather than an internal tiered pricing program.
H.	Water shortage	No change	No change
I.	Discretionary provisions of the Reclamation Reform Act	No change	No change
J.	Endangered Species Act compliance	No change	No change
K.	Standard articles	No change	Contracts include all existing and future rules and regulations promulgated by the Secretary of Interior.

based on guidance contained in the CEQ regulations for implementing NEPA, direction contained in CEQ's "Forty Most Asked Questions Concerning CEQ's NEPA Regulations," and Reclamation's NEPA handbook. Each of these sources indicate that, where ongoing actions are occurring and would be expected to continue in the absence of a proposed action, the no action alternative should be interpreted as continuing the current management and policy direction. In addition, a no action alternative involving non-renewal of existing contracts is considered infeasible, based on the contractors' right to request long-term contract renewal provided under the 1956 and 1963 Reclamation Project Acts (Pub. L. 84-643; Pub. L. 88-49) and subsequent interim renewal during preparation of the PEIS provided under Section 3404(c) of the CVPIA. The No Action Alternative is Reclamation's Preferred Alternative.

The current contract provisions are those that are included in the existing interim renewal contracts and specified in the 1994 EA and the 1998 supplemental EA. These contract provisions would remain the same in the subsequent interim renewal contracts under Alternative 1. Contract provisions include the following:

- A. Contract Term—Pursuant to Section 3404(c)(1) of the CVPIA, the initial term of the interim renewal contracts was for up to three years but subsequent renewals would be for up to two years. The interim renewal period under Alternative 1 would be no more than one year.
- B. Contract Supply—Beneficial uses of CVP supplies include agriculture, M&I, ground water recharge, and fish and wildlife. With the exception of water made available to the Tehama-Colusa and Corning Canal contractors, as explained herein, the quantity of water under contract during the extended interim period would not be more than the amount of highest historical beneficial use plus projected future reasonable beneficial use, provided the total amount remains at or below the current interim contract amount. The contracted quantity of water to be delivered for the interim one year period, per standard water allocation procedures, will be the actual allocations identified by CVP operations criteria in February 2000, including any updates, which may be less than the maximum contract as stated in this supplemental EA. Some of the Tehama-Colusa and Corning Canal contractors historically have used less than their respective contractual amounts. Because the total water supply available to all the Tehama-Colusa and Corning Canal contractors historically has been fully used as a result of annual transfers among the Tehama-Colusa and Corning Canal contractors, Reclamation would continue to contract for the existing contract maximum with each Tehama-Colusa and Corning Canal contractor. Additional environmental analyses and documentation would be required prior to the delivery of any water in excess of the contract amount.
- C. Payment—Payment for CVP water would be required using applicable water service rates, payments, and surcharges, including, but not limited to, those required by CVPIA to the CVP Restoration Fund. Payment of contract and full cost rates would be in accordance with the 1988 Reclamation report. The Friant Surcharge would continue to apply to CVP water delivered to the Friant Division through the proposed contract term. The required water service rates would be paid monthly, two months in advance of delivery.

Contractors are required to have implemented an approved tiered block pricing program, to have paid the United States for all CVP water provided consistent with the federal tiered water rate provisions put forth in the CVPIA and consistent with the interim renewal guidelines addressing said federal water rate provisions, or to have been declared exempt from tiered pricing requirements.

The initial interim renewal contracts required accelerated payment of the noninterest-bearing operations and maintenance (O&M) deficits. If

any, held by the contractor, and any amounts remaining to be repaid are subject to separate agreement, per the original interim renewal contracts. The proposed interim renewal contracts would simply recognize, as appropriate, that the contractor has repaid or is in the process of repaying the outstanding noninterest-bearing O&M deficit, pursuant to a separate agreement governing accelerated repayment.

- D. Water Transfer—Interim guidelines for water transfers, developed pursuant to Section 3405(a) of the CVPIA, would be used in implementing water transfers. All interim contracts would comply with these guidelines, as revised and updated. As stated in the guidelines, all transfers would require separate environmental compliance documentation.
- E. Water Quality—Pursuant to Section 3405(c) of the CVPIA, the contractor shall be responsible for compliance with all state and federal water quality standards applicable to surface and subsurface agricultural drainage generated through the use of federal or contractor facilities or CVP water provided by the contractor within its boundaries.
- F. Water Measurement—Pursuant to the intent of Section 3405(b) of the CVPIA, the contractor shall ensure that all surface water delivery systems within its service area are equipped with water-measuring devices or water-measuring methods within five years of the initial interim contract renewal. The installation of water-measuring devices would require, as appropriate, environmental analyses and documentation, pursuant to NEPA.
- G. Water Conservation—Following development of an approved water conservation plan, pursuant to Section 3405(e) of the CVPIA, contractors are required to continue to implement the water conservation plan and to file annual reports intended to document compliance. An internal tiered pricing program (as discussed above under payment provisions) is required within the district.
- H. Water Shortage—During any year, a water shortage may occur in the quantity of water made available to the contractor by the United States through and by means of the CVP. In any year in which there is a shortage in the available CVP water supply, the Contracting Officer shall apportion the available water supply to those contractors entitled to receive project water consistent with their contract with the United States.

- I. Discretionary Provisions of the Reclamation Reform Act (RRA)—Under the interim renewal contract, the contractor shall be subject to all discretionary provisions of the RRA.
- J. Endangered Species Act Compliance—The contractor shall be required to comply with all applicable requirements of any biological opinion addressing the execution of the interim renewal contracts developed pursuant to Section 7 of the ESA, as amended, and to comply with other appropriate environmental documentation that may be required for specific activities.
- K. Standard Articles—Current standard articles, such as the Water and Air Pollution Control, Equal Opportunity, Compliance with Civil Rights Law and Regulations, and Officials Not to Benefit, shall be included in the interim renewal contracts.

2.1.2 Alternative 2, Interim Renewal of Contracts under Revised Terms

Alternative 2 would provide for interim renewal of all 54 water service contracts with specific changes to the contract provisions, as listed below. Contract provisions are listed only if they would differ from the provisions described above for Alternative 1.

- B. Contract Supply—As under Alternative 1, beneficial uses of CVP water supplies would include agriculture, M&I, and ground water recharge. In addition, out-of-district water banking programs would be conditionally approved by the Contracting Officer under Alternative 2, upon compliance with state and federal law.

Water quantities specified in the contracts would be based on Category 1 and Category 2 water supplies. Category 1 water would be the quantity of water that would be reasonably likely to be available during a year for delivery and would be calculated on the basis of the average quantity of water delivered during the most recent five-year period. Category 1 water would be the "contract total" under Alternative 2 for the purpose of applying CVPLA Section 3405(d) tiered pricing.

Category 2 water would be any additional water that may be delivered to contractors in excess of Category 1 water. The maximum quantity of water delivered, including both Category 1 and Category 2 water, would be the maximum contract quantity from the previous interim contract. The total quantity of water delivered during the interim renewal period under Alternative 2 may therefore be the same as under Alternative 1 but would not be more.

- C. Payment—Payment for water would be based on an 80/10/10 tiered pricing structure. Under this approach, the first 80 percent of the contract total (Category 1) would be priced at the contract rate. The contract rate for agricultural water users would be an allocated share of the CVP O&M costs and capital costs. For M&I users, the contract rate would include an allocated share of the CVP O&M costs and capital costs, as well as an interest component calculated at the authorized CVP rate.

The next 10 percent of water delivery would be priced at the average of the contract rate and the full cost rate. The full cost rate for both agricultural and M&I users would be an allocated share of the CVP O&M costs and capital costs, plus interest calculated at the RRA rate.

The final 10 percent of Category 1 water would be priced at the full cost rate. All Category 2 water would be priced at the full cost rate.

Tiered water pricing would be waived for water delivered to produce a crop that provides significant and quantifiable habitat for waterfowl in fields where water is used. Ability-to-pay limitations for agricultural users would apply, as under Alternative 1, but the interim contracts would provide for the Contracting Officer to reevaluate such determinations every five years.

The required water service rates would be paid annually or semiannually, in advance of delivery. Refunds for overpayment would be provided only for billing or payment error or if the quantity of water scheduled and paid for in a contract year is more than the quantity delivered.

- G. Water Conservation—Unless exempted, contractors shall use incentive pricing, according to the contractors' water conservation plans, rather than an internal tiered pricing program. Contractors are required to submit revised water conservation plans every five years.
- K. Standard Articles—Contractors shall be subject to the modified Westwide Rules and Regulations Article, which includes all existing and future rules and regulations promulgated by the Secretary of Interior, as may be amended or supplemented.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment conditions at the present are essentially the same as those described in the 1994 EA. The geographic area analyzed in the 1994 EA also is comparable to the area to be analyzed in this supplemental EA. Therefore, this supplemental EA evaluates potential effects that interim contract renewal may have on the human and natural environment during the one-year analysis period, based on the affected environment described in the 1994 EA.

Potential impacts arising from the assignments of water, such as those by the Mercy Springs or Widren water districts, as previously described, would be subject to separate environmental review processes and are not addressed in this document.

Consistent with the 1994 EA and the 1998 supplemental EA, the following resources are considered in this document:

- Water resources (Section 3.1);
- Land use (Section 3.2);
- Biological resources (Section 3.3);
- Cultural resources (Section 3.4);
- Recreation resources (Section 3.5);
- Demographics and environmental justice (Section 3.6);
- Indian Trust Assets (Section 3.7); and
- Economic resources (Section 3.8).

Cumulative impacts are also evaluated in Section 3.9. The following assumptions were used in evaluating potential impacts of interim contract renewal for an additional one-year period:

- During the interim renewal contract period, the maximum water delivery to each CVP contractor would not change from the existing maximum contract quantities.
- Based on best available knowledge, Reclamation anticipates that the short-term nature of the interim renewal contracts would not likely result in significant new capital investments; therefore, it is assumed that no new diversions or canals would be constructed as a result of interim renewal.
- Based on best available knowledge, Reclamation anticipates that during the interim renewal period, and associated with the use of interim contract water, there would be little or no
 - conversion of natural lands to agricultural production, thereby maintaining the historic stabilization of agricultural land use;
 - conversion of natural or agricultural habitats to other uses without appropriate state or federal coordination and consultation;
 - demonstrable changes in agricultural practices, including flooding regimes and canal maintenance practices, and weed and pest control activities; and
 - changes in the timing or amount of water stored in and historically released from CVP-operated reservoirs or changes in the timing or amount of water in rivers historically regulated by the CVP.

3.1 WATER RESOURCES

3.1.1 Alternative 1, No Action Alternative

Renewal of the interim contracts with only minor administrative changes to the contract provisions would not result in a change in contract water quantities or, based on best available knowledge, a change in water use. Water delivery during previous interim renewal contract periods has not exceeded historic quantities. It is therefore assumed that there would be no effect on surface water supplies or quality.

Based on best available knowledge, Reclamation anticipates that renewal of interim contracts with only minor changes to the contract provisions would not result in any significant growth-inducing impacts. In addition, no substantial

changes in growth are expected to occur during the short time frame of this renewal.

Due to the short term of the interim renewal contracts, benefits associated with additional water conservation measures included in contract provisions are not expected to be significant.

3.1.2 Alternative 2

Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water) and the pricing structure (80/10/10 tiered pricing) could result in contractors shifting to other water supplies, such as ground water, to enhance supplies or reduce costs. These contract provisions may also result in implementation of conservation measures that would beneficially affect water resources.

On average, CVP contractors north of the Delta typically receive their full contract quantity of water only 70 percent of the time, while contractors south of the Delta receive their full contract quantity of water less than 40 percent of the time. Contractors typically must rely on other water sources to augment CVP supplies. Although the contract water quantity specified under Alternative 2 would likely be less than under current contracts and under Alternative 1, the actual quantity delivered is likely to be similar to historic deliveries because Category 1 water delivery would be based on typical delivery rates for each contractor.

Reliance on alternative supplies would be compounded under Alternative 2 as a result of potential increased water costs under the 80/10/10 tiered pricing approach. While contractors may receive a total quantity of water comparable to historic deliveries, the increased cost for tier 2 or 3 water (water in excess of 80 percent of the Category 1 contract total) would provide further incentive for contractors to shift their reliance to other water supplies. This may be particularly detrimental in CVP service areas subject to ground water overdraft, such as the San Joaquin River region. Although the short term of renewal would result in only minimal impact, increased reliance on ground water to augment CVP supplies could contribute to potential long-term ground water decline.

3.2 LAND USE

3.2.1 Alternative 1, No Action Alternative

The renewal of contracts with only minor administrative changes to the contract provisions would not provide for additional water supplies that could act as an incentive for increased acreage of agricultural production. Uncertainty of supply due to the short-term duration of the renewal could act as a disincentive for farmers to preserve their lands from urban development, but this effect would be offset by the desire to retain agricultural lands until long-term contracts can be executed. Given that this is an interim renewal process, the net effect on land use conversion likely would be minimal.

In addition, Reclamation requests that all contractors inform the appropriate Reclamation area office of proposed land use changes associated with interim contract water. In discussions between Reclamation and the USFWS for the previous interim renewal, it was decided that the Reclamation, through informal consultation with the USFWS, will analyze the potential effects of any changes and would determine what, if any, mitigation would be appropriate for Reclamation to undertake.

3.2.2 Alternative 2

Impacts to land use associated with Alternative 2 would be comparable to those described under Alternative 1. Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water) and the pricing structure (80/10/10 tiered pricing) could result in changes in cropping patterns or land fallowing, as contractors respond to uncertainties in supply and water cost. Because actual water deliveries are not likely to change and because this is an interim renewal process, it is unlikely that the uncertainty of the water supply would result in any changes in agricultural practices that would influence land use.

3.3 BIOLOGICAL RESOURCES

3.3.1 Alternative 1, No Action Alternative

Based on best available knowledge, the status of biological resources in the affected area has not changed significantly from that described in the 1994 EA. Since the 1994 EA was issued, regulatory changes have occurred that affect CVP operations. In 1993, the USFWS released a Biological Opinion that instituted restrictions on CVP and State Water Project (SWP) operations to protect the Delta smelt and its habitat. This biological opinion was revised in 1994 and 1995. In 1994, federal, state, and private interests agreed to implement the Bay-Delta protection plan. Coordinated operation of the CVP and SWP is based on this agreement. In 1992, the National Marine Fisheries Service (NMFS) released a Biological Opinion that established criteria for protection of the winter-run chinook salmon. This Biological Opinion was revised in 1993 and 1995.

Current measures to address biological concerns would continue under interim renewal. Several programs provided for in the CVPIA would continue, including land retirement, refuge water supplies, the anadromous fish restoration program, and the Section 3406(b)(1) "other" program, which would protect, restore, and enhance the biological resources within the CVP service area. Reclamation and USFWS also would continue to implement the long-term CVP-wide Conservation Program (CVPCP) which, in concert with other programs, would address the needs of special status species in the affected area, including habitat. The CVPCP establishes implementing plans and priority needs before identifying ecological needs, options, and actions for implementation. However, the CVPCP does not provide site specific ESA coverage, is not mitigation for any site specific impacts, and does not address or authorize take of listed species.

In response to previous consultation with the USFWS, Reclamation has undertaken a number of commitments to monitor and address any impacts from the previous interim contracts. The purpose of these activities has been to ensure that no significant impacts occur or, if they do, that such impacts are adequately mitigated. Appendix A contains the 1996 through 1999 Annual Reports on the various environmental commitments made and Reclamation's progress in implementing them. The current Biological Opinion for interim contracts is contained in Appendix E and presents the commitments that Reclamation will undertake during the proposed interim renewal period to address potential impacts.

While some land use changes may have occurred that are related to interim contracts, such changes have not been significant, based on the best available knowledge. In response to these changes, Reclamation has initiated consultation with USFWS to determine any mitigation activities that may be necessary. An analysis will also be conducted to determine if and how much land use change has occurred during the period of the interim water contracts. This data will be published separately and used in the analysis of potential environmental effects for long term contract renewals.

Finally, CVP-wide impacts to biological resources have been evaluated in the PEIS, and a Biological Opinion to address potential CVP-wide impacts is being negotiated by Reclamation and USFWS. This opinion is anticipated to be completed during the period of this interim renewal. Operation of the CVP by Reclamation would be subject to the provisions of this Biological Opinion when the agreement has been finalized and a start date has been determined.

The amount and timing of storage at CVP reservoirs and flows in rivers and streams that convey CVP water during the one-year contract renewal period are expected to be similar to historic conditions and to be in conformance with all existing biological opinions. Further, the protective provisions of the existing biological opinions also should benefit any newly listed species. Existing programs to protect biological resources would continue to be implemented under this alternative and to ensure that no significant impacts to biological resources would occur. Because this is an interim renewal process, it is unlikely that any changes in agricultural practices or land use, which could result in loss of habitat or species, would occur. No significant impacts to biological resources are expected.

3.3.2 Alternative 2

Impacts to biological resources associated with Alternative 2 would be comparable to those described under Alternative 1. Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water) and the pricing structure (80/10/10 tiered pricing) could result in changes in agricultural practices or land use as contractors respond to uncertainties in supply and water cost. However, due to the short period of this renewal and because actual water deliveries are likely to remain the same during this period, it is

unlikely that any changes in agricultural practices or land use which could result in loss of habitat or species would occur. Existing programs to protect biological resources, as described under Alternative 1, would continue to be implemented under Alternative 2. No significant impacts to biological resources are expected.

3.4 CULTURAL RESOURCES

3.4.1 Alternative 1, No Action Alternative

The No Action Alternative would not result in activities that could affect cultural resources, such as substantial changes in reservoir elevations, changes in land use, or the construction of any new facilities. During preparation of the 1994 EA, Reclamation consulted with the State Historic Preservation Officer regarding the potential impacts on cultural resources. As part of this consultation, Reclamation developed a process for the contractors to follow to determine if changing water uses would affect historic properties. This process would remain unchanged during the one-year interim renewal period. No impacts to cultural resources are expected.

3.4.2 Alternative 2

Impacts to cultural resources associated with Alternative 2 would be comparable to those described under Alternative 1. Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water) and the pricing structure (80/10/10 tiered pricing) could result in changes in agricultural land uses, such as land fallowing. The types of changes in agricultural practices likely to occur under Alternative 2, such as land fallowing, could benefit cultural resources by not disturbing potential sites. Nevertheless, because actual water deliveries are not likely to change and because this is an interim renewal, uncertainty of supply would not result in any measurable changes in land use, which could in turn affect cultural resources. The process to protect historic properties developed by Reclamation during consultation for the 1994 EA discussed above under Alternative 1 would continue to apply during the interim renewal period under Alternative 2. No impacts to cultural resources are expected.

3.5 RECREATION RESOURCES

3.5.1 Alternative 1, No Action Alternative

No changes in CVP reservoir storage or modifications in the amount or timing of water deliveries, which could affect recreational resources, would occur under Alternative 1; therefore, no impacts to recreational resources are anticipated.

3.5.2 Alternative 2

Impacts to recreational resources associated with Alternative 2 would be comparable to those described under Alternative 1.

3.6 DEMOGRAPHICS AND ENVIRONMENTAL JUSTICE

3.6.1 Alternative 1 – No Action Alternative

Factors contributing to population change, employment, and 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, changes in population and the various indicators of social well-being that would result are expected to be relatively minor.

Executive Order 12898 requires federal agencies to identify potential impacts arising from their actions that would disproportionately affect minority and low-income populations. Contract terms that affect water delivery would affect agricultural production, which dictates the migration and location of migrant workers who tend to be from minority and low-income populations. 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, Alternative 1 would not differ from current conditions and would not be expected to disproportionately affect minority or low-income populations.

3.6.2 Alternative 2

Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water) and the pricing structure (80/10/10 tiered pricing) could result in changes in agricultural practices, including cropping patterns and land fallowing. M&I users would also be impacted by changes in supply or water cost. Because this is a temporary action, and because the potential changes in water delivery and cost is expected to be within the normal range of variation, it is unlikely that significant changes in social-well being would occur under this alternative.

Changes in cropping patterns and land fallowing may be detrimental to farm workers, especially to migrant workers who tend to be from minority and low-income populations. This impact would be attenuated by the short duration of the interim renewal and the low likelihood of major shifts in agricultural production in a single year. Any changes would likely be within the normal range of annual or seasonal variation. No significant disproportionate impacts to minority or low-income populations are expected.

3.7 INDIAN TRUST ASSETS (ITA)

3.7.1 Alternative 1, No Action Alternative

Continued delivery of project water to the existing contracts would not affect any Indian Trust Assets (ITA) because existing rights would not be affected, no physical changes to existing facilities are proposed, and no new facilities are proposed.

3.7.2 Alternative 2

Impacts to ITA associated with Alternative 2 would be comparable to those described under Alternative 1.

3.8 ECONOMIC RESOURCES

3.8.1 Alternative 1, No Action Alternative

Existing water deliveries and CVP facility operations would continue under the No Action Alternative. No significant changes in power generation, recreational opportunities, or agricultural economies are expected. No significant economic impacts were identified during the previous interim renewal period and, similarly, no significant economic impacts are anticipated to occur under the extended period of renewal.

3.8.2 Alternative 2

Contract provisions under Alternative 2 that stipulate the quantity of water delivered (Category 1 and Category 2 water), the water pricing structure (80/10/10 tiered pricing), and annual or semiannual payment for water, could place an additional financial burden on water contractors. Because the economy of the Central Valley is heavily dependent on these water supplies, this increased burden, despite the short duration of the renewal, would translate into economic impacts throughout the affected area.

Uncertainty as to the quantity of water delivered may provide some disincentive for long-term investment by agricultural or M&I contractors. Because the short duration of the renewal action, it is unlikely that uncertainty would significantly alter investment decisions.

While contractors may receive the same quantity of water under this alternative, the tiered pricing structure stipulated in the contract may result in higher water prices for both agricultural and M&I contractors if second or third tier water is provided. The contract provision for annual or semiannual payment for CVP water may also place an increased financial burden on contractors since water payments could no longer be economically distributed over time. The increased cost of water resulting from these two contract provisions could lead to increases in water conservation or measurement practices, conversion to alternative water supplies, land fallowing, or changes in cropping patterns. Local and regional economies would be directly affected as a result of losses in farming revenues, decreased value of land dependant on water supplies, increased costs to consumers of agricultural products or M&I water, and increased water conservation or measurement costs.

The cost of water and the return on investment varies substantially within the affected area and therefore the magnitude of the economic impact also would vary. Potential impacts may be most adverse in CVP service areas where the price of water already meets or exceeds the contractors capacity to pay for it (i.e., Tehama-

Colusa Canal or Bella Vista contractors). In areas where the costs of alternative supplies are substantially higher, such as the Tulare Lake region, agricultural producers could experience significant losses in net revenue.

Costs for increased conservation or measurement may be substantial for some contractors. While some cost savings may be achieved, return on investment from implementing such measures would occur over the long run and would be minor during the interim period of renewal.

Ability-to-pay determinations would apply under this alternative and would provide partial relief to contractors for whom it is authorized; however, because CVPIA requires that third tier water be priced at the full-cost rate, no relief would be provided for third tier deliveries. Second tier water deliveries would also reflect only partial relief from capital obligations. In addition, contractors for whom ability-to-pay studies have not been performed would not be able to seek relief during the short time period of this renewal.

No significant changes in power generation or recreational opportunities would be expected to occur under Alternative 2 and no impacts to these economic areas are expected.

3.9 CUMULATIVE IMPACTS

CEQ regulations (40 CFR Parts 1500-1508) implementing the procedural provisions of NEPA, as amended (42 USC §§ 4321 et seq.), define cumulative effects as follows:

"The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR § 1508.7).

A single project may have individually minor impacts; however, when considered together with other projects, the effects may be collectively significant. Therefore, a cumulative impact is the additive effect of all past, present, and reasonably foreseeable future actions in the geographic area.

The potential environmental impacts of these projects and the potential for additive effects when combined with the proposed activities considered in this EA were examined, and neither of the alternatives were determined to result in significant cumulative impacts.

3.9.1 Cumulative Activities in the Affected Area

Due to the large area of potential effect, there are numerous actions and projects being undertaken by federal, state, and local agencies or individuals that could contribute to cumulative impacts. Therefore, the following discussion focuses on water-related activities with broad effects within the Central Valley, as well as on

activities that are similar in time or effect to the interim renewal contracts. These actions would, in general, affect fisheries and other biological resources, land use, ground water and surface water use, and economic values (i.e., land and agricultural production costs). The contribution of the interim renewal contracts to cumulative impacts is assessed based on these actions.

The following actions are major activities currently underway in the affected area. This list is not comprehensive but is representative of the types of activities that would be expected to occur in the affected area.

Implementation of the CVPLA—The multiple requirements of the CVPLA are being implemented over time based on specific provisions of the act. The final PEIS was issued in October 1999, and the site-specific environmental review process for long-term water contract renewal has begun. Long-term water service contracts will supercede the interim contracts but may still influence behavior during the period of interim renewal.

Other provisions that are being implemented include acquiring water from willing sellers for Level 4 wildlife refuge supplies, dedicating and managing a portion of CVP yield for fish and wildlife, implementing water transfers, land retirement, and assessing and collecting Restoration Fund payments and charges.

Implementation of the Bay-Delta Plan Accord—This agreement among state and federal agencies in the San Francisco Bay/San Joaquin River Bay-Delta provides for development of a long-term plan to restore ecosystem health and to improve water management in the Delta. The plan consists of multiple actions over a wide area.

Trinity River Instream Flow Requirements Study—This action evaluates instream flow requirements in the Trinity River and may result in new flow requirements that affect flow levels in the Sacramento River and water reliability in the CVP system.

Sacramento and San Joaquin River Basin Comprehensive Study—This action is to develop strategies to increase flood protection and to improve the ecosystem health in the Sacramento and San Joaquin river watersheds.

East Bay Municipal Utility District Supplemental Water Supply Project—This project would provide for delivery of water, pursuant to an existing CVP contract, from the American River.

American River Watershed Project—This action is to develop strategies to address flood control problems in the American River basin.

In addition to specific projects or actions, current activities, such as continued operation of the SWP, and large-scale trends, such as changes in federal farm

programs or demand for agricultural products, may contribute to cumulative effects in the affected area. Numerous local projects throughout the Central Valley also would contribute to cumulative impacts.

Alternative 1, No Action Alternative

The proposed renewal of the interim contracts for one year with only minor administrative changes to the contract provisions would not be expected to contribute significantly to any cumulative impacts under this alternative.

While many of the projects listed above would seek to beneficially manage water and biological resources on a larger scale, current trends toward urban encroachment and conversion of agricultural land to nonagricultural uses in the Central Valley would be expected to occur during the interim renewal period and may result in cumulative adverse effects on all types of environmental resources. Because renewal contracts are of a limited duration, represent a continuation of existing conditions, and would not provide for additional water supplies that could lead to shifts in agricultural practices or land use, interim contract renewal would contribute negligibly to cumulative impacts. Interim contract renewal is fundamentally different from these long-term federal activities because the proposed action is a short-term interim activity with a clearly defined end point (through February 2001). Based on what has occurred in the previous interim periods, extending the interim renewal period for one year with only minor administrative changes to the contract provisions, is not expected to contribute to CVP-related impacts in any significant manner.

Alternative 2

Cumulative impacts associated with Alternative 2 would be comparable to those described under Alternative 1. Although Alternative 2 may result in significant adverse impacts to water resources, land use, and economics, which may contribute to significant cumulative impacts, the contribution to such impacts would be minor because interim renewal would be a temporary action.

4. CONSULTATION AND COORDINATION

CHAPTER 4

CONSULTATION AND COORDINATION

4.1 ENDANGERED SPECIES ACT

Reclamation consulted with the USFWS pursuant to the ESA on the previous interim renewal contracts and received a final Biological Opinion in December 1994, which was revised in February 1995. The Biological Opinion subsequently was extended to cover the interim renewal from February 1995 through February 2000.

The Biological Opinion detailed a number of commitments made by Reclamation, including filing of an annual report that indicated Reclamation's compliance with these commitments. The four most recent annual reports by Reclamation are contained in Appendix A. Reclamation will provide the USFWS, Endangered Species Division, with copies of future annual reports of Interim Contract Biological Opinion Implementation in draft for 30 day review and approval prior to finalization.

Since the 1994 EA was issued, additional species in the CVP area have been added to the federal threatened and endangered species listing. USFWS, based on an evaluation of Reclamation's compliance with the 1995 Biological Opinion, extended the effective date of the 1995 Biological Opinion to cover the extended interim renewal period for the 1998 supplemental EA. The USFWS further concurred with Reclamation that the issuance of interim CVP contracts is not likely to adversely affect any newly listed species.

Reclamation consulted with USFWS during preparation of this supplemental EA. As part of the USFWS consultation process, Reclamation provided USFWS with additional information concerning water service area boundaries, water transfers, selenium, and other issues. Reclamation also requested that 14 Friant contractors that are not part of the proposed action be included in the Biological Opinion. This request was made because, although the current interim contracts do not expire until February 28, 2001, the Biological Opinion for these 14 contractors

expires in February 28, 2000. (See Appendix C for correspondence between Reclamation and USFWS regarding these issues.)

USFWS issued a revised Biological Opinion for interim renewal of contracts through February 28, 2001 (Appendix E). The Biological Opinion also applies to 14 Friant contractors. This opinion presents commitments that Reclamation will undertake during the interim renewal period to address potential impacts to threatened or endangered species.

Reclamation also consulted with NMFS during preparation of this supplemental EA. NMFS concurred with Reclamation's determination that the proposed action would not adversely affect any listed species, or their designated or proposed habitat (Appendix D).

4.2 CULTURAL RESOURCES

As discussed previously, Reclamation consulted with the State Historic Preservation Officer during the preparation of the 1994 EA regarding the potential impacts on cultural resources. As part of this consultation, Reclamation developed a process for contractors to determine whether they would be changing water uses and possibly affecting historic properties. This process would remain unchanged during the one-year interim renewal period.

5. REFERENCES

1
.

CHAPTER 5

REFERENCES

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_____. 1994a. Interim Renewal Contracts Draft Environmental Assessment. Mid-Pacific Regional Office. September 1994.

_____. 1994b. Interim Renewal Contracts Final Environmental Assessment. Mid-Pacific Regional Office. December 1994.

_____. 1997. Environmental Assessment for the Execution of 14 Interim Water Service Contracts through February 28, 2001. South-Central California Area Office. December 1997.

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_____. 1999a. GIS Map: U.S.B.R. Mid-Pacific Region Federal Water Districts by Units. Mid-Pacific Regional Office. February 1, 1999.

_____. 1999b. Central Valley Project Improvement Act, Final Programmatic Environmental Impact Statement. October 1999.

_____. 1999c. CVP Water Supply Partial Contract Assignment from Mercy Springs Water District (Contract No. 14-06-200-3365A) to Pajaro Valley Water Management Agency, Santa Clara Valley Water District, and Westlands Water District, Final Environmental Assessment and Final Finding of No Significant Impact. South-Central California Area Office. April 1999.

6. LIST OF PREPARERS

1
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CHAPTER 6

LIST OF PREPARERS

Tetra Tech, Inc.

Dean Amundson
M.S., Environmental Policy
Years of Experience: 6
(Co-Project Manager)

David Batts
M.S., Natural Resource Planning and Management
B.S., International Development
Years of Experience: 7
(Economic and Biological Resources)

John Bock
BS, Environmental Toxicology
Years of Experience: 6
(Demographics)

Karen E. Frye, AICP
B.S., Political Economy of Natural Resources
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(Co-Project Manager)

Patti Kroen
Post-Graduate studies, Geomorphology and Soils
B.S., Physical Geography
B.S., Geology
Years of Experience: 13
(Water Resources)

Randolph Varney
B.A., Technical and Professional Writing
Years of Experience: 13
(Technical Editing)

APPENDIX A

INTERIM RENEWAL CONTRACTS
BIOLOGICAL OPINION IMPLEMENTATION
ANNUAL STATUS REPORTS
(1996 through 1999)

APPENDIX B

RESPONSES TO COMMENTS ON
THE DRAFT SUPPLEMENTAL EA

APPENDIX C

BUREAU OF RECLAMATION
CORRESPONDENCE WITH US FISH AND WILDLIFE SERVICE
CONCERNING 14 INTERIM RENEWAL CONTRACTS

APPENDIX D

NATIONAL MARINE FISHERIES SERVICE
LETTER TO BUREAU OF RECLAMATION
INFORMAL CONSULTATION AND REQUEST FOR CONCURRENCE WITH
DETERMINATION OF NO ADVERSE EFFECT FOR 55 INTERIM RENEWAL CONTRACTS

APPENDIX E

US FISH AND WILDLIFE SERVICE
BIOLOGICAL OPINION FOR INTERIM CONTRACT RENEWAL

APPENDIX B

Interim Contract Sample

DRAFT -- DRAFT -- DRAFT

Irrigation and M&I
R.O. Draft 05/27-1994
Rev. R.O. 06/21-1994
Rev. R.O. 07/11-1994
Rev. R.O. 07/19-1994
Rev. R.O. 08/09-1994
Rev. R.O. 08/15-1994
Rev. R.O. 08/19-1994
Rev. R.O. 02/17-1995
Rev. R.O. 08/13-1997
Rev. R.O. 09/29-1999
Rev. R.O. 09/30-1999
Rev. R.O. 11/03-1999
Rev. R.O. 08/25-2000
Rev. R.O. 09/14-2000
Rev. R.O. 12/08-2000
R.O. 01/30-2001

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

INTERIM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND

PROVIDING FOR PROJECT WATER SERVICE

THIS CONTRACT, made this ____ day of _____, 2001, in
pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or
supplementary thereto, including, but not limited to, the acts of August 26, 1937 (50 Stat. 844),
as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented,
July 2, 1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1261), as

1 amended and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively
2 hereinafter referred to as the Federal Reclamation law, between THE UNITED STATES OF
3 AMERICA, hereinafter referred to as the United States, and _____,
4 hereinafter referred to as the Contractor, a public agency of the State of California, duly
5 organized, existing, and acting pursuant to the laws thereof, with its principal place of business in
6 _____, California;

7 WITNESSETH, That:

8 EXPLANATORY RECITALS

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

15 [DIVISIONAL ISSUE] WHEREAS, the United States constructed
16 _____, hereinafter collectively referred to as the _____ facilities, which
17 will be used in part for the furnishing of water to the Contractor pursuant to the terms of this
18 interim renewal contract; and

19 [DISTRICT ISSUE] WHEREAS, the Contractor and the United States entered
20 into Contract No. _____ as amended, which provided the Contractor, Central Valley

1 Project water from the _____ from _____ to
2 _____ and

3 WHEREAS, the Contractor and the United States entered into interim renewal
4 contract(s) identified as Contract No(s). _____, the latter of which is
5 hereinafter referred to as the Existing Interim Renewal Contract, which provided Project Water
6 to the Contractor from _____ through _____; and

7 WHEREAS, the Contractor has requested a subsequent interim renewal contract
8 pursuant to the Existing Interim Renewal Contract, Federal Reclamation law and the laws of the
9 State of California, for water service from the Central Valley Project; and

10 WHEREAS, the United States and the Contractor believe that either further
11 negotiations on a long-term renewal contract for the Contractor would be beneficial and mutually
12 commit to continue to negotiate to seek to reach agreement or the Contractor's proposed long-
13 term renewal contract's required environmental review necessary to execute a long-term renewal
14 contract has not been completed, and the Contractor has requested a subsequent interim renewal
15 contract pursuant to Article 2 (b)(1) of the existing Interim Renewal Contract; and

16 WHEREAS, the United States has determined that the Contractor has to date
17 fulfilled all of its obligations under the Existing Interim Renewal Contract; and

18 WHEREAS, The Contracting Officer has determined that the Contractor has the
19 capability to fully utilize for reasonable and beneficial use, or shown projected future reasonable
20 and beneficial use for, the quantity of Project Water to be made available to it pursuant to this
21 interim renewal contract; and

1 [DISTRICT ISSUE] WHEREAS, rights of renewal of Contract No.

2 _____ and to convert said contract to a contract as provided by subsection (d),
3 Section 9 of the Act of August 4, 1939 (53 Stat. 1187), are set forth in said contract; and

4 WHEREAS, Section 3404 of the CVPIA, precludes long-term renewal of water
5 service contracts until the completion of appropriate environmental documentation, including a
6 programmatic environmental impact statement ("PEIS") pursuant to the National Environmental
7 Policy Act analyzing the direct and indirect impacts and benefits of implementing the CVPIA
8 and the potential renewal of all existing contracts for Project Water; and

9 WHEREAS, in order to continue water service provided under Project water
10 service contracts that expire prior to the completion of the PEIS, the United States intends to
11 execute interim renewal contracts for a period not to exceed three (3) Years in length, and for
12 successive interim periods of not more than two (2) Years in length, until appropriate
13 environmental documentation, including the PEIS, is finally completed, at which time the
14 Secretary shall, pursuant to Federal Reclamation law, upon request of the Contractor, enter into a
15 long-term renewal contract for a period of twenty-five (25) Years; and may thereafter renew such
16 long-term renewal contracts for successive periods not to exceed twenty-five (25) Years each;
17 and

18 WHEREAS, the Secretary intends to assure uninterrupted water service and
19 continuity of contract through the process set forth in Article 2 hereof; and

1 WHEREAS, the United States is willing to renew the Existing Interim Renewal
2 Contract pursuant to Section 3404(c)(1) of the CVPIA on the terms and conditions set forth
3 below;

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

6 DEFINITIONS

7 1. When used herein unless otherwise distinctly expressed, or manifestly
8 incompatible with the intent hereof, the term:

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

11 (b) "Charges" shall mean the payments in addition to the Rates determined
12 annually by the Contracting Officer, required by the Federal Reclamation law, including
13 Section 3407 of the CVPIA;

14 (c) [District Issue] "Contractor's Service Area/boundaries" shall mean the
15 area to which the Contractor is permitted to provide Project Water under this interim
16 renewal contract;

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

19 (e) "Delivered Water" shall mean Project Water made available to
20 the Contractor and diverted at the point(s) of delivery approved by the Contracting
21 Officer;

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

4 (g) "Excess Lands" shall mean all lands defined as excess in
5 Section 204 of the RRA, other than those lands exempt from acreage limitation under
6 Federal Reclamation law;

7 (h) "Full Cost Rate" shall mean that water rate described in Sections 205(a)(3)
8 or 202(3) of the RRA, whichever is applicable;

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

11 (j) "Irrigation Water" shall mean Project Water which is used primarily
12 in the production of agricultural crops or livestock, including domestic use
13 incidental thereto, and watering of livestock;

14 (k) "Landholder" shall mean an individual or entity attributed with the total
15 irrigable acreage of one or more tracts of land situated in one or more districts owned
16 and/or operated under a lease which is served with Irrigation Water pursuant to a contract
17 with the United States;

18 (l) "M&I Water" shall mean water made available from the Project other than
19 Irrigation Water. M&I Water shall include water used for purposes such as the watering
20 of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment
21 or water delivered to landholding operated in units of less than _____ acres unless the

1 Contractor establishes to the satisfaction of the Contracting Officer that the use of water
2 delivered to any such landholding is a use described in subdivision (j) of this Article;

3 (m) "O&M" shall mean normal and reasonable care, control, operation, repair,
4 replacement, and maintenance of Project facilities;

5 (n) "Operating Non-Federal Entity" shall mean a Non-Federal entity which
6 has the obligation to operate and maintain all or a portion of the [Division] facilities
7 pursuant to an agreement with the United States;

8 (o) "Project" shall mean the Central Valley Project owned by the
9 United States and operated by the Department of the Interior, Bureau of Reclamation;

10 (p) "Project Water" shall mean all water that is developed, diverted, stored, or
11 delivered by the United States in accordance with the statutes authorizing the Project and
12 in accordance with the terms and conditions of applicable water rights permits and
13 licenses acquired by and/or issued to the United States pursuant to California law;

14 (q) "Rates" shall mean the payments determined annually by the Contracting
15 Officer in accordance with the then current applicable water ratesetting policies for the
16 Project;

17 (r) "Secretary" or "Contracting Officer" shall mean the Secretary of the
18 United States Department of the Interior or his duly authorized representative;

19 (s) "Year" shall mean the period from and including March 1 of
20 each Calendar Year through the last day of February of the following Calendar Year:

21 TERM OF CONTRACT - RIGHT TO USE OF WATER

1 2. (a) This interim renewal contract shall be effective from March 1, 2001 and
2 shall remain in effect through February 28, 2002, and thereafter will be renewed as described in
3 this article. Except as provided in subdivision (b) of this Article, until completion of all
4 appropriate environmental review, and provided that the Contractor has complied with all the
5 terms and conditions of the interim renewal contract in effect for the period immediately
6 preceding the requested successive interim renewal contract, this interim renewal contract will be
7 renewed, upon request of the Contractor, for successive interim periods each of which shall be no
8 more than two (2) Years in length. Also, except as provided in subdivision (b) of this Article, in
9 order to promote orderly and cost effective contract administration, the terms and conditions in
10 subsequent interim renewal contracts shall be identical to the terms and conditions in the interim
11 renewal contract immediately preceding the subsequent interim renewal contract: Provided
12 however, That each party preserves the right to propose modification(s) in any interim renewal
13 contract other than those described in subdivision (b) of this Article, in which case the parties
14 shall negotiate in good faith appropriate modification(s) to be included in any successive interim
15 renewal contracts. Said modification(s) of each successive interim renewal contract shall be
16 agreed upon within a reasonable time prior to the expiration of the then existing interim renewal
17 contract. Nothing in this Article shall in any way alter the obligation that, upon final completion
18 of the PEIS and any necessary supplemental environmental documentation, the Secretary shall
19 pursuant to Federal Reclamation law, upon request of the Contractor, enter into a long-term
20 renewal contract for a period of twenty-five (25) Years and may thereafter renew such long-term
21 renewal contracts for successive periods not to exceed twenty-five (25) Years each. The
22 Contractor asserts that Contract No. _____ and existing law go beyond the preceding

1 sentence to give it enforceable rights to successive long-term renewal contracts. The Contracting
2 Officer disagrees with that assertion. The parties agree that this interim renewal contract
3 preserves the rights and positions of the parties and that the omission of language in this interim
4 renewal contract setting out the rights asserted by the Contractor to successive renewals is not
5 intended to be, nor shall it be interpreted as, a waiver of any such rights to the extent any such
6 rights are later determined to exist by a court of competent jurisdiction or by mutual agreement
7 of the parties. If a court of competent jurisdiction or the parties by mutual agreement determine
8 that incorporation of such language in this interim renewal contract is necessary to preserve such
9 rights, this interim renewal contract shall be construed as incorporating such language as though
10 fully set forth herein as of the effective date hereof.

11 (b) The parties anticipate that they will engage in good faith negotiations
12 intended to permit the execution of a twenty-five (25) Year long-term renewal contract
13 contemplated by Section 3404 (c) of the CVPIA, hereinafter referred to as a "long-term renewal
14 contract", by the end of the term hereof. The parties recognize the possibility that this schedule
15 may not be met. Accordingly:

16 (1) In the event (i) the Contractor and Contracting Officer have
17 reached agreement on the terms of the Contractor's long-term renewal contract or (ii) the
18 Contractor and Contracting Officer have not completed the negotiations on the Contractor's
19 long-term renewal contract, believe that further negotiations on that contract would be beneficial,
20 and mutually commit to continue to negotiate to seek to reach agreement, but (iii) all
21 environmental documentation required to allow execution of the Contractor's long-term renewal

1 contract by both parties has not been completed in time to allow execution of the Contractor's
2 long-term renewal contract by November 30, 2001, then (iv) the parties will expeditiously
3 complete the environmental documentation required of each of them in order to execute the
4 Contractor's long-term renewal contract at the earliest practicable date. In addition, the
5 Contractor's then current interim renewal contract will be renewed without change upon the
6 request of either party through the agreed-upon effective date of the Contractor's long-term
7 renewal contract or, in the absence of agreement on the terms of the Contractor's long-term
8 renewal contract, through the succeeding February 28.

9 (2) Provided that this interim renewal contract is not subject to
10 renewal under the terms described in subdivision (1) of this Article, if a party determines that the
11 parties have reached an impasse which they have been unable to resolve and which precludes
12 agreement on the long-term renewal contract, that party may notify the other that it has
13 concluded that there is no reasonable likelihood of reaching agreement on the terms of a
14 long-term renewal contract prior to November 1, 2001. In the event of such notice, the parties
15 will immediately agree to a schedule and process for negotiating the terms (other than any terms
16 that would impair continuity of water supply or continuity of contract) of and executing an
17 interim renewal contract; provided that neither party will propose for inclusion in the interim
18 renewal contract any provision not previously included in an existing interim renewal contract
19 which it had previously proposed for inclusion in the long-term renewal contract and which was
20 the subject of an impasse in the long-term renewal contract negotiations. The schedule will
21 provide for completion of the negotiations of the terms of that contract by February 1, 2002, and

1 for execution of the contract on or about February 15, 2002. The parties each acknowledge the
2 right of either party to seek judicial relief in connection with any impasse reached in connection
3 with negotiation of the long-term renewal contract and/or an interim renewal contract that would
4 become effective on or after February 28, 2002.

5 (c) The parties acknowledge that the Contractor asserts that it is entitled as a
6 matter of law to an interim renewal contract of longer duration than twelve (12) months, and that
7 the Contracting Officer asserts that it is under no obligation to provide the Contractor with an
8 interim renewal contract of any particular duration. Accordingly, the parties further
9 acknowledge that (i) the foregoing process represents a mutual accommodation to facilitate their
10 joint desire to proceed with the development of a long-term renewal contract in an expeditious
11 and orderly manner, (ii) they each preserve their respective rights and positions relative to the
12 entitlement of the Contractor to subsequent interim renewal contracts should they become
13 necessary, and the terms thereof, and (iii) their agreement to the process and interim renewal
14 contract terms described above is in no way intended to be, nor will it be interpreted as, a waiver
15 of any such rights or positions, all of which are and will be expressly preserved.

16 (d) [DISTRICT ISSUE] The omission of language in this interim renewal
17 contract providing for conversion of this interim renewal contract or any subsequent renewals
18 thereof to a repayment contract, pursuant to the Act of July 2, 1956 (70 Stat. 483), shall not
19 prejudice the Contractor's right to assert a right to have such language included in subsequent
20 renewals of this interim renewal contract or to exercise such conversion, all as provided by law.

1 or to negotiate the language regarding such conversion to be included in subsequent renewal
2 contracts.

3 WATER TO BE MADE AVAILABLE AND DELIVERED TO THE CONTRACTOR

4 3. (a) Subject to the provisions set forth in Articles 11 and 12 hereof, and
5 consistent with applicable State water rights, permits and licenses, the Contractor is entitled to,
6 and the Contracting Officer shall be obligated to make available to the Contractor up to _____
7 acre-feet of Project Water for irrigation and/or municipal and industrial purposes during the term
8 of this interim renewal contract. The quantity of Project Water delivered to the Contractor in
9 accordance with this Article 3(a) in any Year shall be scheduled and paid for pursuant to the
10 provisions of Articles 4 and 7 hereof, and shall not exceed the quantity of Project Water the
11 Contractor intends to put to reasonable beneficial use within the Contractor's Service
12 Area/boundaries or sold, transferred, or exchanged pursuant to Article 9 during the term of this
13 interim renewal contract.

14 (b) The Contractor shall utilize the Project Water made available to it pursuant
15 to this interim renewal contract in accordance with all applicable requirements of any Biological
16 Opinion addressing the execution of this interim renewal contract developed pursuant to Section
17 7 of the Endangered Species Act of 1973 as amended, and in accordance with environmental
18 documentation as may be required for specific activities, including conversion of Irrigation
19 Water to M&I Water.

20 (c) The Contractor shall make reasonable and beneficial use of Project Water
21 or other water furnished pursuant to this interim renewal contract. [Divisional Issue] In addition.

1 use of Project Water in a ground-water recharge program shall be permitted under this contract to
2 the extent that it is carried out in accordance with California law; Provided, however, that such
3 ground-water recharge program cannot be undertaken unless and until the Contractor submits a
4 ground-water management plan pursuant to California law that demonstrates that such ground-
5 water recharge program will result in a reasonable and beneficial use of such water.

6 (d) If the Contracting Officer determines that Project Water, or other water
7 available to the Project, can be made available to the Contractor in addition to the quantity of
8 Project Water made available to the Contractor pursuant to subdivision (a) of this Article, the
9 Contracting Officer shall so notify the Contractor. If the Contractor requests the delivery of any
10 quantity of such water, the Contracting Officer shall make such water available to the Contractor
11 in accordance with applicable statutes, regulations, guidelines, and policies.

12 (e) [DIVISIONAL ISSUE] If the Contractor requests permission to
13 reschedule for use during the subsequent Year some or all of the Project Water made available to
14 the Contractor during the current Year or to use, during the current Year, that quantity of Project
15 Water the United States has agreed to make available to the Contractor during the subsequent
16 Year, the Contracting Officer may permit such uses in accordance with applicable statutes,
17 regulations, guidelines, and policies.

18 (f) The Contractor's right pursuant to Federal Reclamation law and applicable
19 State law to the beneficial use of water furnished pursuant to this interim renewal contract, any
20 subsequent interim renewal contract and, as described in Article 2(a), any long-term renewal
21 contract, shall not be disturbed so long as the Contractor shall fulfill all of its obligations under

1 this interim renewal contract and any such renewal thereof. Nothing in the preceding sentence
2 shall affect the Contracting Officer's ability to impose shortages under subdivision (b) of Article
3 12 of this interim renewal contract and the applicable provisions of any such renewal thereof.

4 (g) Notwithstanding subdivisions (j) and (l) of Article 1, Project Water
5 furnished to the Contractor pursuant to this interim renewal contract may be delivered for
6 purposes other than those described in subdivisions (j) and (l) of Article 1 upon written approval
7 by the Contracting Officer in accordance with the terms and conditions of such approval.

8 TIME FOR DELIVERY OF WATER

9 4. (a) On or about February 15, of each Calendar Year, the Contracting Officer
10 shall declare the amount of Project Water estimated to be made available to the Contractor
11 pursuant to this interim renewal contract for the upcoming Year. The declaration will be updated
12 monthly, as necessary, based on current hydrologic conditions. The Contracting Officer shall
13 make available the forecast of Project operations, with relevant supporting information, upon the
14 written request of the Contractor or its representatives. Upon written request of the Contractor,
15 the Contracting Officer shall provide the basis of the estimate which shall include, but not be
16 limited to, a monthly pumping forecast for the O'Neill Pumping Plant, the projected carryover of
17 Project reservoirs, projected CVPLA impacts, projected Endangered Species Act, and all other
18 regulatory impacts.

19 (b) On or before each March 1, the Contractor shall submit to the Contracting
20 Officer and at such other times as necessary, a written schedule, satisfactory to the Contracting
21 Officer, showing the times, and quantities of Project Water to be delivered by the United States

1 to the Contractor during the upcoming Year pursuant to this interim renewal contract, and,
2 consistent with subdivision (a) of Article 3 herein.

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

8 POINT OF DIVERSION AND RESPONSIBILITY FOR DISTRIBUTION OF WATER

9 5. (a) The Project Water to be furnished to the Contractor pursuant to this
10 interim renewal contract shall be made available to the Contractor at _____ and
11 any additional point or points of delivery either on Project facilities or another location or
12 locations mutually agreed to in writing by the Contracting Officer and the Contractor.

13 (b) [DISTRICT ISSUE] The Contracting Officer shall make all reasonable
14 efforts to maintain sufficient flows and levels of water in the _____ Canal to
15 furnish Project Water to the Contractor at the turnout(s) established as a delivery point(s)
16 pursuant to (a) of this Article.

17 (c) Irrigation Water furnished to the Contractor pursuant to this interim
18 renewal contract shall be delivered by the Contractor in accordance with any applicable land
19 classification provisions of Federal Reclamation law and the associated regulations. Project
20 Water shall not be delivered to land outside the Contractor's Service Area/boundaries unless
21 approved in advance by the Contracting Officer.

1 (d) All Project Water delivered to the Contractor pursuant to this interim
2 renewal contract shall be measured and recorded with equipment furnished, installed, operated,
3 and maintained by the United States or the responsible Operating Non-Federal Entity at the point
4 or points of delivery established pursuant to subdivision (a) of this Article. Upon the request of
5 either party to this interim renewal contract, the Contracting Officer shall investigate the
6 accuracy of such measurements and shall take any necessary steps to adjust any errors appearing
7 therein. The Contractor shall advise the Contracting Officer on or before the 10th calendar day
8 of each month of the quantity of M&I Water taken during the preceding month.

9 (e) Neither the United States nor any Operating Non-Federal Entity shall be
10 responsible for the control, carriage, handling, use, disposal, or distribution of Project Water
11 made available to the Contractor pursuant to this interim renewal contract beyond the delivery
12 points specified in subdivision (a) of this Article. The Contractor shall indemnify the United
13 States its officers, employees, agents, and assigns on account of damage or claim of damage of
14 any nature whatsoever for which there is legal responsibility, including property damage,
15 personal injury, or death arising out of or connected with the control, carriage, handling, use,
16 disposal, or distribution of such Project Water beyond such delivery points, except for any
17 damage or claim arising out of (i) acts performed by the United States or any of its officers,
18 employees, agents, or assigns, including any responsible Operating Non-Federal Entity, with the
19 intent of creating the situation resulting in any damage or claim, (ii) willful misconduct of the
20 United States or any of its officers, employees, agents, or assigns, including any responsible

1 Operating Non-Federal Entity, or (iii) negligence of the United States or any of its officers,
2 employees, agents, or assigns including any responsible Operating Non-Federal Entity.

3 MEASUREMENT OF WATER WITHIN THE DISTRICT

4 6. (a) [Contract Unique Issue] The Contractor shall ensure that, unless the
5 Contractor has established an alternative measurement program satisfactory to the Contracting
6 Officer, all surface water delivered for irrigation purposes within the Contractor's Service
7 Area/boundaries is measured at each agricultural turnout and such water delivered for municipal
8 and industrial purposes is measured at each municipal and industrial service connection. All
9 water measuring devices or water measuring methods of comparable effectiveness must be
10 acceptable to the Contracting Officer. The Contractor shall be responsible for installing,
11 operating, and maintaining and repairing all such measuring devices and implementing all such
12 water measuring methods at no cost to the United States. The Contractor shall use the
13 information obtained from such water measuring devices or water measuring methods to ensure
14 proper management of the water; to bill water users for water delivered by the Contractor; and, if
15 applicable, to record water delivered for municipal and industrial purposes by customer class as
16 defined in its water conservation plan. Nothing herein contained, however, shall preclude the
17 Contractor from establishing and collecting any charges, assessments, or other revenues
18 authorized by California law. The Contractor shall include a summary of its annual surface
19 water deliveries in the annual report described in subdivision (d) of Article 25.

20 (b) [Contract Unique Issue] To the extent the information has not otherwise
21 been provided, upon execution of this interim renewal contract, the Contractor shall provide to

1 the Contracting Officer a written report describing the measurement devices or water measuring
2 methods used or to be used to implement subdivision (a) of this Article and identifying the
3 agricultural turnouts and the municipal and industrial service connections or alternative
4 measurement programs approved by the Contracting Officer, at which such measurement devices
5 or water measuring methods are being used, and, if applicable, identifying the locations at which
6 such devices and/or methods are not yet being used including a time schedule for implementation
7 at such locations. The Contracting Officer shall advise the Contractor in writing within ninety
8 (90) days as to the adequacy of, and necessary modifications, if any, of the measuring devices or
9 water measuring methods identified in the Contractor's report and if the Contracting Officer does
10 not respond in such time, they shall be deemed adequate. Within six (6) months following the
11 Contracting Officer's response, the parties shall negotiate in good faith the earliest practicable
12 date by which the Contractor shall modify said measuring devices and/or measuring methods as
13 required by the Contracting Officer to ensure compliance with subdivision (a) of this Article.

14 (c) All new surface water delivery systems installed within the Contractor's
15 Service Area/boundaries after the effective date of this interim renewal contract shall also
16 comply with the measurement provisions described in subdivision (a) of this Article.

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

20 RATES AND METHOD OF PAYMENT FOR WATER

1 7. (a) The Contractor shall pay the United States in monthly payments as
2 provided in this Article for the quantities of Delivered Water furnished to the Contractor pursuant
3 to this interim renewal contract. Such payments shall consist of the applicable Rates and
4 Charges determined annually in accordance with applicable Federal law and associated
5 regulations. The Rates and Charges applicable upon execution of this interim renewal contract
6 are set forth in Exhibit "A."

7 (b) The Contracting Officer shall notify the Contractor of the Rates and
8 Charges as follows:

9 (1) Prior to July 1, of each Calendar Year, the Contracting Officer
10 shall provide the Contractor the preliminary calculation of the Charges that will be applied for
11 the period October 1 of the current Calendar Year, through September 30, of the following
12 Calendar Year, and identify the statutes, regulations and guidelines used as the basis for such
13 calculations. On or before September 15 of each Calendar Year, the Contracting Officer shall
14 notify the Contractor in writing of the Charges to be in effect during the period October 1 of the
15 current Calendar Year, through September 30 of the following Calendar Year, and such
16 notification shall revise Exhibit "A."

17 (2) Prior to October 1 of each Calendar Year, the Contracting Officer
18 shall make available to the Contractor an estimate of the Rates of payment for the following Year
19 and the computations and cost allocations upon which those Rates are based. The Contractor
20 shall be allowed not less than two months to review and comment on such computations and cost
21 allocations. By December 31 of each Calendar Year, the Contracting Officer shall provide the

1 Contractor with the final Rates to be in effect for the upcoming Year, and such notification shall
2 revise Exhibit "A."

3 (c) At the time the Contractor submits the initial schedule for the delivery of
4 Project Water for each Year pursuant to subdivision (b) of Article 4 of this interim renewal
5 contract, the Contractor shall pay the United States the total amount payable pursuant to the
6 applicable Rate(s) for all Project Water scheduled to be delivered pursuant to this interim
7 renewal contract during the first two (2) calendar months of the Year. Before the end of the first
8 month or part thereof of the Year, and before the end of each calendar month thereafter, the
9 Contractor shall pay pursuant to the applicable Rate(s) for all Project Water scheduled to be
10 delivered pursuant to this interim renewal contract during the second month immediately
11 following. Adjustments between the payments for the scheduled amount of Project Water and
12 the appropriate payments for quantities of Delivered Water furnished pursuant to this interim
13 renewal contract each month shall be made before the end of the following month: Provided,
14 That any revised schedule submitted by the Contractor pursuant to Article 4 which increases the
15 amount of Project Water to be delivered pursuant to this interim renewal contract during any
16 month shall be accompanied with appropriate payment for Rates to assure that Project Water is
17 not furnished to the Contractor in advance of such payment. In any month in which the quantity
18 of Delivered Water furnished to the Contractor pursuant to this interim renewal contract equals
19 the quantity of Project Water scheduled and paid for by the Contractor, no additional Project
20 Water shall be made available to the Contractor unless and until payment of Rates for such
21 additional Project Water is made. Final adjustment between the payments of Rates for the

1 Project Water scheduled and the quantities of Delivered Water furnished during each Year
2 pursuant to its contract shall be made as soon as possible but no later than April 30th of the
3 following Year.

4 (d) The Contractor shall pay all Charges owing for Delivered Water before the
5 end of the month following the month of delivery. Such amounts shall be consistent with the
6 quantities of Irrigation Water and M&I Water shown in the United States' water delivery report
7 for the subject month. The water delivery report shall be regarded by the Contractor as a bill for
8 the payment of appropriate Charges. Any monthly adjustment for overpayment or underpayment
9 of Charges shall be accomplished through the adjustment of Charges due to the United States in
10 the next month. By March 31, of each Year, the Contractor shall make any additional payment
11 of Charges it is obligated to make for Delivered Water furnished to the Contractor pursuant to its
12 contract for the previous Year. The amount to be paid for past due payment of Charges shall be
13 computed pursuant to Article 19 of this interim renewal contract.

14 (e) The Contractor shall pay for any Project Water provided under subdivision
15 (d) or (e) of Article 3 as determined by the Contracting Officer pursuant to applicable statutes,
16 regulations, guidelines, and policies.

17 (f) Payments to be made by the Contractor to the United States under this
18 interim renewal contract may be paid from any revenues available to the Contractor.

19 (g) Revenues received by the United States pursuant to this interim renewal
20 contract shall be allocated and applied in accordance with Federal Reclamation law, including
21 but not limited to, subsection 3 of Section 1 of the Act of July 2, 1956 (70 Stat. 483), and

1 subsection (f) of Section 3405, subsection (c)(1) of Section 3406 and subsection (d)(2)(A) of
2 Section 3407 of the CVPIA, and the associated regulations, including but not limited to, the
3 Project Irrigation Water ratesetting policy and the Project M&I ratesetting policy promulgated
4 pursuant to the Administrative Procedures Act.

5 (h) At the Contractor's request, the Contracting Officer shall provide to the
6 Contractor an accounting of all of the expenses allocated and the disposition of all revenues
7 received pursuant to this interim renewal contract in sufficient detail to allow the Contractor to
8 determine that the allocation of expenses and disposition of all revenues received was
9 accomplished in conformance with Federal Reclamation law and the associated regulations. The
10 Contracting Officer and the Contractor shall enter into good faith negotiations to resolve any
11 discrepancies or disputes arising out of said accounting of the Contractor's review thereof.

12 (i) The parties acknowledge and agree that the efficient administration of this
13 interim renewal contract is their mutual goal. Recognizing that experience has demonstrated that
14 mechanisms, policies, and procedures used for establishing Rates and Charges, and/or for
15 making and allocating payments, other than those set forth in this Article would be in the mutual
16 best interest of the parties, it is expressly agreed that the parties may enter into agreements for
17 alternative mechanisms, policies, and procedures for any of those purposes while this interim
18 renewal contract is in effect without amending this contract.

19 NON-INTEREST BEARING OPERATION AND MAINTENANCE DEFICITS

20 3. [Contract Unique Issue] The Contractor and the Contracting Officer have entered
21 into a written agreement specifying a mutually acceptable mechanism through which the

1 Contractor will retired its outstanding non-interest bearing operation and maintenance deficits.
2 [Alternative Language] The Contractor and the Contracting Officer concur that at the time of
3 execution of this interim renewal contract, the Contractor has no non-interest bearing operation
4 and maintenance deficits and shall have no further liability therefor.

5 TRANSFERS OR EXCHANGES OF WATER

6 9. The right to Project Water provided for in this interim renewal contract may be
7 sold, transferred, or exchanged to others for beneficial uses within the State of California if such
8 sale, transfer or exchange is authorized by applicable Federal laws, State laws, and applicable
9 guidelines or regulations then in effect. The right to sell, transfer, or exchange Project Water
10 shall include, and the Contracting Officer shall apply this Article in a manner that does not
11 impede or restrict, lawful short-term sales, transfers, or exchanges of the type the Contractor
12 historically carried out with approval of the Contracting Officer under Contract No.
13 _____. No sale, transfer, or exchange of the right to Project Water under this
14 interim renewal contract may take place without the prior written approval of the Contracting
15 Officer.

16 APPLICATION OF PAYMENTS AND ADJUSTMENTS

17 10. (a) The amount of any overpayment by the Contractor shall be applied first to
18 any accrued indebtedness arising out of this interim renewal contract then due and payable by the
19 Contractor. Any amount of such overpayment then remaining shall, at the option of the
20 Contractor, be refunded to the Contractor or credited upon amounts to become due to the United
21 States from the Contractor under the provisions hereof in the following months. With respect to

1 overpayment, such adjustment shall constitute the sole remedy of the Contractor or anyone
2 having or claiming to have the right to the use of any of the water supply provided for herein.

3 (b) All advances for miscellaneous costs incurred for work requested by the
4 Contractor pursuant to Article 24 shall be adjusted to reflect the actual costs when the work has
5 been completed. If the advances exceed the actual costs incurred, the difference will be refunded
6 to the Contractor. If the actual costs exceed the Contractor's advances, the Contractor will be
7 billed for the additional costs pursuant to Article 24.

8 TEMPORARY REDUCTIONS--RETURN FLOWS

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

13 (b) The United States may temporarily discontinue or reduce the quantity of
14 Project Water to be delivered to the Contractor as herein provided for the purposes of
15 investigation, inspection, maintenance, repair, or replacement of any of the Project facilities or
16 any part thereof necessary for the delivery of Project Water to the Contractor, but so far as
17 feasible the Contracting Officer will give the Contractor due notice in advance of such temporary
18 discontinuance or reduction, except in case of emergency, in which case no notice need be given:
19 Provided, That the United States shall use its best efforts to avoid any discontinuance or
20 reduction in such service. Upon resumption of service after such reduction or discontinuance,
21 and if requested by the Contractor, the United States will, if possible, deliver the quantity of

1 Project Water, which would have been delivered hereunder in the absence of such discontinuance
2 or reduction: Provided further, That with respect to any quantity of Project Water not delivered
3 after a discontinuance or reduction the Contractor shall be relieved of its scheduling and payment
4 obligations for such quantity of Project Water.

5 (c) The United States reserves the right to all seepage and return flow water
6 derived from water delivered to the Contractor hereunder which escapes or is discharged beyond
7 the Contractor's Service Area/boundaries: Provided, That this shall not be construed as claiming
8 for the United States any right to seepage or return flow being put to reasonable and beneficial
9 use pursuant to this interim renewal contract within the Contractor's Service Area/boundaries by
10 the Contractor or those claiming by, through, or under the Contractor.

11 WATER SHORTAGE AND APPORTIONMENT

12 12. (a) In its operation of the Project, the Contracting Officer will use all
13 reasonable means to guard against a condition of shortage in the quantity of water to be made
14 available to the Contractor pursuant to this contract. Insofar as determined by the Contracting
15 Officer to be practicable, the Contracting Officer will, in the event a shortage appears probable,
16 notify the Contractor of such determinations as soon as possible.

17 (b) If there is a reduction in the total water supply available to the Contractor
18 during any Year because of errors in physical operations of the Project, drought, other physical
19 causes beyond the control of the Contracting Officer or actions taken by the Contracting Officer
20 to meet legal obligations, no liability shall accrue against the United States or any of its officers,
21 agents, or employees for any damage, direct or indirect, arising therefrom, so long as actions

1 based upon the opinions or determinations of the Contracting Officer are consistent with the
2 standards in Article 18.

3 (c) In any Year in which there may occur a shortage for any of the reasons
4 specified in subdivision (b) above, the Contracting Officer shall apportion the available Project
5 Water supply among the Contractor and others entitled, under existing contracts and future
6 contracts (to the extent such future contracts are permitted under subsections (a) and (b) of
7 Section 3404 of the CVPLA) and renewals thereof, to receive Project Water consistent with the
8 contractual obligations of the United States.

9 (d) [Divisional Issue].

10 UNAVOIDABLE GROUND-WATER PERCOLATION

11 13. The Contractor shall not be deemed to have furnished Irrigation Water to Excess
12 Lands or Ineligible Lands within the meaning of this interim renewal contract if such lands are
13 irrigated with ground water that reaches the underground strata as an unavoidable result of the
14 furnishing of Irrigation Water by the Contractor to Eligible Lands.

15 COMPLIANCE WITH FEDERAL RECLAMATION LAW

16 14. This interim renewal contract shall be implemented in accordance with all
17 applicable provisions of Federal Reclamation law, as amended and supplemented.

18 WATER AND AIR POLLUTION CONTROL

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

QUALITY OF WATER

16. (a) Project facilities used to make available and deliver Project Water to the Contractor pursuant to this interim renewal contract shall be operated and maintained to enable the United States to make available and deliver Project Water to the Contractor in accordance with the water quality standards specified in subsection 2(b) of the Act of August 26, 1937 (50 Stat. 865), as added by Section 101 of the Act of October 27, 1986 (100 Stat. 3050), or other existing Federal laws. The United States is under no obligation to construct or furnish water treatment facilities to maintain or to better the quality of Project Water furnished to the Contractor pursuant to this contract. The United States does not warrant the quality of Project Water made available and delivered to the Contractor pursuant to this contract.

(b) The operation and maintenance of Project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The Contractor shall be responsible for compliance with all State and Federal water quality standards applicable to surface and subsurface agricultural drainage discharges generated through the use of Federal or Contractor facilities or Project Water provided by the Contractor within the Contractor's Service Area/boundaries. This Article shall not affect or alter any legal obligations of the Secretary to provide drainage services.

WATER ACQUIRED BY THE CONTRACTOR OTHER THAN
FROM THE UNITED STATES

1 17. Water or water rights now owned or hereafter acquired by the Contractor other
2 than from the United States and Irrigation Water furnished pursuant to the terms of this interim
3 renewal contract may be simultaneously transported through the same distribution facilities of
4 the Contractor subject to the following: (i) if the facilities utilized for commingling Irrigation
5 Water and non-Project water were constructed without funds made available pursuant to Federal
6 Reclamation law, the provisions of Federal Reclamation law will be applicable only to the
7 Landholders of lands which receive Irrigation Water; (ii) the eligibility of land to receive
8 Irrigation Water must be established through the certification requirements as specified in the
9 Acreage Limitation Rules and Regulations (43 CFR Part 426); (iii) the water requirements of
10 Eligible Lands within the Contractor's Service Area/boundaries can be established and the
11 quantity of Irrigation Water to be utilized is less than or equal to the quantity necessary to irrigate
12 such Eligible Lands; and (iv) if the facilities utilized for commingling Irrigation Water and non-
13 Project water are constructed with funds made available pursuant to Federal Reclamation law,
14 the non-Project water will be subject to Federal Reclamation law, until such funds have been
15 repaid.

16 OPINIONS AND DETERMINATIONS

17 18. (a) Where the terms of this interim renewal contract provide for actions to be
18 based upon the opinion or determination of either party to this contract, said terms shall not be
19 construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable
20 opinions or determinations. Both parties, notwithstanding any other provisions of this contract,
21 expressly reserve the right to seek relief from and appropriate adjustment, including monetary

1 damages, for any such arbitrary, capricious, or unreasonable opinion or determination. Each
2 opinion or determination by either party shall be provided in a timely manner.

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

8 CHARGES FOR DELINQUENT PAYMENTS

9 19. (a) The Contractor shall be subject to interest, administrative, and penalty
10 charges on delinquent installments or payments. When a payment is not received by the due
11 date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond
12 the due date. When a payment becomes 60 days delinquent, the Contractor shall pay an
13 administrative charge to cover additional costs of billing and processing the delinquent payment.
14 When a payment is delinquent 90 days or more, the Contractor shall pay an additional penalty
15 charge of 6 percent per year for each day the payment is delinquent beyond the due date.
16 Further, the Contractor shall pay any fees incurred for debt collection services associated with a
17 delinquent payment.

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

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

26 EQUAL OPPORTUNITY

27 20. During the performance of this contract, the Contractor agrees as follows:

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

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

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

21 (4) The Contractor will comply with all provisions of Executive Order
22 No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and
23 relevant orders of the Secretary of Labor.

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

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

1 (7) The Contractor will include the provisions of paragraphs (1) through (7) in
2 every subcontract or purchase order unless exempted by the rules, regulations, or orders
3 of the Secretary of Labor issued pursuant to Section 204 of said amended Executive
4 Order, so that such provisions will be binding upon each subcontractor or vendor. The
5 Contractor will take such action with respect to any subcontract or purchase order as may
6 be directed by the Secretary of Labor as a means of enforcing such provisions, including
7 sanctions for noncompliance: Provided, however, That in the event the Contractor
8 becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a
9 result of such direction, the Contractor may request the United States to enter into such
10 litigation to protect the interests of the United States.

11 GENERAL OBLIGATION--BENEFITS
12 CONDITIONED UPON PAYMENT

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

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

23 COMPLIANCE WITH CIVIL RIGHTS LAWS
24 AND REGULATIONS

25 22. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964
26 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the
27 Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.) and any other applicable civil rights
28 laws, as well as with their respective implementing regulations and guidelines imposed by the
29 U.S. Department of the Interior and/or Bureau of Reclamation.

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

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

PRIVACY ACT COMPLIANCE

23. (a) The Contractor shall comply with the Privacy Act of 1974 (5 U.S.C. 552a) (the Act) and the Department of the Interior rules and regulations under the Act (43 CFR 2.45 et seq.) in maintaining landholder acreage certification and reporting records, required to be submitted to the Contractor for compliance with Sections 206 and 228 of the Reclamation Reform Act of 1982 (96 Stat. 1266), and pursuant to 43 CFR 426.10.

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

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

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

(e) The Contractor shall forward promptly to the System Manager each proposed denial of access under 43 CFR 2.64; and each request for amendment of records filed under 43 CFR 2.71; notify the requester accordingly of such referral; and provide the System Manager with information and records necessary to prepare an appropriate response to the requester. These requirements do not apply to individuals seeking access to their own certification and reporting forms filed with the Contractor pursuant to 43 CFR 426.10. unless the requester elects to cite the Privacy Act as a basis for the request.

CONTRACTOR TO PAY CERTAIN MISCELLANEOUS COSTS

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

WATER CONSERVATION

25. (a) Prior to the delivery of water provided from or conveyed through Federally constructed or Federally financed facilities pursuant to this contract, the Contractor shall be implementing an effective water conservation program based on the Contractor's water conservation plan that has been determined by the Contracting Officer to meet the conservation and efficiency criteria established under Federal law. The water conservation program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives.

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

1 (c) As part of the water conservation program, the Contractor shall develop
2 and be implementing a tiered block water pricing program that promotes conservation and the
3 efficient management of Project Water during the term of this contract. Such pricing program
4 for Project Water shall take into account all relevant circumstances, including without limitation,
5 water shortages imposed under this interim renewal contract and the availability and cost of the
6 Contractor's and individual water user's non-Project alternative sources of supply, including
7 ground water and other non-Project water supplies, so that the Contractor's pricing structure
8 provides incentives for conservation and the efficient management of overall water supply
9 available to water users served by the Contractor. Provided, That no such tiered block water
10 pricing program need be implemented by the Contractor if the Contracting Officer determines,
11 based on information provided by the Contractor, that (i) such a pricing structure will not result
12 in significant conservation of water available for use within the Contractor's service area,
13 including ground water or (ii) other pricing program, conservation or management measures are
14 more appropriate and/or will result in comparable or better conservation of the water supplies
15 available within the Contractor's boundaries. Provided further, If the Contractor fails to, or elects
16 not to, comply with this subdivision of Article 25, then any subsequent interim renewal contract
17 shall contain a tiered pricing contractual provision pursuant to subsection (d) of Section 3405 of
18 the CVPLA.

19 (d) The Contractor shall submit to the Contracting Officer by
20 December 31, of each Calendar Year, an annual report on the status of its implementation of the
21 water conservation program.

22 EXISTING OR ACQUIRED WATER OR WATER RIGHTS

1 26. Except as specifically provided in Article 17 of this contract, the provisions of this
2 interim renewal contract shall not be applicable to or affect water or water rights now owned or
3 hereafter acquired by the Contractor or any user of such water within the Contractor's Service
4 Area/boundaries from other than the United States by the Contractor. Any such water shall not
5 be considered Project Water under this contract. In addition, this interim renewal contract shall
6 not be construed as limiting or curtailing any rights which the Contractor or any water user
7 within the Contractor's Service Area/boundaries acquires or has available under any other
8 contract pursuant to the Federal Reclamation law.

9 OPERATION AND MAINTENANCE BY NON-FEDERAL ENTITY

10 27. [DIVISIONAL ISSUE] (a) The responsibility for performing and, in some cases
11 funding the operation and/or maintenance (O&M) of all or any portion or portions of the
12 [division] facilities may be transferred to an Operating-Non-Federal Entity by one or more
13 separate agreements between the United States and the Operating Non-Federal Entity. Any such
14 agreements shall require the Operating Non-Federal Entity to perform the O&M in compliance
15 with the provisions of this Contract and shall not interfere with the rights and obligations of the
16 Contractor or the United States hereunder.

17 (b) If so notified in writing by the Contracting Officer, the Contractor shall
18 pay directly to such Operating Non-Federal Entity in accordance with such notice, (1) that
19 portion of the Rate (s) to be paid the United States pursuant to this Contract which the
20 Contracting Officer determines is the Contractor's appropriate share of the costs of the O&M of
21 the [division] facilities transferred to the Operating Non-Federal Entity for O&M; and (2) all
22 appropriate additional amounts charged or assessed by the Operating Non-Federal Entity for the
23 O&M of the [division] facilities. Such direct payments to such Operating Non-Federal Entity

1 shall not relieve the Contractor of its obligation to pay directly to the United States its allocated
2 share of the remaining costs for the O&M of the Project.

3 CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

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

9 BOOKS, RECORDS, AND REPORTS

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

19 ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

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

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

26 SEVERABILITY

27 31. In the event that a person or entity who is neither (i) a party to a Project interim
28 renewal contract, nor (ii) a person or entity that receives Project Water from a party to a Project
29 interim renewal contract, nor (iii) an association or other form of organization whose primary
30 function is to represent parties to Project interim renewal contracts, brings an action in a court of

1 competent jurisdiction challenging the legality or enforceability of a provision included in this
2 interim renewal contract and said person, entity, association, or organization obtains a final court
3 decision holding that such provision is legally invalid or unenforceable and the Contractor has
4 not intervened in that lawsuit in support of the plaintiff(s), the parties to this interim renewal
5 contract shall use their best efforts to (i) within thirty (30) days of the date of such final court
6 decision identify by mutual agreement the provisions in this interim renewal contract which must
7 be revised, and (ii) within three (3) months thereafter promptly agree on the appropriate
8 revision(s). The time periods specified above may be extended by mutual agreement of the
9 parties. Pending the completion of the actions designated above, to the extent it can do so
10 without violating any applicable provisions of law, the United States shall continue to make the
11 quantities of Project Water specified in this interim renewal contract available to the Contractor
12 pursuant to the provisions of this interim renewal contract, which were not found to be legally
13 invalid or unenforceable in the final court decision.

14 OFFICIALS NOT TO BENEFIT

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

18 CHANGES IN CONTRACTOR'S BOUNDARIES

19 33. While this contract is in effect, no change may be made in the Contractor's
20 boundaries, by inclusion or exclusion of lands, dissolution, consolidation, merger or otherwise,
21 except upon the Contracting Officer's written consent.

22 NOTICES

23 34. Any notice, demand, or request authorized or required by this contract shall be
24 deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or
25 delivered to the Area Manager _____, and on
26 behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors
27 of the _____. The designation of the addressee or the address may
28 be changed by notice given in the same manner as provided in this Article for other notices.

1 IN WITNESS WHEREOF, the parties hereto have executed this interim renewal
2 contract as of the day and year first above written.

3 THE UNITED STATES OF AMERICA

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

7 (SEAL) NAME OF DISTRICT/ENTITY

8 By: _____
9 President

10 Attest:

11 _____
12 Secretary

APPENDIX C

INTERIM CONTRACTS RENEWAL 2000 BIOLOGICAL OPINION - 3rd QUARTER STATUS REPORTS

JAN 25 2001

MP-150
ENV-1.10

MEMORANDUM

To: Cay Goude, Assistant Field Supervisor, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, Sacramento CA

From: Laura Allen
sgd Laura Allen
Deputy Regional Environmental Officer

Subject: 3rd Progress Report for Reclamation's Commitments in the Interim Contract Renewal
Biological Opinion

Enclosed is a table outlining proposed actions, conservation measures, or reasonable and prudent measures contained in the February 29, 2000, Section 7 Consultation Biological Opinion (BO) on U.S. Bureau of Reclamation Renewal of 54 Interim and 14 Friant Contracts (Interim Contract Renewal BO). We submit this table to comply with a Reporting Requirement on page 5-8 of the Interim Contract Renewal BO, which asks for quarterly progress reports on the commitments contained within this BO and any other BO that addresses service area effects of the Central Valley Project (CVP). This report is for the quarter that ended December 31, 2000.

We have also enclosed additional information regarding all Reclamation funded selenium monitoring in the San Joaquin Valley, as you have requested.

If you have any questions about this status report, please call Bob Eckart at 978-5051 or Laura Allen at 978-5047.

Attachment

VER...allenewal25 Jan 2001-978-5047
1:10:23- Interim Contract Renewal memo. vna

February 2000 Interim Contract Renewal Biological Opinion Commitments or Conservation Measures pg. 1

Proposed Action/Conservation Measures	Responsibility	Due	Status/Remarks
1. Reclamation will develop and implement programs with the water districts (Districts) to ensure that land use changes associated with project water will be addressed pursuant to ESA.	FWS/USBR		
a. Identify Districts regarding ES requirements of the Interim Opinion.	FWS/USBR	April 28, 2000	1a. Completed. Notice sent week of July 3, 2000.
b. Synthesize existing and new information on distribution and potential habitat of federally listed, proposed, and candidate species within the Districts.	FWS/USBR	Sept 30, 2000 or ASAP	1b.c. Ongoing. Cooperative GIS teams from both agencies working on Central Valley Habitat Monitoring Workplan. This timeline in this plan has been revised since the last status report. Phase I expected 3/01, Phase II expected in 6/01. Phase III will occur after Phase II but no expected date has been determined.
c. Develop (hard copy and digitized) habitat and potential distribution of listed, proposed, and candidate species, and provide information to the Districts, the Service and the California Department of Fish and Game.	FWS/USBR	Sept 30, 2000 or ASAP	1c. Both agencies are working together to synthesize the data and finalize habitat maps.
d. Monitor land use changes and ongoing activities in the Districts to ensure that project water is not used in a manner that adversely affects listed, proposed, and candidate species.	FWS/USBR	Sept 30, 2000 or ASAP	1d. see above
2. Reclamation will ensure that its operation and maintenance activities, as well as activities of other associated with the use of CVP water within the Districts will not adversely affect listed, proposed, and candidate species.	FWS/USBR		
a. Work with the California Department of Pesticide Regulation to develop guidelines and information addressing the effects of the application of pesticides to listed, proposed, and candidate species.	FWS/USBR	March 31, 2000	2a. Completed. Memo to Service documenting the pesticide information related to candidate species that Reclamation contributed to CDPR.
b. Develop and distribute to the Districts and landowners guidelines on construction and maintenance activities that are not beneficial to listed, proposed, and candidate species.	FWS/USBR	February 28, 2001	2b. Pending, but delayed. Rough Draft of CCAO Field Operations Manual was attached to the Oct memo. CCAO is incorporating comments received from FWS on the manual. Draft O&M manual was completed by the SCCAO and distributed to contractors. NCAO is just starting to draft their manual patterned after the SCCAO and CCAO manuals. Rough drafts may be available by Feb. 28th, 2001.
c. Review water conservation plans for the Districts prior to implementation to ensure they do not adversely affect listed, proposed, and candidate species.	USBR	Within 3 months of contract renewal	2c. Ag District Plans were provided in July quarterly report. Printed copies of the urban districts annual reports are available at each Area Office.
d. Amend the criteria for water conservation plans to ensure consistency with the ESA. 1) Status Report Update 2) Revise Criteria	USBR	Status May 31, 2000 Revision August 31, 2000	2d. The criteria for water conservation plans is amended every 3 years, consistent with the CVPIA. The criteria was amended in 1999, so will not be amended again until 2002. When this commitment was written in February 2000, the opportunity for amending the 1999 criteria had already passed. Reclamation will informally consult with the Service by forming an interagency team that will ensure that the 2002 criteria is in compliance with the ESA. Reclamation will send a memo to the Service and NMFS requesting their participation on the team.

February 2000 Interim Contract Renewal Biological Opinion Commitments or Conservation Measures pg 2

Proposed Action/Conservation Measures	Responsibility	Due Date/Time Period	Status/Remarks
3. Reclamation, working with the Service, will implement critically needed action to assure the continued existence of listed and proposed species and their habitats that have been affected by the CVP.	FWS/USBR	ongoing	3. Ongoing. CVP conservation program (CP) and b(1) other projects.
a. Identify lands that are critical to the continued survival of listed species and proposed species	USBR	continue updating	3a. Ongoing. Last update of high priority species provided to CP from FWS on 1/27/00. Historic trend analysis completed and mapping program discussed in 1bcd above to help identify and prioritize land for conservation easements or acquisition.
b. Implement critical needs plan	FWS/USBR	Implementing	3b. Ongoing
c. Develop a long term program to address overall effect of the CVP and implementation of the CVPIA	FWS/USBR	Pursue adequate funding and partners	4. Ongoing CVP consultations, CVP conservation program and b(1) "other" projects/programs.
Reasonable and Prudent Measures	Responsibility	Due Date/Time Period	Status/Remarks
I. Develop and implement programs with the Districts in Appendix A of this opinion to ensure that land use activities associated with project water will be addressed pursuant to the USA.			
A. Work with CDPR to develop guidelines that provide an update on work that has been completed on this measure. In addition, provide information to CDPR generated from ongoing efforts described in Conservation Measure 1(c).	FWS/USBR	March 29, 2000	A. Completed. Memo to Service describing Reclamation's contribution of ESA information to the CDPR.
H. Identify land and water use techniques or measures within a CVP service area which are critically impacting listed and proposed species or their habitats.			
A. Prepare a study plan to identify the sources of selenium contamination to the Grasslands, San Joaquin River, and south Delta estuary.	USBR	28 Apr 00	A. This requirement is already handled through the existing Grassland Bypass Project (GBP) monitoring program. A USGS sources of selenium study for the GBP, funded by Reclamation, began in FY2000 and is not expected to be completed until the end of 2002, at the earliest. The BA Proposed Action for the continuation of the GBP through 2009 has commitments for supporting studies down-river of the project.
B. Develop and implement an approved monitoring program to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates along the lower San Joaquin River and southern Sacramento-San Joaquin Delta.	USBR	August 31, 2000	B. Initiated and ongoing. Service biologists have 14 split tail that are being tested for Se, B and other contaminants. A report will be generated after the lab results are in. The BA Proposed Action for the continuation of the GBP through 2009 has commitments for supporting Se studies and monitoring to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates.
C. Provide quarterly reports on locations of monitoring and mean standard for wetland water supplies in the Grasslands, and at least one report either directly or indirectly from Reclamation actions will identify and implement corrective actions and habitat expansion formal consultation.	USBR	December 31, 1999, March 31, 2000, June 30, 2000, September 30, 2000	C. See IIA - the reporting measure is handled with the existing GBP monitoring program and existing quarterly reports. Corrective actions were made in previous years and continue to be monitored through the GBP monitoring program, which includes Service biologists, who receive the monthly averages at the same time as Reclamation. All inlets from the Grasslands Project Area to the wetland channels have been plugged since April 21, 1998 and monthly selenium averages have only exceeded 2 ppb occasionally since then and the exceedences have been less than 1 ppb. Those exceedences are not directly or indirectly tied to Reclamation actions because Reclamation has aggressively prevented selenium drainage from entering the wetlands.

February 2000 Interim Contract Renewal Biological Opinion Commitments or Conservation Measures pg 3

Reasonable and Prudent Measures	Responsibility	Due Date/Time Period	Status/Remarks
<p>III. Identify, analyze and compensate for past effects since 1991 for Friant and 1995 for Interim contractors.</p> <p>A. Identify and analyze the impacts of changes to contract service area boundaries since 1991 for any Friant contracts that have not undergone section 7 consultation. Fully compensate for any impacts associated with past water allocations of Interim or Friant Div. water allocations.</p> <p>B. Identify and analyze the impacts of changes to contract service area boundaries since 1995 for interim contractors and provide this information and associated GIS data layers. Fully compensate for any impacts associated with past changes to contract service area boundaries for interim contracts.</p> <p>C. Identify and analyze the impacts of changes in purpose of use since 1991 for Friant contractors and 1995 for Interim contractors and provide this information and analysis. Provide an analysis on how changes in purpose of use will affect droughts to districts, and how these changes in allocations will affect CVP wide water supplies under drought conditions.</p> <p>D. Identify and analyze the impacts of all water assignments executed since 1991 for Friant contractors and 1995 for Interim contractors and provide this information. Fully compensate for any impacts associated with past water allocations of Interim or Friant Division water allocations.</p>	USBR	Prior to initiation of consultation (cons) for Iter	A. Information and analysis ongoing. Information will be provided in BA's for Long-Term contract renewal (LTCR). All Friant contract service area boundary changes have been consulted on.
	USBR	Prior to Iter or next interim period	B. Information and analysis ongoing. Draft maps for interim contract service areas were provided to FWS in May showing boundaries changes since '95 and acreage changes by district. Information will be provided in BA's for Long-Term contract renewal
	USBR	Prior to Iter or an additional interim period.	C. The 1995 Interim contract renewal consultation included change of purpose of use from ag to M&I. Analysis of shortages should be included in the NEPA document and BA for that action. In general the ag shortage provisions remain even if purpose of use converted to M&I.
	USBR	Prior to Iter or an additional interim period.	D. Information and analysis ongoing.
<p>IV. Consult on future actions including changes in purpose of use of contracts, transfers involving Interim for Friant Div. contractors assignments, and inclusions, annexations and exclusions to contract service area boundaries.</p> <p>A. Consult on future changes in water contracts from agriculture only to agriculture/M&I purposes.</p> <p>B. Provide an analysis of how future changes in purpose of use will affect shortages to districts and how these change in allocations will affect CVP wide water supplies under drought conditions.</p> <p>C. No execution of future changes in purpose of use unless it can be shown that such changes will not reduce under drought condition water supplies for proposed or listed species.</p> <p>D. Informal consultation for assignments of Interim and Friant Divisions that may affect listed species. Consult formally for those contracts or actions with direct or indirect effects that are likely to adversely affect listed species, or result in take. Consult informally if an action will not affect listed species prior to signing of the FWSM or ROD.</p>	USBR	Due Date Not Applicable	IV. Will occur when applicable
	USBR		A. Will occur when applicable
	USBR		B. June 9, 1997 joint letter on CVPIA administrative proposal on urban water supply reliability stated that ag shortage provisions remain even if converted to M&I. M&I water in the districts up for renewal that are granted M&I priority has not changed since the OCAP consultation (1992).
	USBR		C. See B.
	USBR		D. Will occur when applicable

February 2000 Interim Contract Renewal Biological Opinion Commitments or Conservation Measures pg 4

Responsible and Prudent Measures	Responsibility	Due Date/Time Period	Status/Remarks
E. Informal consultation for inclusions or annexations involving the interim and Friant contractors in this opinion that may affect listed species. Formally consult for those inclusions with direct or indirect effects that are likely to adversely affect listed species or result in take. Informal consultation will determine if the inclusions or annexations will not affect listed species prior to signing of the FONSI or RSP.	USBR		E. Will occur when applicable
F. Apply specific criteria to all transfers involving interim or Friant Divisions contracts that have not already under gone section 7 consultation.	USBR		F. Will occur when applicable. Note: the correct language for this provision is on page 2-10, not this language.
V. Develop and implement a program to compensate for losses of listed species habitat that occur as a result of delivery of ACP water to the Interim & Friant Div. Contract service area.	USBR		V. In Development. Mitigation plan for impacts directly related to discretionary Reclamation actions.
A. Establish a contingency plan that would develop and implement a process to identify impacts and then address those impacts to listed species or their habitats within the interim and Friant Division's contract service area that occur as a result of delivering ACP water to contractors.	USBR/CONTR		A. SCCAO has developed a draft compensation plan for the Friant contractors in which incentives are used to reduce the amount of land converted and compensation will take the form of fee title acquisition, conservation easements, land retirement, and enhancement of existing preserved lands. For other interim contractors, MIP-150 is drafting a similar plan. Where appropriate, it will incorporate the adaptive mgt and monitoring plan in development by Mike Frits.
B. Finalize implementation of the contingency plan to address impacts to species or their habitats within the interim and Friant Division's contract service area that occur without a FWS incidental take authorization.	USBR/CONTR		B. Once the contingency plans are finalized, steps will be made to ensure they are implemented at each of the Area Offices and that all contractors are made aware of their responsibilities under the plans.
C. The contingency plan for impacts to listed species or their habitat will be reviewed in a section 7 consultation with the FWS and will incorporate compensation for temporal and other habitat losses. 1. Cases of listed species habitat within the interim and Friant contract service areas will be compensated at rates consistent with the recovery needs for those listed species.	USBR/FWS		C. The contingency plans will be coordinated with the FWS and the appropriate (formal or informal) Section 7 consultation will occur after finalization.

Enclosure 1:

Selenium monitoring programs conducted in conjunction with the Grasslands Bypass Project are as follows:

Grasslands Bypass Project Monitoring Program: This program is a joint effort between the US Bureau of Reclamation, the San Luis & Delta-Mendota Water Authority, the US Fish & Wildlife Service, the US Environmental Protection Agency, the US Geological Survey, the Central Valley Regional Water Quality Control Board and the California Department of Fish & Game. Monitoring data is reviewed monthly by the Data Collection and Reporting Team and distributed monthly to the public in hard copy format and at the project website <http://www.mpr.usbr.gov/mp150/grassland/index.html>. Quarterly narrative and graphical data summary reports are prepared to provide an overview of the data collected in the most recent quarter of the Grassland Bypass Project. These reports are distributed to the public and on the website. An annual summary report is prepared and distributed to the public and on the website. This annual report consists of technical chapters prepared by the agency staff responsible for each portion of the Grassland Bypass monitoring program. The chapters are:

- Summary
- Drainage Control Activities by Grassland Area Farmers
- Flow and Salinity Monitoring
- Water Quality Monitoring
- Flow, Salt and Selenium Mass Balances in the San Luis Drain
- Project Impacts on the San Joaquin River
- Biological Effects
- Biomonitoring Program
- Sediment Monitoring
- Sediment Quantity in the San Luis Drain
- Quality Control

All reports are compiled by the San Francisco Estuary Institute under contract to the US Bureau of Reclamation. Components of the monitoring program include:

1. Continuous Monitoring
 - a. Station A (Inflow to the San Luis Drain)
 - b. Station B (discharge from the San Luis Drain)
 - c. Station D (Mud Slough North downstream of drainage discharge)
 - d. Station F (Salt Slough at Highway 165)
 - e. Station N (San Joaquin River at Crow's Landing)

Daily selenium loads are calculated at the compliance point, Site B.

1. Weekly Monitoring
 - a. Station A (Inflow to the San Luis Drain) taken from grab samples
 - b. Station A (Inflow to the San Luis Drain) taken from composite samples
 - c. Station B (discharge from the San Luis Drain)

- d. Station C (Mud Slough North upstream of drainage discharge)
 - e. Station D (Mud Slough North downstream of drainage discharge)
 - f. Station F (Salt Slough at Highway 165)
 - g. Station G (San Joaquin River at Fremont Ford)
 - h. Station H (San Joaquin River at Hills Ferry)
 - i. Station J (Camp 13 Ditch), water supply to south grasslands
 - j. Station K (Agatha Canal), water supply to south grasslands
 - k. Station L2 (San Luis Canal at splits), water supply within grasslands
 - l. Station M2 (Santa Fe Canal at weir), water supply within grasslands
 - m. Station N (San Joaquin River at Crows Landing)
3. Monthly Monitoring
- a. Fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from Sites B, C, D, F and control
 - b. Fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from Sites B, C, D, F and control
 - c. Daphnia Magna survival in 7-day tests using water samples collected from Sites B, C, D, F and control
 - d. Daphnia Magna reproduction in 7-day tests using water samples collected from Sites B, C, D, F and control
 - e. *Selenastrum capricornutum* growth in 4-day tests using water samples collected from Sites B, C, D, F and control
 - f. Selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests.
 - g. Sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests.
 - h. Total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests.
4. Quarterly Monitoring
- a. Biological monitoring of fish tissue, invertebrates, fish eggs and bird eggs at Stations C, D, E (Mud Slough North at Highway 140), F, G, H and I (Mud Slough North backwater site below the Drain discharge)
 - b. Sediment quality monitoring at Stations A, B, C, D, E and F. Stations I as well as locations within the San Luis Drain are sampled annually.
5. Annual Monitoring
- a. Sediment quantity within the San Luis Drain.

Grassland Area Farmers Monitoring Program: The Grassland Area Farmers have their own internal monitoring program. Selenium load allocations have been assigned to each member. These load allocations are used for members to keep track of their discharge and to be used as part of the selenium trading program that has been developed. The location of the internal sites are upstream of the discharge into the San Luis Drain Site A, and are located at the main regional discharge points. At these regional locations there are...

measurements. At district discharge points there is continuous flow and weekly quality measurements. In addition drainage sumps within each district are monitored for flow and quality. The districts tabulate this information for use in managing drainage within their boundaries.

Of the four districts that are the subject of the proposed contract renewal action reviewed in the biological assessment, Broadview Water District monitors its sumps and district discharge. Eagle Field, Oro Loma and Mercy Springs Water Districts are within the Panoche Drainage District. Flows from sumps are monitored by Panoche but are tabulated so discharges from these districts can be determined. The allocated load identified in paragraph 3 above has been calculated for the districts in the same manner that it was calculated for Panoche Drainage District.

Sumps that are not in districts are monitored by the regional drainage entity. This monitoring program allows for quantification of selenium in drainage reaching Grassland Bypass Channel that does not come from Grassland Area Farmers.

Regional Board Reports: Separate from the Grasslands Bypass monitoring program the Regional Board publishes monitoring data. This data is published in annual reports. The most recent reports are titled "Agricultural Drainage Contribution to the Water Quality in the Grassland Watershed of western Merced County, California: October 1997 - September 1998 (Water Year 1998)" and dated May 2000 and "Water Quality of the Lower San Joaquin River: Lander Avenue to Vernalis, October 1997 - September 1998 (Water Year 1998)" and dated May 2000. These reports are available beginning in May of 1985. These reports are available beginning in May of 1985. They are available on the Regional Board web page at <http://www.swrcb.ca.gov/~rwqcb5/index.html>.

USBR Monitoring of Water Quality in the DMC: The USBR monitors flow and water quality within the Delta-Mendota Canal as it passes through the Grassland Area. Included in this monitoring is the discharge from drainage sumps that discharge into the DMC. At times the concentration of DMC water exceeds the 2 ppb selenium standard for delivery into the refuges.

Sources of Selenium Study: As a result of high rainfall events in water years 1997 and 1998 the

Oversight Committee for the Grassland Bypass Project commissioned a "Sources of Selenium" study to identify the sources of the drainage discharge through the Grassland Bypass Project. The scope was limited to discharge from the Grassland Drainage Area and upstream impacts. There are three Tasks to the study: I. Data Compilation and Interpretation, II. Development of a District-Level Water Balance and Selenium Load Model for the Grasslands Area of the Western San Joaquin Valley and III. Development of a Transient, Three-Dimensional Groundwater Flow Model for the Grasslands and Adjacent Areas of the Western San Joaquin Valley. Task I was completed in January 2000 and the remaining Tasks II and III are set to be completed by October 2000.

APPENDIX D

RESPONSES TO COMMENTS ON THE DRAFT 2001 SUPPLEMENTAL EA

Introduction

The draft supplemental EA for the renewal of 2001 interim contracts for one year, between March 1, 2001 through February 28, 2002, was circulated for public and agency review for 18 days from February 2, 2001 to February 20, 2001. The final supplemental EA provides response to comments received on the draft supplemental 2001 EA. This appendix includes a list of the comment letters, the comment letters, and responses to the substantive environmental issues raised in the comments.

No new impacts were identified, nor was there an increase in the severity of previously identified impacts.

List of Comment Letters

Letter Reference	Commentor
A	Jon D. Rubin, Duane, Morris & Heckscher LLP, Attorney for Santa Clara Valley Water District, Pajaro Valley Water District Management Agency, and Widren Water District.
B	Diane V. Rathmann, Linneman, Burgess, Telles, Van Atta & Vierra, for San Luis 7 Delta-Mendota Water Authority.
C, .	Jeanne M. Zolezzi, Attorney-at-Law, Herum Crabtree, Brown, Dyer, Zolezzi, Terpstra.

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February 20, 2001

VIA FACSIMILE

Mr. Frank Michny
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Draft Supplemental Environmental Assessment and Draft Finding of
No Significant Impact

Dear Mr. Michny:

Pursuant the February 2, 2001 News Release, Santa Clara Valley Water District ("SCVWD"), Pajaro Valley Water Management Agency ("PVWMA") and Widren Water District ("Widren") hereby propose two revisions to the Draft Supplemental Environmental Assessment and Draft Finding of No Significant Impact prepared for Central Valley Project Interim Renewal Contracts. The proposed changes are intended to allow for a more accurate reflection of existing circumstances.

First, Widren requests that page 1-10 be revised as follows (additions indicated in bold, deletions indicated by strikeout):

Widren Water District Assignment: Assignment of water from the Widren Water District to the ~~area~~ City of Tracy has been considered in the past and a proposal was developed. In April 2000, however, the Widren Water District withdrew its request for the assignment, and all work regarding this assignment permanently ceased. ~~As a result of on-going litigation between local, non-federal interests regarding this assignment, no final action has been taken by Reclamation. This action has been suspended until the dispute has been resolved. No action is expected in the immediate future. Should the issues under question be resolved and~~ Widren Water District seek another assignment of its contract, another proposal for assignment would be presented to Reclamation, and Reclamation would initiate consultation with USFWS to address concerns about potential impacts to listed

A-1

Mr. Frank Michny
February 20, 2001
Page 2

~~species. Evaluation of this action and consultation with USFWS would be required to conducted as part of a separate environmental review process.~~

Underline and italics in original).

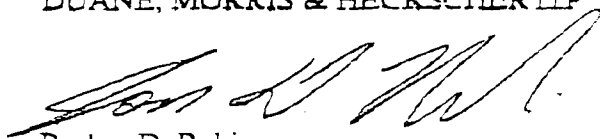
Second, SCVWD and PVWMA request that the following revision be made to page 3-1 additions indicated in bold, deletions indicated by strikeout):

Potential impacts arising from ~~the future~~ assignments of water, ~~such as those by the Mercy Springs or Widren water districts, as previously described, would be subject to separate environmental review processes~~ **must comply with the requirements of the National Environmental Policy Act and/or California Environmental Quality Act, and therefore, are not addressed in this document.**

A-2

Thank you for your consideration of these comments.

Sincerely,
DUANE, MORRIS & HECKSCHER LLP



By Jon D. Rubin
Attorneys for Santa Clara Valley Water
District, Pajaro Water Valley Water
Management Agency, and Widren Water
District

cc: Joan Maher, SCVWD
Charles McNiesh, PVWMA
Douglas A. Unruh, Widren
Thomas M. Berliner
Nicole A. Turr

Response to Comment Letter A

Response to Comment A-1:

Suggested changes incorporated in section 1.5.3 of the Final 2001 Supplemental EA.

Response to Comment A-2:

Suggested changes to the second paragraph of the 2000 Supplemental EA incorporated in the 2001 Supplemental EA at the beginning of Chapter 3.

Diane W. Rathmann

Mr. Frank Michny

February 20, 2001

Re: DSEA for the Renewal of Interim Water Service Contracts

Page: 2

**General Comments of the
San Luis & Delta-Mendota Water Authority (SLDMWA)**

Page 2-5: The members of the SLDMWA point out that Alternative 2 has been rejected on policy grounds as an appropriate mechanism for implementation of the tiered pricing provisions of CVPIA in the recently-executed Friant Division Long-Term Renewal Contracts, in the CVP-wide form of Long-Term Renewal Contract, and in the 11/17-2000 draft negotiated for Delta-Mendota Unit Long-Term Renewal Contracts (collectively, the Long-Term Renewal Contracts). In addition, the alternative concerning water quantity was rejected by CVP contractors and has not been adopted in any of these same negotiated long-term contracts. It is therefore could not be viewed as a preferred alternative.

B-2

Page 2-6: "G. Water Conservation" is confusing, where it states: "unless exempted, contractors shall use incentive pricing, according to the contractors' water conservation plans, rather than an internal tiered pricing program." Under existing interim renewal contracts (IRC's), contractors are required to implement incentive pricing under their water conservation plans, but not CVPIA tiered pricing, which applies only to contracts longer than 3 years. In the Long-Term Renewal Contracts, tiered pricing mandated by CVPIA has replaced any contract requirement for incentive pricing under water conservation plans. The reference to "an internal tiered pricing program" is not clear.

B-3

Page 3-3: The discussion of water supply in 3.1.2 is not accurate. Even considering averaged deliveries over the past 5 years, contractors south of the Delta have received an average 82% CVP water supply. If the text is relying on long-term projections contained in the Programmatic Environmental Impact Statement (PEIS), it needs to identify that document and qualify the broad statement. Furthermore, the discussion about shifting sources of supply is applicable in areas of available ground water; in other areas, in particular given the competition for available south-of-Delta supplies created by the Environmental Water Account currently established under the CalFed Program, together with purchases for Level 4 refuge supplies, increased pricing incentives for CVP water would very possibly mean that there could be no shift from CVP supplies, but that economic impacts would be greater.

B-4

Page 3-4: In the second paragraph under 3.3.1, the listing of measures to address biological concerns omits the annual dedication of 800,000 acre feet of CVP yield under Section 3406(b)(2) of the CVPIA—a huge commitment that comes directly at the expense of south-of-Delta contractors. The fifth paragraph under 3.3.1 speaks of a Biological Opinion to address potential CVP-wide impacts as evaluated in the PEIS. If this means the November, 2000, Biological Opinion on Implementation of the CVPIA, the text should be updated to identify that document; if it means some other BO, what is that?

B-5

Page 3-3: In section 3.3.2, the assessment of economic impacts from implementing Alternative 2 should go farther to look at cumulative impacts of conditions facing contractors and their water

Mr. Frank Michny

February 20, 2001

Re: DSEA for the Renewal of Interim Water Service Contracts

Page: 3

users during the one-year period of the proposed interim renewals. Given projected water shortages, projected power rate increases and current crop prices, increased incentive pricing during this year could produce permanent impacts by forcing farm operations to go out of business. The analysis correctly notes that ability to pay relief could not be forthcoming, unless it were enacted on some emergency basis.

B-6

Response to Comment Letter B

Response to comment B-1:

Our determination and conclusions are provided in the Finding of No Significant Impact (FONSI). We have used the Supplemental EA to present the information and impact analysis to support the conclusion(s) in the FONSI.

Response to comments B-2, B-3, B-4, B-6:

Comment noted. In the 2001 Supplemental EA, the alternative considered was continuation of existing interim contracts. In section 2.1.2 of this EA, a statement was added to clarify that alternative 2 from the 2000 supplemental EA was not evaluated in the 2001 Supplemental EA.

Response to comment B-5:

Text of the 2001 Supplemental EA was updated to reflect these suggestions. See section 3.3.1.

HERUM CRABTREE

BROWN DYER

ZOLEZZI TERPSTRA

Jeanne M. Zolezzi
jzolezzi@herumcrabtree.com

February 21, 2001

VIA FACSIMILE

Mr. Frank Michney
Bureau of Reclamation
2800 Cottage Way
Sacramento CA, 95825-1898.

Re: Comments on Supplemental 2001
Environmental Assessment for Interim Water Service Contracts

Dear Frank:

I have reviewed the Supplemental 2001 Environmental Assessment for Interim Water Service Contracts on behalf of The West Side Irrigation District and have the following comments:

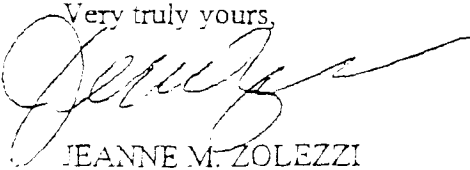
Section 1.5.2. of the "Issues Related to CVP Water Use Under the Proposed Interim Contracts" states that:

"No changes to district boundaries are part of the proposed action and the boundaries in place, as of the date of this document, will remain the same through February 28, 2002."

C-1

This is not necessarily the case. WSID is aware of pending detachment requests made by landowners in the district to the San Joaquin County Local Agency Formation Commission. WSID has no say in the detachment, and is ordinarily notified of the detachment once it has taken place. WSID notifies the Bureau of Reclamation as soon as it is informed of such actions.

Very truly yours,



JEANNE M. ZOLEZZI
Attorney-at-Law

JMZ:rl

cc: Ms. Barbara Kleinert, The West Side Irrigation District

E:\documents\1077-0077\JMZ\10764.doc

Response to Comment Letter C

Response to comment C-1:

In section 1.5.2 of the 2001 final Supplemental EA, clarifying language was incorporated for potential changes to district boundaries. Refer to changes in section 1.5.2 of the final Supplemental EA.

APPENDIX E

US FISH AND WILDLIFE SERVICE CONCURRENCE MEMORANDUM

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

IN REPLY REFER TO:
1-1-01-I-1211

February 28, 2001

Memorandum

To: Regional Director, Mid-Pacific Region, Bureau of Reclamation

From: Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Section 7 Compliance Under the Endangered Species Act for the Interim Renewal of Specific CVP Water Service Contracts from March 2001 to February 2002

This memorandum is in response to your January 2001 request for formal consultation with the Sacramento Fish and Wildlife Office (SFWO) on renewal of interim Central Valley Project (CVP) water contracts for specific CVP contractors (provided in Attachment 1) for the period March 1, 2001 to February 28, 2002. We have decided to extend the existing Interim Renewal Contract biological opinion (2000 Interim Opinion), dated February 29, 2000 (Service File No. 1-1-00-F-0056), for the period March 1, 2001 to February 28, 2002. The 2000 Interim opinion covered some CVP contracts which are now covered in the formal consultations for the Friant Division and Cross Valley Units dated January 20, 2001 (Service File No. 1-1-01-F-0027) and Hidden and Buchanan Unit dated February 14, 2001 (Service File No. 1-1-01-F-0048). The districts which have completed section 7 consultation and have signed 25-year long term water contracts will not need interim contracts and are excluded from this extension. Some of the districts, identified by asterisks in Appendix 1, which were included in the 25-year long term water contract biological opinions mentioned above do not as yet have signed water contracts and will require interim contracts and ESA coverage through this consultation. The Service based the decision to extend the existing the 2000 Interim Renewal Contract biological opinion on the following:

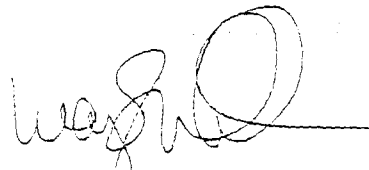
- careful consideration of the proposed action identified in your Draft Supplemental Environmental Assessment, dated February 2001, and additional information provided by Reclamation.
- the single year period for the proposed action,
- no new federally listed species or designated critical habitat have been added to the project area since completion of the 2000 Interim Renewal Contract biological opinion.

- except for CVP interim contractors converted to long-term 25-year contracts, the Service has completed an internal analysis of the proposed action and determined that it remains consistent with that found in the 2000 Interim Renewal Contract biological opinion,
- these water contracts will be renewed for long-term or additional interim periods that will include consultation under Section 7 of the Endangered Species Act,
- Reclamation's continued commitment to, and accomplishment of, *Conservation Measures* and *Terms and Conditions* provided in the 2000 Interim Renewal Contract biological opinion and those found in other recent associated biological opinions,
- Reclamation's commitment to provide a level of funding and effort consistent with levels identified in the biological opinion for *Implementation of the CVPLA and Continued Operation and Maintenance of the CVP* (Service No. 1-1-98-F-0124) as follows:
 - Reclamation will provide an additional \$450,000 from their portion of the fiscal year 2001 CVPLA budget to fund efforts associated with the Habitat Restoration Program, established under section 3406(b)(1) of the Central Valley Project Improvement Act. This action, when added to the existing budget of the Habitat Restoration Program (\$600,000), will provide for a total of \$1,050,000. This additional funding will be provided after joint approval by both Reclamation and the Service.
 - Reclamation assumes it will be able to make the CVP Conservation Program whole for fiscal year 2001, which was \$2.26 million in fiscal year 1999 and \$2.40 million in fiscal year 2000. If this is not achieved, Reclamation may need to reinitiate consultation under ESA.
- The Service's commitment to provide a level of funding and effort consistent with levels identified in the biological opinion for *Implementation of the CVPLA and Continued Operation and Maintenance of the CVP* (Service No. 1-1-98-F-0124) as follows:
 - The Service will provide an additional \$450,000 from our portion of the fiscal year 2001 CVPLA budget to fund efforts under the Habitat Restoration Program, established under section 3406(b)(1) of the Central Valley Project Improvement Act. This action, when added to the budget of the Habitat Restoration Program identified above (\$1,050,000), will provide for an overall total of \$1,500,000. This additional funding will be provided after joint approval by both Reclamation and the Service.

In addition, the Service concurs with Reclamation's conclusion, in a memorandum dated February 28, 2001, that execution of the partial assignment of CVP contract water supply to the Mercy Springs Water District, an interim CVP water contractor, to the Santa Clara Valley Water District and Westlands Water District for use of up to 5,260 acre-feet of CVP for 1 year from March 1, 2001 to February 28, 2002, is not likely to adversely affect federally listed species. The Service reached this conclusion based on the bulleted items above, and Reclamation's commitment to include the section 7 review and analysis of the Mercy Springs partial assignment during the section 7 consultation on long-term renewal of the Delta Mendota Canal Unit or in additional interim contract period, whichever comes first.

We find this year-long extension of the 2000 Interim Renewal Contract biological opinion to be appropriate. This extension will provide a reasonable addition of time to meet the existing commitments related to *Conservation Measures and Terms and Conditions* and is based on the assumption Reclamation and the Service will immediately convene the Coordination Team consistent with the biological opinion on *Implementation of the CVPLA and Continued Operation and Maintenance of the CVP* (Service File No. 1-1-98-F-0124), dated November 21, 2000 to further the purposes of ESA. This Team will, among other duties, provide guidance on the continued implementation of all associated *Conservation Measures and Terms and Conditions* associated with Interim Renewal of CVP contracts.

As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action. If you have any questions, please contact Cay Coude, Assistant Field Supervisor for the Endangered Species Division, at (916) 414-6648.

A handwritten signature in black ink, appearing to read 'Wayne S. White', with a large, stylized loop at the end.

Wayne S. White

Attachment

APPENDIX F

**NATIONAL MARINE FISHERIES SERVICE
CONCURRENCE LETTER**

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

February 27, 2001

In Response Refer To:
SWR-01-SA-0023:MEA

Mr. Frank Michny
Regional Environmental Offices
U.S. Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

Dear Mr. Michny:

This is in response to your letter of January 31, 2001 initiating informal consultation under the Endangered Species Act for execution of 44 interim Central Valley Project (CVP) water service contracts for the period of February 2001 to February 2002. A draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) for the renewal of these interim water service contracts through February 28, 2002 was subsequently submitted to the National Marine Fisheries Service (NMFS) via letter dated February 6, 2001 (received February 7, 2001). Enclosed with the draft EA and draft FONSI was the Bureau of Reclamations (Reclamations) Water Supply Outlook for Water Year 2001.

Species, under the jurisdiction of the NMFS, which may be affected by Reclamation's proposed action are: 1) endangered Winter-run chinook salmon (*Oncorhynchus tshawytscha*); 2) threatened Central Valley Spring-run chinook salmon (*O. tshawytscha*); 3) threatened Central Valley Steelhead (*O. mykiss*); and, 4) threatened Southern Oregon/Northern California Coast coho salmon (*O. kisutch*). In addition, designated critical habitat for these species may be affected by the proposed action.

Reclamation has determined that executing these interim contracts, in and of themselves, will likely have no adverse effect on winter-run chinook salmon, spring-run chinook salmon, coho salmon, or steelhead. Reclamation's determination is based on the following:

- (1) Contract amounts are limited to established needs or existing contract amounts, whichever is less. There will be no increase in total deliveries.
- (2) Contracts will be for 1 year in duration, February 2001 to February 2002.



- (3) The interim contracts contain shortage provisions that allow for reduction of deliveries for various reasons, including the need for CVP operations to be modified to meet requirements of listed species. Biological Opinions addressing the effects of the hydrologic operation of the CVP on Winter-run chinook salmon already exist. In addition, Reclamation is presently in consultation with NMFS on the effects of the CVP/State Water Project(SWP) on spring-run chinook and steelhead and has committed to complete a consultation on these species for the period of March 2001 to March 2002, and initiating consultation on long-term operations of the CVP and SWP. Reclamation has also consulted on the effects of operations of the Trinity River Division on coho salmon.
- (4) The hydrologic operations of the CVP are, and will continue to be, operated in compliance with existing and any new Biological Opinions that address the effects of the operation of the CVP on any listed species. A letter dated October 29, 1999, was provided to NMFS to confirm this commitment.
- (5) Reclamation is committed to engaging NMFS in the (b)(2) interagency team to provide recommendations on how to best dedicate and manage 800,000 acre-feet of CVP yield.
- (6) The proposed action is tiered from the CVPLA PEIS and was considered within and is consistent with the programmatic biological opinion (dated November 14, 2000) NMFS prepared on the implementation of the CVPLA.

NMFS' interpretation of the letter of October 29, 1999, mentioned in item (4) above, is that Reclamation will continue to operate the CVP in compliance with existing or soon to be completed long-term biological opinions and will not commit additional resources (e.g. water withdrawals) which would effect the environmental baseline, absent this action.

Based on the best available information, NMFS concurs with Reclamation's determination that the 1 year interim contracts, identified in the list enclosed with your letter of January 31, 2001, will not likely adversely effect winter-run chinook salmon, spring-run chinook salmon, coho salmon, or steelhead, or their designated critical habitat. By letter dated December 22, 1997, we responded, in essence, that we did not object to the proposed renewal of interim water service contracts so long as Reclamation retained the flexibility to reduce actual water deliveries as may be necessary for a variety of environmental needs. The contracts shortage provisions should allow Reclamation adequate flexibility to continue to comply with the existing Biological Opinion for Winter-run chinook salmon and the new opinions currently under development that address the effects of CVP operations on listed species. In addition, based on our interpretation of your October 29, 1999 letter, Reclamation, through this action, will not commit resources which will effect the environmental baseline for the long-term. Reclamation should be prepared to exercise its flexibility within these contracts as our agencies proceed with Endangered Species Act Section 7 consultations on CVP operations.

This concludes Section 7 consultation for Reclamation's proposed execution of 1 year water service contracts. However, if any new information becomes available indicating that listed or proposed species may be adversely affected, further consultation and/or conferencing will be necessary.

If you have any questions concerning these comments, please contact Mr. Michael Aceituno in our Sacramento Area Office, 650 Capitol Mall, Suite 8-300, Sacramento, California 95814. He can be reached by telephone at (916) 930-3600 or Fax at (916)930-3629.

Sincerely,



for Rebecca Lent, Ph.D.
Regional Administrator

cc: Jim Lecky, NMFS, Long Beach, CA
Wayne White, USFWS, Sacramento, CA

Appendix C

Interim Biological Renewal Biological Opinion Status Report

Updated Interim Status Report – November 2001

Proposed Action/Conservation Measures	Responsibility	Due Date/ Time Period	Status/Remarks
1. Reclamation will develop and implement programs with the 65 water districts (Districts) to ensure that land use changes associated with project water will be addressed pursuant to ESA.	FWS/USBR		
a. Notify Districts regarding ESA requirements of the Interim Opinion	FWS/USBR	Done	1a completed . Notice sent week of July 3, 2000
b. Synthesize existing and new information on distribution and potential habitat of federally listed, proposed, and candidate species within the Districts.	FWS/USBR	Ongoing	1bcd: Ongoing . Cooperative GIS teams from both agencies working on Central Valley Habitat Monitoring Workplan. 1993 habitat data is available and 2000 data is being synthesized.
c. Map (hard copy and digitized) habitat and potential distribution of listed, proposed, and candidate species, and provide information to the Districts, the Service and the California Department of Fish and Game.	FWS/USBR	Ongoing	c. Ongoing . Both agencies are working together to synthesize the data and finalize habitat maps .
d. Monitor land use changes and ongoing activities in the Districts to ensure that project water is not used in a manner that adversely affects listed, proposed, and candidate species.	FWS/USBR	Ongoing	d. Ongoing
2. Reclamation will ensure that its operation and maintenance activities as well as activities of other associated with the use of CVP water within the Districts will not adversely affect listed, proposed and candidate species.	FWS/USBR		
a. Work with the California Department of Pesticide Regulation to develop guidelines and information addressing the effects of the application of pesticides to listed, proposed, and candidate species.	FWS/USBR	Done	2a. Completed . Memo to Service documenting the pesticide information related to candidate species that Reclamation contributed to CDPR.
b. Develop and distribute to the Districts and landowners guidance on construction and maintenance activities that are most beneficial to listed, proposed, and candidate species.	FWS/USBR	February 28, 2001	2b. Ongoing . Rough Draft of CCAO Field Operations Manual was submitted to the FWS for review, will incorporate comments received from FWS on the manual. Draft O&M manual was completed by the SCCAO and distributed to contractors. NCAO is just starting to draft their manual patterned after the SCCAO and CCAO manuals.
c. Review water conservation plans for the Districts prior to implementation to ensure they do not adversely affect listed, proposed or candidate species.	USBR	Within 3 months of contract renewal	2c. Ongoing . Printed copies of the urban districts annual reports are available at each Area Office.
d. Amend the criteria for water conservation plans to ensure consistency with the ESA. 1) Status Report Update 2) Revise Criteria	USBR	2002	2d. Pending . The criteria for water conservation plans is amended every 3 years, consistent with the CVPIA. The criteria was amended in 1999, so will not be amended again until 2002. Reclamation will informally consult with the Service by forming an interagency team that will ensure that the 2002 criteria is in compliance with the ESA. Reclamation will send a memo to the Service and NMFS requesting their participation on the team.

Proposed Action/Conservation Measures	Responsibility	Due Date/Time Period	Status/Remarks
3. Reclamation, working with the Service, will implement critically needed action to assure the continued existence of listed and proposed species and their habitats that have been affected by the CVP.	FWS/USBR	ongoing	3. Ongoing. CVP conservation program (CP) and b(1) other projects.
a. Identify lands that are critical to the continued survival of listed species and proposed species.	USBR	continue updating	3a. Ongoing. Last update of high priority species provided to CP from FWS on 1/27/00. Historic trend analysis completed and mapping program discussed in 1bcd above to help identify and prioritize land for conservation easements or acquisition.
b. Implement critical needs plan.	FWS/USBR	Implementing	3b. Ongoing
4. Develop a long-term program to address overall effect of the CVP and implementation of the CVPIA.	FWS/USBR	Pursue adequate funding and partners	4. Ongoing. CVP consultations, CVP conservation program and b(1) "other" projects/programs.
Reasonable and Prudent Measures	Responsibility	Due Date/Time Period	Status/Remarks
I. Develop and implement programs with the Districts in Appendix A of this opinion to ensure that land use activities associated with project water will be addressed pursuant to the ESA.			
A. Work with CDPR to develop guidelines that provide an update on work that has been completed on this measure. In addition, provide information to CDPR generated from mapping efforts described in Conservation Measure 1(c).	FWS/USBR	Done	A. Completed. Memo to Service describing Reclamation's contribution of ESA information to the CDPR.
II. Identify land and water use techniques or measures within CVP service areas which are critically impacting listed and proposed species or their habitats.			
A. Prepare a study plan to identify the sources of selenium contamination in the Grasslands, San Joaquin River, and south Delta estuary.	USBR	Continuing	A. Ongoing. This requirement is already handled through the existing Grassland Bypass Project (GBP) monitoring program. A USGS sources of selenium study for the GBP, funded by Reclamation, began in FY2000 and is not expected to be completed until the end of 2002, at the earliest. The Study had 3 phases: Joe McGahan has completed phase I and the raw data generated has been sent to USGS for analysis. The BA&BO Proposed Action for the continuation of the GBP through 2009 has commitments for supporting studies down-river of the project.
B. Develop and implement an approved monitoring program to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates using the lower San Joaquin River and southern Sacramento-San Joaquin Delta.	USBR	Continuing	B. Initiated and ongoing. Service biologists tested 14 split tail for Se, B and other contaminants. A report will be generated after the lab results are in. The BA/BO Proposed Action for the continuation of the GBP through 2009 has commitments for supporting Se studies and monitoring to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates.
C. Provide quarterly reports on locations of monitoring and monitoring results. If concentration exceeds 2 ug/l monthly mean standard for wetland water supplies in the Grasslands, and is a result either directly or indirectly from Reclamation actions, will identify and implement corrective actions and initiate separate formal consultation.	USBR	Continuing	C. See IIA - the reporting measure is handled with the existing GBP monitoring program and existing quarterly reports. Corrective actions were made in previous years and continue to be monitored through the GBP monitoring program, which includes Service biologists, who receive the monthly averages at the same time as Reclamation. All inlets from the Grasslands Project Area to the wetland channels have been plugged since April 21, 1998 and monthly selenium averages have only exceeded 2 ppb occasionally since then and the exceedences have been less than 1 ppb. Those exceedences are not directly or indirectly tied to Reclamation actions because Reclamation has aggressively prevented selenium drainage from entering the wetlands.

Reasonable and Prudent Measures	Responsibility	Due Date/ Time Period	Status/Remarks
III. Identify, analyze and compensate for past effects since 1991 for Friant and 1995 for Interim contractors. (Note: Friant is no longer an interim contractor)			
A. Identify and analyze the impacts of changes to contract service area boundaries since 1991 for any Friant contracts that have not undergone section 7 consultation. Fully compensate for any impacts associated with past water assignments of Interim or Friant Div. water allocations.	USBR	Prior to initiation of consultation (cons.) for ltrc	A. Information and analysis ongoing. Information will be provided in BA's for Long-Term contract renewal (LTCR). All Friant contract service area boundary changes have been consulted on.
B. Identify and analyze the impacts of changes to contract service area boundaries since 1995 for interim contractors and provide this information and associated GIS data layers. Fully compensate for any impacts associated with past changes to contract service area boundaries for interim contracts.	USBR	Prior to ltrc or next interim period	B. Information and analysis ongoing. Draft maps for interim contract service areas were provide to FWS in May showing boundaries changes since '95 and acreage changes by district. Information will be provided in BA's for Long-Term contract renewal
C. Identify and analyze the impacts of changes in purpose of use since 1991 for Friant contractors and 1995 for Interim contractors and provide this information and analysis. Provide an analysis on how changes in purpose of use will affect shortages to districts, and how these changes in allocations will affect CVP-wide water supplies under drought conditions	USBR	Prior to ltrc or an additional interim period.	C. No Change. The 1995 Interim contract renewal consultation included change of purpose of use from ag to M&I. In general the ag shortage provisions remain even if purpose of use converted to M&I, so these changes in allocations will not affect CVP-wide supplies under drought conditions.
D. Identify and analyze the impacts of all water assignments executed since 1991 for Friant contractors and 1995 for interim contractors and provide this information. Fully compensate for any impacts associated with past water assignments of Interim or Friant Division water allocations.	USBR	Prior to ltrc or an additional interim period.	D. Information and analysis ongoing. There has only been one assignment since 1995 (Mercy Springs) resulting in changes in water use. All other assignments were simple name change actions, usually as a result of deaths in a family.
IV. Consult on future actions including changes in purpose of use of contracts, transfers involving interim for Friant Div. contractors, assignments, and inclusions, annexations and exclusions to contract service area boundaries.	USBR	Due Date Not Applicable	IV. Will occur when applicable
A. Consult on future changes in water contracts from agriculture only to agriculture/M&I purposes.	USBR		A. Will occur when applicable
B. Provide an analysis of how future changes in purpose of use will affect shortages to districts and how these change in allocations will affect CVP-wide water supplies under drought conditions.	USBR		B. No Change. June 9, 1997 joint letter on CVPIA administrative proposal on urban water supply reliability stated that ag shortage provisions remain even if converted to M&I. M&I water in the districts up for renewal that are granted M&I priority has not changed since the OCAP consultation (1992).
C. No execution of future changes in purpose of use unless it can be shown that such changes will not reduce under drought condition water supplies for proposed or listed species.	USBR		C. See B above.
D. Informal consultation for assignments of interim and Friant Divisions that may affect listed species. Consult formally for those contracts or actions with direct or indirect effects that are likely to adversely affect listed species, or result in take. Consult informally if an action will not affect listed species prior to signing of the FONSI or ROD	USBR		D. Will occur when applicable

Reasonable and Prudent Measures	Responsibility	Due Date/ Time Period	Status/Remarks
E. Informal consultation for inclusions or annexations involving the interim and Friant contractors in this opinion that may affect listed species. Formally consult for those inclusions with direct or indirect effects that are likely to adversely affect listed species, or result in take. Informal consultation will determine if the inclusions or annexations will not affect listed species prior to signing of the FONSI or ROD.	USBR		E. Will occur when applicable
F. Apply specific criteria to all transfers involving interim or Friant Divisions contracts that have not already under gone section 7 consultation.	USBR		F. Will occur when applicable. Note: the correct language for this provision is on page 2-10, not this language.
V. Develop and implement a program to compensate for losses of listed species habitat that occur as a result of delivery of CVP water to the Interim & Frait Div. Contract service area.	USBR		V. Pending. Mitigation plan for impacts directly related to discretionary Reclamation actions.
A. Establish a contingency plan that would develop and implement a process to identify impacts and then address those impacts to listed species or their habitats within the interim and Friant Division's contract service area that occur as a result delivering CVP water to contractors.	USBR/CONTR		A. Pending. SCCAO has developed a draft compensation plan for the Friant contractors in which incentives are used to reduce the amount of land converted and compensation will take the form of fee title acquisition, conservation easements, land retirement, and enhancement of existing preserved lands. The Friant plan will be the prototype for other district plans, though each will be unique for that district.
B. Ensure implementation of the contingency plan to address impacts to species or their habitats within the interim and Friant Division's contract service area that occur without a FWS incidental take authorization.	USBR/CONTR		B. Once the contingency plans are finalized, steps will be made to ensure they are implemented at each of the Area Offices and that all contractors are made aware of their responsibilities under the plans.
C. The contingency plan for impacts to listed species or their habitat will be reviewed in a section 7 consultation with the FWS and will incorporate compensation for temporal and other habitat losses. Losses of listed species habitat within the interim and Friant contract service areas will be compensated at ratios consistent with the recovery needs for those listed species.	USBR/FWS		C. The contingency plans will be coordinated with the FWS and the appropriate (formal or informal) section 7 consultation will occur after finalization.

APPENDIX D

RESPONSES TO COMMENTS ON THE DRAFT 2002 SUPPLEMENTAL EA

Introduction

The draft supplemental EA for the renewal of 2002 interim contracts for two years (from March 2, 2002 through February 29, 2004) was circulated for public and agency review for 30 days from December 7, 2001 to January 7, 2002. The final Supplemental EA provides response to comments received on the draft. This appendix includes a list of the comment letters (Table 1), the comment letters, and the responses to the substantive environmental issues raised in the comments.

No new impacts were identified, nor was there an increase in the severity of previously identified impacts.

Table 1
List of Comment Letters Received

Letter Reference	Commentor
DPWD	William D. Harrison, General Manager, Del Puerto Water District
USEPA	Joshua Baylson, Acting Deputy Director, Cross Media Division, Region IX, US Environmental Protection Agency
SLDMWA,	Diane V. Rathmann, Linneman, Burgesss, Telles, Van Atta, Vierra, Rathmann, Whitehurst & Keene, On behalf of the San Luis & Delta-Mendota Water Authority
TCS	Aileen D. Roder, Taxpayers for Common Sense
SCVWD	Kellye J. Kennedy, Santa Clara Valley Water District

Del Puerto WATER District

P.O. Box 1596 • Patterson, CA 95363-1596

Fax (209) 892-4469 • Phone (209) 892-4470

December 18, 2001

Bureau of Reclamation
Mid-Pacific Regional Office
ATTN: Mr. Frank Michny
2800 Cottage Way
Sacramento, CA 95825-1898

BUREAU OF RECLAMATION OFFICIAL FILE COPY RECEIVED		
DEC 27 2001		
CODE	ACTION	SIGNATURE DATE
150		JW

Re: Request for Review and Comment on Draft Supplemental Environmental Assessment and
Draft Finding of No Significant Impact for Interim Renewal Water Service Contracts -
Central Valley Project, California

Dear Mr. Michny:

On behalf of the Del Puerto Water District, an Interim Renewal Contractor for Central Valley
Project water service from the Delta-Mendota Canal, I am writing to comment on the Draft
Supplemental Environmental Assessment (DSEA).

We have reviewed the DSEA and agree with the conclusion reached that interim renewal of the
proposed water service contracts for up to two years, with only minor changes, will result in no
significant impact to the quality of the human environment including Water Resources, Land Use,
Biological Resources, Threatened or Endangered Species, Cultural Resources, Recreation
Resources, Demographics and Environmental Justice, Indian Trust Assets, Economic Resources.
Neither will this action result in significant cumulative impacts. A Finding of No Significant
Impact for the proposed action is therefore appropriate.

DPW
1

Thank you for the opportunity to review and comment on this document and finding.

Sincerely,



William D. Harrison, General Manager
DEL PUERTO WATER DISTRICT

cc: Board of Directors
Ernest Conant

150		

Response to Comments by Del Puerto Water District (DPWD)

DPWD-1 Comment noted.



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

ALP/SD Frank
01/05

January 4, 2002

Frank Michny
Regional Environmental Officer
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825

Dear Mr. Michny:

The Environmental Protection Agency (EPA) has reviewed the **Draft Supplemental Environmental Assessment for the 2002 Renewal of Interim Water Service Contracts through February 29, 2004 - Central Valley Project, California**. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The Bureau of Reclamation (Bureau) proposes to execute 42 interim renewal water service contracts for up to two years between March 1, 2002 and February 29, 2004. Execution of interim contracts is needed to continue delivery of Central Valley Project (CVP) water until long-term contracts can be executed.

The renewal of interim water service contracts was first evaluated in a 1994 environmental assessment (EA) with supplemental EAs (SEAs) issued in 1998, 2000, and 2001 for subsequent interim renewals (i.e., "roll-overs"). The current SEA is tiered to these previous EAs and relies on the evaluation of environmental consequences provided in the 2000 and 2001 SEAs. The proposed interim contracts include the same terms as those executed in 1994, and renewed in 1998, 2000, and 2001. If long-term contracts are not executed by March 1, 2003, a one-year extension of these interim contracts (March 1, 2003 through February 29, 2004) may be executed. Prior to a second year extension, the Bureau will determine if additional NEPA analysis is necessary.

As you know, EPA has had a long institutional interest in the Bureau's renewal of interim and long-term contracts. We provided comments on the 1994 draft guidelines for interim renewal of long-term CVP contracts and on the 1994 EA for interim renewal of 67 CVP water service contracts. In that many of our earlier comments are still relevant to the proposed contracts and current SEA, these letters are hereby incorporated by reference. Copies are attached.

EPA continues to be concerned that the "roll-overs" of the interim contracts have compromised the Bureau's NEPA process for the following reasons:

- The present SEA is the fourth "roll-over" since 1994. In effect, many of these interim renewal contracts have been continued for 7 years. The current renewal would extend these interim renewal contracts to a period of 10 years. Therefore, the premise that the contracts are of a limited duration with minor environmental impacts, is no longer valid.
- The status quo perpetuates and aggravates environmental degradation and constitutes an irretrievable commitment of resources which should be fully evaluated pursuant to NEPA. We note that the Central Valley Project Improvement Act Programmatic Environmental Impact Statement did not evaluate water quality impacts at any level, nor did it evaluate other environmental impacts at the district level. We continue to believe there is a compelling need for detailed evaluation of long-term and cumulative impacts of district-level water quality, groundwater, and water supply reliability effects of the continuing action.

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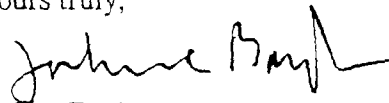
We urge the Bureau to stop continual "roll-overs" of the interim contracts and to pursue execution of long-term contracts based on a sound NEPA process which informs environmentally responsive contract design. To do so would be in the best interests of California, the public, and sound water supply management. We believe an adequate NEPA process for district-level contracts should include evaluation of the long-term and cumulative impacts of the status quo and continual roll-over of interim renewal contracts. We also urge the Bureau to create strong incentives to move contractors from interim renewal contracts to long-term contracts. We consider these NEPA compliance issues to be significant and we will work with you to resolve our concerns to avoid elevation of these issues.

USEPA
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EPA wishes to acknowledge the significant efforts made by Bureau staff over the past several years in developing an approach to CVP contracts that is fair to the districts involved and implements the reforms envisioned by the CVPLA. Our detailed comments (attached) discuss a number of issues which we believe should be considered in the environmental documentation for interim renewal of water service contracts. We stand ready to offer our support on working through the issues raised in our comments or on other issues raised during the comment period. If you have any questions about these comments, please call Lisa Hanf at (415) 972-3854 or Laura Fujii at (415) 972-3852.

Yours truly,



Joshua Baylson,
Acting Deputy Director
Cross Media Division

Attachments: Detailed comments (3 pages)
EPA Comments on 1994 Draft Guidelines for Interim Renewal of CVP
Contracts
EPA Comments on 1994 Interim Renewal EA

MI002218

Filename: interimcvpcontracts.wpd

cc: Donna Tegelman, BOR, MP-400
Gary Stern, National Marine Fisheries Service, Santa Rosa
Michael Aceituno, National Marine Fisheries Service, Sacramento
US Army Corps of Engineers, San Francisco & Sacramento
Pat Port, Department of the Interior
Wayne White and David Wright, US Fish and Wildlife Service
Jim White, Department of Fish and Game
Victoria Whitney, State Water Resources Control Board
Mary Nichols, California Resources Agency
Patrick Wright, CALFED

DETAILED COMMENTS

Impact of No Action (Status Quo)

The 1994 Environmental Assessment (EA) and subsequent Supplemental Environmental Assessments (SEAs) measure impacts of the proposed action relative to the status quo scenario, or "no action." However, the Bureau has failed to place the status quo in the context of historical biological resource losses or actual on-the-ground environmental conditions associated with CVP water delivery (e.g., reduced flows in the San Joaquin River). Thus, the conclusion that there are no significant impacts since the proposed action represents a continuation of the existing action is flawed.

Recommendation:

We urge the Bureau to evaluate potential impacts of the continuing action in comparison to existing environmental conditions and trends. As we have stated before, "no action" does not equate with "no impact." Therefore, the Bureau should determine whether the continuation of the action will contribute to a declining, stable, or improving environmental condition.

USEP
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Environmental Consequences

An underlying assumption of the SEA appears to be that there are no changes in land use, canal maintenance procedures, cropping patterns, or other agricultural and irrigation practices because the contracts are of a limited duration, represent a continuation of existing conditions, and will not provide for additional water supplies that could lead to shifts in agricultural practices or land use (draft Finding Of No Significant Impacts (FONSI), pg. 3). However, changes in existing conditions have occurred which could affect agricultural practices. These changes should be taken into account.

Recommendations:

We recommend the Bureau reevaluate the assumption of no change in agricultural or irrigation practices that occur with market and other economic shifts, regulatory reform, and environmental dynamics. In examining the incremental impacts of roll-overs, the Bureau should consider the cumulative impacts from changed agricultural conditions. Conditions to consider include changes in herbicide use for aquatic plant control in irrigation canals, the increased focus on invasive species control, new air quality standards (e.g., PM2.5), new water quality actions (e.g., California Regional Water Quality Control Board waste discharge requirements), and projected growth and development within the Central Valley.

USEP
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The 2000 SEA (pg. 3-4) states that the Bureau has undertaken a number of commitments to monitor and address any impacts from the previous interim contracts. We urge the Bureau to include the most recent monitoring results in the final environmental documentation.

USEPA
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Alternatives

1. It appears that Alternative 2, as presented in the 2000 SEA, is no longer being evaluated as an alternative. Therefore, only Alternative 1, the No Action alternative, is considered in the 2001 and 2002 SEAs (2002 SEA, pg. 2-2).

Recommendation:

Given the fact that many of the interim contracts have been in place for 7 years and may be continued into the indefinite future, we strongly believe the Bureau should consider evaluation of other reasonable alternatives as required by NEPA [40 CFR Section 1502.14(a) and (c)].

USEPA
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2. As presented in the 2000 SEA, Alternative 2 would specify water quantities using two water supply categories. The first, more reliable water category, would be the quantity of water that would be reasonably likely to be available during a year for delivery and would be the "contract total." The second category of water would be any additional water that may be delivered to contractors in excess of the first category of water.

EPA has frequently expressed our concern that the contract quantities included in the current contracts do not accurately reflect the delivery capability of the CVP, especially after regulatory actions under the Clean Water Act, the CVPIA and the Endangered Species Act are considered. In many years -- and for some districts, in most years -- the CVP is unable to deliver the entire amount of water called for in the current contracts. EPA is concerned that this "over commitment" of CVP supplies has the potential to adversely affect the Bureau's ability to effectively assist in addressing California water and environmental needs.

USEPA
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Recommendation:

We urge the Bureau to consider including the dual water category approach in their interim contract renewals, especially since these contracts may continue into the indefinite future. We suggest that the Bureau develop a consistent process for determining, on a contract by contract basis, the proper allocations of "base" and "supplemental" quantities. We believe the "base" amount should reflect recent historical realities but also factor in the anticipated future limitations on CVP supplies noted and evaluated in the CVPIA Programmatic EIS.

3. Alternative 2 also included the concept of tiered water pricing for the first category of water (contract total) where the first 80 percent of the contract total would be priced at the contract rate. Subsequent 10 percent increments would be priced at higher rates. The second category of water would be priced at the full cost rate.

Recommendation:

EPA has often expressed our support for the concept of tiered pricing as a mechanism for encouraging economically efficient water uses in both the agricultural and urban sectors. EPA appreciates that implementing tiered pricing in the real world is difficult, given the vastly different circumstances of irrigation districts and the various approaches to managing water supplies in diverse hydrologies. Nevertheless, we urge the Bureau to reconsider including tiered water pricing in interim renewal contracts and to develop carefully tailored, district or unit level approaches to tiered pricing.

USEPA
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General Comments

1. We recommend the Bureau clearly state in the environmental documentation the most realistic schedule for execution of long-term contract renewals. We ask that the Bureau confirm that interim contract renewals will not be continued into the indefinite future. We also strongly urge the Bureau to include language in each interim contract stating a specific schedule and date for finalizing and executing the long-term contract.

USEPA
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2. We are concerned that NEPA review of the major environmental issues involved in water delivery under these contracts is being carried out in an increasingly fragmented way through different NEPA processes. We urge the Bureau to more explicitly articulate (a) how the various long-term contract EISs (e.g., American River Unit) will tier from the CVPLA PEIS, (b) how these interim contract SEAs will tier from the CVPLA PEIS (now that there is a final Record Of Decision on the PEIS), and (c) how the many local efforts, such as the San Luis Drain EIS and the Westside Integrated Resource Plan (WIRP), will tier from the CVPLA PEIS and relate to the various contract renewal evaluations.

USEPA
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3. The final environmental documentation should include updated information on the status of current water transfers and assignments; implementation of CVPLA requirements of Section 3405, as already incorporated into the interim contract provisions (e.g., installation of water measurement devices, conservation plans, meeting water quality standards, payment provisions); US Fish and Wildlife and National Marine Fisheries Service concurrence letters on meeting Endangered Species Act requirements; and status of Interim Contracts Renewal Biological Opinion commitments.

USEPA
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, Ca. 94105-3901

April 22, 1994

APR 22 1994

John Davis
Repayments Branch Chief
Bureau of Reclamation, Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Davis:

Enclosed are Environmental Protection Agency (EPA) comments on the March 10, 1994 draft Guidelines for interim renewal of long-term Central Valley Project contracts under P.L. 102-575.

The EPA has submitted comments on two previous drafts of the guidelines (letters to James Moore, dated March 5, 1993 and August 13, 1993). We appreciate the efforts which Reclamation has made to solicit and respond to public comments. The present draft of Interim Contract Renewal Guidelines is an improvement over earlier versions. However, we continue to have concerns with several sections.

If you would like to discuss these comments with us, please call Thomas Hagler, Office of Regional Counsel (415-744-1375) or Carolyn Yale, Office of Federal Activities, Environmental Review Section (415-744-1580).

Yours truly,


Harry Seraydarian
Director
Water Management Division

Enclosure

EPA Comments:

Interim Draft Guidelines: Implementation of the Interim Contract Renewal Provisions, P.L. 102-575

1. **Water shortage.** The current language states that shortages may be caused by "drought or other unavoidable causes." It is not clear how "unavoidable causes" might be interpreted, or whether compliance with state and federal environmental laws could somehow be construed as "avoidable." We strongly recommend that the section be revised to clearly state that shortages may occur when necessary to comply with legal obligations, including obligations under P.L. 102-575, the Federal Clean Water Act, and Endangered Species Act. The language of the July 14, 1993 draft of these guidelines is a clearer expression of these responsibilities.

2. **Water supply.** Draft guidelines section (V.B) on water supply states that the quantity of water under contract will be reviewed for "reasonable beneficial use." The procedures and standards used to determine reasonable beneficial use should be identified in more detail in the guidelines. We believe that determination of reasonable beneficial use should include an evaluation as to whether the water uses unreasonably interfere with the attainment of state and federal water quality standards and water conservation measures.

Additionally, the guidelines provide that evaluation of water supply may include projected needs, without identifying the time frame for this analysis of future conditions. We stated in our letter of August 13, 1993, that we believe the water supply determination should be based on the contractor's historical use, rather than projected use beyond the interim renewal period. Please refer to the August comment letter for more details on this subject.

3. **Water quality.** The currently proposed guidelines state that provisions contained in Section 3405(c) of P.L. 102-575 will be added to interim renewal contracts. However, the guidelines add the nuance that the requirement for compliance with all State and Federal water quality standards will apply to agricultural drainage discharges "generated through the use of Federal or Contractor facilities or CVP water provided by the Contractor within its boundaries." This language is more limited than Section 3405(c). As we noted in our March 5, 1993 letter, implementation of this section should impose on a district the responsibility for meeting applicable water quality standards with respect to "drainage discharges generated within its boundaries."

4. **Conservation.** As you know, P.L. 102-575 grants Reclamation discretionary authority to renew contracts for an interim period until completion of the programmatic EIS. Having an approved water conservation plan in place should be a clearly stated prerequisite for interim contract renewal; any subsequent interim

renewals should be contingent on satisfactory implementation of the plan. While there may be "extenuating circumstances" which prevent meeting these requirements, these should be defined narrowly in the guidelines.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, Ca. 94105-3901

October 19, 1994

Rick Breitenbach
Office of Water Policy and Allocation, MP-180
Mid-Pacific Region
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Breitenbach:

The Environmental Protection Agency (EPA) Office of Federal Activities would like to submit comments on the Draft Environmental Assessment (EA) for interim renewal of 67 Central Valley Project (CVP) repayment or water service contracts. These comments are provided in accordance with responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

EA Approach and Findings

According to the EA, interim renewal of expired contracts is intended not only to provide continuing water deliveries to existing CVP contractors but to implement the Central Valley Project Improvement Act (CVPIA). The interim renewals cover a period of time until all necessary environmental documentation for long-term water contract renewals, including the programmatic environmental impact statement on implementation of the CVPIA (ES-1), is completed. In the two action alternatives considered in the EA, Reclamation proposes to renew 67 contracts, pursuant to the Central Valley Project Improvement Act, for a maximum of three years each. Alternative #1 (preferred alternative, p. II-9) tracks most closely, but not exactly, the Final Interim Guidelines for Implementation of Interim Renewal Contracts (May 20, 1994). The second action alternative is closer to pre-CVPIA contract provisions, and represents a version favored by CVP contractors (p. II-4). Finally, "no action" reflects "continuation of existing contract terms"-- a mixture of pre-CVPIA and CVPIA provisions. The EA analysis of effects of the three alternatives suggests that there would be no appreciable differences among them with respect to water deliveries or water use, or other impacts on the environment.

EPA Comments

EPA is extremely interested in seeing that contract provisions designed to support CVPIA are faithfully negotiated in interim renewal contacts. To this end, we submitted comments on the Interim Guidelines on several occasions (letters to James Moore dated March 5, 1993 and August 13, 1993; letter to John Davis, April 22, 1994). The EA, the Interim Guidelines, and the proposed contracts are inextricably linked; EPA's detailed comments on these matters are enclosed. EPA's major concerns are as follows:

(1) While the final Interim Guidelines did not respond fully to certain issues we raised, they were formally endorsed by the Regional Director after a public process and should be represented in the EA. In some instances, the preferred alternative #1 contains proposed contract provisions which are weaker than the final Guidelines with respect to environmental protection. EPA believes that these changes need to be justified, and that the EA should include an alternative fully reflecting the Interim Guidelines as approved.

(2) EPA is concerned that the EA does not provide a range of alternatives satisfying 40 CFR Sec. 1508.9(b) [see also NEPA Sec. 102(2)(C), 42 USC Sec. 4332]. In the purpose and need statement (p. I-1) the first purpose of interim contract renewals cited is "protecting, restoring, and enhancing fish, wildlife and associated habitats" in affected areas. In large measure this depends on improving water supplies and, in certain areas, water quality for biological resources. However, all three of the alternatives (no action plus two action alternatives) propose contract renewals for approximately the same water quantities (equal or close to full existing contract quantity). Additionally, the alternatives do not evaluate contract provisions to address quality problems associated with Central Valley Project water use.

(3) Finally, EPA is concerned about the direction of Bureau policy implied by the EA and the proposed contract language. We are concerned that these documents do not explicitly state that water allocations will be made for fish and wildlife purposes (under the Endangered Species Act, under state and federal water quality standards, and to some extent under other provisions of the CVPIA), and that these allocations will reduce water available for contract deliveries. Absent reduced contract water quantities or a clear contractual provision recognizing and restating the Secretary's authority to meet these fish and wildlife objectives, the Bureau may be restricting its ability to implement fish and wildlife measures during the period covered by these interim contracts.

Details on recommended changes in the EA and proposed contract provisions are enclosed. If you would like to discuss these comments, please call Carolyn Yale (415-744-1580). We would appreciate receiving two copies of any subsequent documentation for this EA.

Yours truly,

A handwritten signature in dark ink, consisting of several overlapping loops and a horizontal line at the end, positioned above the typed name.

David Farrel, Chief
Environmental Review Section

ID 002218

cc: Jim McKevitt, U.S. Fish and Wildlife Service
Mike Hoover, U.S. Fish and Wildlife Service
Jim White, California Department of Fish and Game
Jim Bybee, National Marine Fisheries Service
Nanette Engelbrite, Western Area Power Administration
Robert Franklin, Hoopa Valley Tribe
Jeannine Jones, California Department of Water Resources
Wendy Pulling, Natural Resources Defense Council
Dave Yardas, Environmental Defense Fund

Interim renewals should clearly support CVPIA

Interim renewals should be designed to promote CVPIA purposes, such as environmental restoration and mitigation, and water conservation. Although interim renewals are for a short term only, they should support policies intended to make a difference over the longer run. While the EA identifies CVPIA goals in the purpose and need statement (see p. ES-1), it is not clear how the alternatives would achieve these objectives. For example, the analysis of water deliveries concludes there would be no difference among the three alternatives [that is, deliveries could be 1.694 million acre feet (maf), slightly below the current contract quantity, 1.735 maf]. These water contract and delivery quantities predate CVPIA and recent Bay/Delta protective measures: The analysis of contract water supply and impacts does not allow for environmental water allocations.

The EA also implies that water conservation has no potential effects on water quality or quantity used (p. III-15). There is no way of distinguishing between status quo conservation plans and Reclamation's new conservation plan criteria. The EA should provide comparative information regarding short and longer-term objectives, and potential longer-term effects, of these options.

. In summary, the EA should analyze an alternative which promotes CVPIA objectives of protecting fish, wildlife, and habitat and improving water conservation. The relationship between these policies and implementing contract provisions should be stated clearly. As it is, the alternatives appear to be designed to narrow the differences from no action/status quo. There are no clear policies distinguishing the two action alternatives from each other, or from no action. This fact, combined with the EA analysis that there may be no significant impacts to distinguish one alternative from another, provides little guidance for selecting a course of action.

Provide water for environmental protection

The policy statements, contract provisions and water supply analysis in the EA do not unequivocally support Reclamation's legal obligations to operate the Central Valley Project to protect fish and wildlife, pursuant to such laws as the Endangered Species Act and Clean Water Act. EPA believes that the principle of operating the CVP to meet all legal requirements for environmental protection applies in all alternatives (including "no action"). Contract provisions should support this principle. Water requirements for environmental resources should be reflected in the discussion of water available for deliveries

BUREAU OF RECLAMATION: DRAFT EA, INTERIM RENEWAL CONTRACTS
SEPTEMBER 1994

to contractors.

Policy statements: The EA alternatives provide only limited compliance: For "no action" and alternative 2 contractors would be required to comply with D-1485 and the existing biological opinions for winter-run salmon and delta smelt; Alternative 1 would require contractor compliance with any biological opinions developed pursuant to Section 7 of the Endangered Species Act. Other measures, including "implementation of the CVPIA... and development of water quality standards for the Delta" are regarded by Reclamation as too speculative for inclusion in the EA (p. III-62). The EA should express a commitment to meet all legal requirements.

Contract provisions: The EA version of the shortage provision (which is the same for both action alternatives) would "allow water shortages to be caused by drought or other physical or legal causes that are beyond the control of the United States" (p. III-3). This is a significant departure from the final Interim Guidelines, which provide that shortages of water available to the contractor may occur with drought or "other causes including but not limited to, compliance with federal and state laws and regulations. The interim contracts will contain language that gives the United States the authority on how Project water is allocated within the CVP" (emphasis added). We believe very strongly that the EA should include a shortage provision which follows the Guidelines.

Water supply analysis: The EA water supply analysis should distinguish between stated contract quantity and amount of water which would be available to contractors after meeting legal environmental requirements. The EA bases the interim renewal water contract quantity on the highest historical "beneficial" use over a period of 1980-1993 (Alt. 1-- totalling 1.694 million acre feet) or the same amount as in the existing long-term contracts (no action, Alt. 2-- 1.735 million acre feet). (For most contractors, the interim renewal contract quantities are the same under both alternatives.) The analysis of water deliveries to contractors refers to these maximum quantities, without considering environmental needs which could reduce water availability to contractors (see for example, pp. III-16-17).

Improve water conservation and management

We support the provision in Alternative 1 which requires contractors to prepare and begin implementing water conservation plans conforming to Reclamation's Criteria for Evaluating Water Conservation Plans (April 30, 1993). To effectively implement conservation, and for Reclamation to evaluate the plans and

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SEPTEMBER 1994

implementation efforts, adequate documentation of water supplies, use and quality of seepage and return flows is required. This includes adopting and enforcing water use measurement and reporting requirements.

Reclamation has repeatedly stated that in reviewing a contract for renewal, the Bureau evaluates whether water has been put to "reasonable beneficial use" (see pp. II-9 and II-16). In commenting on the Interim Renewal Guidelines we have asked what this determination entails in terms of documentation from the contractor and evaluation procedures and standards on Interior's part. The EA Technical Appendix D, "Descriptions of Affected CVP Contractors," indicates that in many instances information is missing on such topics as groundwater use and accurate water measurement. Under these circumstances, it is difficult to conclude that an exacting evaluation of reasonable beneficial use of Central Valley Project water has been conducted. Given limited documentation and regulation of ground water use, we are also concerned about the implications of including "groundwater recharge" as a beneficial use of irrigation water (discussed in Alt. 2).

We believe that determination of reasonable beneficial use should include an evaluation as to whether the water uses unreasonably interfere with the attainment of state and federal water quality standards and water conservation measures (see letter to John Davis from Harry Seraydarian, April 22, 1994). We strongly recommend that Reclamation develop effective methods and standards for evaluating reasonable beneficial use. Contract provisions should give Reclamation authority to reduce water supplies where water use has not been reasonable and beneficial.

Water pricing

The EA observes that for all alternatives "ability to pay" rate reductions will be available to irrigators. As a result, the irrigation water rates and Restoration Fund charges identified in the EA may not in fact be paid in full by irrigators, but shifted to power users. (See pp. I-7 and III-55.) In a previous letter we raised questions regarding the legal and policy basis for continued use of ability to pay rate reductions in the CVP (letter from Jacqueline Wyland to Kirk Rodgers, July 8, 1994). Further, we would like to know if ability to pay relief could be implemented for the action analyzed in this EA, given the short time frame for interim renewals and, as we understand it, the substantial documentation and review procedures for ability to pay. If ability to pay reductions could be implemented, the potential effects on water use should be discussed.

Impacts of no action (status quo)

The EA measures impacts of alternatives in terms of change from status quo (see, for example, pp. III-16-17). However, when using the status quo/no action alternative as a reference point for effects of alternatives, it is essential to place this in the context of historical biological resource losses. Failure to begin implementation of the CVPIA may result in additional impacts simply by supporting ongoing activities which continue to degrade the environment. Given the need-- and CVPIA requirement-- to correct for past and current Project impacts, the interim renewals should be evaluated in terms of likely contribution to longer-term environmental consequences.

Response to Comments by US Environmental Protection Agency (USEPA)

- USEPA-1 Reclamation anticipates completing the environmental compliance and the execution of long-term water service contract within this interim period. The complexity of the analysis associated with the Programmatic Environmental Impact Statement (PEIS) extended its completion until October 1999 with the Record of Decision approved on January 9, 2001. The PEIS evaluated CVP-wide impacts of long-term contract renewal. Environmental compliance documents tiered from the PEIS are at various stages of completion. Friant Division, Hidden Unit, and Buchanan Unit long-term contract have been executed. Interim contracts are necessary until completion of the contract negotiation and environmental compliance processes. The interim renewal of these contracts essentially maintains the status quo.
- USEPA-2 Comment Noted. See section 1.1, second paragraph, of this environmental assessment which explains our environmental analysis approach. Reclamation believes the NEPA analysis is appropriate for the action at hand.
- USEPA-3 The final PEIS, partly based on comments on the draft PEIS, did evaluate impacts to Delta water quality in Technical Appendix Volume Ten, October 1999, and habitat and water quality conditions that affect fish in the Central Valley streams in Attachment B of the Fish Habitat Water Quality Technical Information, September 1997. Regional and district level water quality impacts as they may relate to the approval of long-term water service contracts have or will be evaluated in the long-term contract renewal NEPA documents tiered from the PEIS.
- USEPA-4 See USEPA-1 and 2. Reclamation and the contractors have made and will continue efforts to complete the appropriate environmental compliance process for long-term contracts.
- USEPA-5 Section 3404 (c)(3) of the CVPIA provides the incentives to renew interim and "encourage early renewal" of all CVP water service contracts. Reclamation intent is to aggressively pursue completion of long-term contract renewals.
- USEPA-6 See section 1.1, second paragraph, of this final EA. The EA and the scope of analysis were developed consistent with NEPA regulations and guidance for the Council on Environmental Quality. The proposed action is the continuation of the existing interim contracts with only minor, administrative changes to the contract provisions. Only minor change in actions, circumstances, or information has occurred. See response to comment USEPA-2.

Response to Comments by US Environmental Protection Agency (USEPA)

- USEPA-7 With interim contract renewal, the continuation of the same amount of water being provided to the same lands for the existing/ongoing purpose does not result in a significant new impact. Other activities may be affecting agricultural practices, but the renewal of existing interim water service contracts for up to 2 years will not shift agricultural practices or land use. For the renewal of interim contracts, we believe it would be a unproductive exercise to analyze impacts on natural resources from activities such as changes in herbicide use for aquatic plant control or increased focus on invasive species control which interim water service contracts have little if any relationship to the action at hand.
- USEPA-8 Monitoring results of previous interim contracts have shown no significant affects from Reclamation's discretionary actions related to interim contract renewals. Appendix C of this Supplemental EA provide the latest report on the interim contract renewal US Fish and Wildlife Service's biological opinion.
- USEPA-9 Other alternatives are being evaluated as part of the long-term contract renewal process. So far, twenty-seven long-term contracts have been renewed. Unless unforeseen complications arise, Reclamation and the interim contractors will execute long-term contracts, which will include completing all environmental compliance, within the next two years.
- USEPA-10 The Reclamation Project Act of 1956 and Reclamation Project Act of 1963 mandate renewal of existing contract amounts when beneficially used. Needs analysis have been completed to identify the amount of water that could be beneficially used by each water service contractor. The contract amounts were constrained to not exceed the beneficial use or the existing contract amount, whichever is less.
- CVPIA required CVP to institute environmental management as part of the CVP operations, such as allocation of 800,000 acre-feet for fish and wildlife purposes, refuge water supply, and acquisition of water from willing sellers. These requirements in addition to existing Federal and State requirements of CVP operations constrain the actual delivery amounts. These existing legal constraints provide regulatory/environmental use of CVP water.
- USEPA-11 Alternatives, including tiered pricing, are being developed through the negotiations process for long-term contracts. Appropriate alternatives will be evaluated as part of the environmental compliance process for long-term contract renewals.
- USEPA-12 See response USEPA-1 and 5. Various unforeseen circumstances have delayed the execution of long-term contracts for the interim contractors.

Response to Comments by US Environmental Protection Agency (USEPA)

USEPA-13 With the completion the CVPIA PEIS and the ROD (1/9/01), Reclamation has continued with the process to complete the contract negotiations and tiered regional environmental documents necessary to executed long-term water service contracts, many of which are also interim contracts. The environmental process is complete for the 25 of the 28 Friant Division contracts, the Hidden Unit contract, and the Buchanan Unit contract and also near completion for the Cross Valley Canal Unit contracts.

USEPA-14 No water transfers or assignments of water are part of the proposed action. They are separate independent actions. Appropriate environmental compliance and documentation will be completed for any request from interim contractors for Reclamation approval of water transfers or water assignments.

This Supplemental EA provides the US Fish and Wildlife Service biological opinion (Appendix F), the National Marine Fisheries Service concurrence letter (Appendix E), and the interim contracts status report for US Fish and Wildlife Service's biological opinion (Appendix C).

January 4, 2002

Specific Comments
of the
San Luis & Delta-Mendota Water Authority

Comments on the Draft FONSI:

Page 1: Paragraph 5, last sentence-should read, "interim contracts renewals,"

SLDM

2

Page 1: Paragraph 6, second sentence-term should be plural, "The terms and conditions . . ."

Pages 2 and 3: In describing the support for the finding of no significant impact, the draft FONSI needs to more clearly explain that the new renewal contracts will not result in any significant incremental change over existing contracts, but that changes in water use within historical parameters will occur from year to year. As written, the FONSI could be interpreted too narrowly as meaning that no changes or increases in water use will occur or that there will be no changes in any policies or programs intended to benefit fish and wildlife under the IRC's from the last IRC. In fact, there may be a lesser or greater water allocation, and some changes in policies and programs will inevitably take place. The following changes are suggested:

1. Water resources - Renewal of the interim contracts will not ~~result in a change in~~ contract water quantities from the quantities in existing contracts and will therefore not cause any increased or use and therefore there will be no effect on surface water supplies or quality. For the same reason, renewal ~~Renewal~~ of interim contracts will not result in any growth-inducing impacts that will increase water demand during the up to two-year time frame of this renewal.

SLDM

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2. Land use - The renewal of contracts will not provide for additional water supplies that could act as an incentive for conversion of native habitat for increased acreage of agricultural production, conversion of land to municipal and industrial development use, or other activities, resulting in land use changes. The amount and types of crops will vary according to the annual water allocation and farming practices, and a small quantity of irrigation use may be changed to M&I purposes where the existing contract and governing laws and regulations allow. Given the two-year time frame of this renewal, there will be no net effect on land use.

3. Biological resources - The amount and timing of storage at CVP reservoirs and flows in rivers and streams that convey CVP water during the two-year contract renewal period are expected to be similar to the amount and timing of storage and flows under historic CVP operations conditions and will be in conformance with all biological opinions and with regulatory requirements. Renewal of the interim contracts will not cause changes in existing ~~Existing~~ programs to protect biological resources, and programs will continue to be implemented to ensure

that no significant impacts to biological resources will occur. ~~[Strike rest of paragraph—item 4 covers threatened and endangered species specifically, and the same conclusion has already been reached as to biological resources in general.]~~

4. [No suggested changes.]

5. Cultural resources - the proposed action will not ~~cause result in~~ activities that could affect cultural resources, such as permanent changes in reservoir elevations, changes in land use, development of native habitat for agricultural or M&I use, or the construction of any new facilities. No impacts to cultural resources are expected.

6. Recreation resources - ~~No changes in CVP reservoir storage or modifications in the amount or timing of water deliveries, which could affect recreational resources, will occur under the proposed action. The proposed action will not cause changes in historic CVP operations that determine reservoir storage or the amount or timing of water deliveries.~~ Therefore, no ~~No~~ impacts to recreational resources are anticipated.

7. Demographics and environmental justice - The proposed action will not cause changes in historical water supplies or CVP operations and, as a result, no changes in population and the various indicators of social well being will result from the contract renewal. ~~No changes in water supplies or CVP operations will occur under the proposed action and, as a result, no changes in population and the various indicators of social well being that will result are expected to occur.~~ The proposed action will support continued agricultural production and therefore will not cause ~~will not result in~~ changes to employment of minority and low-income populations. No disproportionate impacts to minority or low-income populations are expected to occur as a result of renewing these contracts.

8. [No suggested changes.]

9. Economic resources - The renewal of interim CVP contracts will not cause changes from existing contracts in deliveries or pricing of CVP water, CVP facility operations, CVP power generation and use, or recreation use, and will therefore not cause economic impacts. ~~Existing water deliveries and CVP facility operations will continue under the proposed action. No changes in power generation, recreational opportunities, or agricultural economies are expected and no economic impacts are anticipated to occur under the extended period of renewal.~~

10. [No suggested changes.]

January 4, 2002

Comments on Draft SEA:

Comments on Chapter 1:

Page 1-1, first paragraph, third sentence: "If negotiations and the required environmental review necessary to execute long-term renewals to replace interim contracts . . ."

Page 1-3, first sentence: " . . . renewal of the contracts is in essence a continuation of the 'status quo,' that is, they continue ~~perpetuate~~ the existing use and allocation, . . ."

SLDMW
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Comments on Chapter 2:

Page 2-2, second complete paragraph, third sentence: "The current contract provisions are those that are included in the existing interim renewal contracts and specified in the 2001 Supplemental EA. They contain only minor variations from the provisions described in the 1994 EA, the 1998 Supplemental EA, and the 2000 Supplemental EA."

Page 2-2: Second complete paragraph, last paragraph, last sentence should read "2002 Supplemental EA."

Page 2-3: Since the Friant interim contracts are no longer in the group to be renewed, the discussion of storage of water in wetter years is weaker. Suggested revision of entire paragraph 2.2.2 as follows:

"Reduction in contract amounts due to current delivery constraints on the CVP system identified in the PEIS was considered in certain cases, but rejected from analysis for several reasons. The reason is twofold: First, water needs analysis have been completed for all contracts, and in almost all cases, the needs exceed or equal the total contract amount. Second, the shortage provision of the contract protects the Contracting Officer 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. Such actions include, for example, actions to implement the CVPIA, which has dedicated significant amounts of CVP water to environmental uses and which provides funding from the contractors to improve habitat and to acquire water for environmental purposes. Third, retaining the full historic water quantities under contract provides the contractors with assurance the water will be made available in wetter years and helps to support investments for local storage, water conservation improvements and capital repairs. Second, in order to implement good water management, the contractors need to be able to store or immediately use water available in wetter years when more water is available. By quantifying contract amounts in terms of the needs analysis and the CVP delivery capability, the contractors can make their own economic decisions. Allowing the contractors to retain the full water quantity gives them assurance that the water will be available to them for storage investments. In addition the

SLDMW
5

Mr. Frank Michny

January 4, 2002

Re: DSEA for the Renewal of Interim Water Service Contracts

Page: 5

~~CVPLA, in and of itself, achieves a balance, in part through its dedication of significant amounts of
CVP water and actions to acquire water for environmental purposes.~~

SLDMW

5

Response to Comments by
San Luis and Delta-Mendota Water Authority (SLDMWA)

- SLDMWA-1 Comment noted.
- SLDMWA-2 Text revised.
- SLDMWA-3 The text of the draft Finding of No Significant Impact will be reviewed and revised to more clearly explain the identified issues when a finding is approved.
- SLDMWA-4 Text revised as suggested.
- SLDMWA-5 Text revised as suggested.



January 7, 2002

VIA FAX (916) 978-5055 AND REGULAR MAIL

Mr. Frank Michny
United States Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825-1898

RE: Central Valley Project Interim Renewal Contracts

Dear Mr. Michny:

With this letter Taxpayers for Common Sense (TCS), a national non-profit dedicated to stopping wasteful government spending, submits our comments regarding Central Valley Project interim contract renewals.

TCS urges Bureau of Reclamation to conduct the most comprehensive study possible of these interim contracts renewals in order to fully evaluate the economic impacts related to renewals. The Central Valley Project Improvement Act (CVPIA) and CALFED signified a commitment by stakeholders to end the era of big subsidies and waste in California water policy. Bureau of Reclamation must stay true to the spirit of both the CVPIA and CALFED by renewing CVP contracts in a way that represents a responsible vision of future water needs in California. Central Valley Project contract promises should reflect realistic water delivery amounts at far less subsidized prices.

TCS
1

TCS is extremely concerned by Bureau of Reclamation's rejection of the possible alternative of Reduction in Interim Contract Amounts (Section 2.2.2) in its Draft Supplemental Environmental Assessment. We strongly urge Bureau of Reclamation to reconsider its decision regarding levels of water promised in its interim and long-term contracts. We believe a reduction in interim contract amounts is a feasible and an important alternative that should not have been rejected. Bureau of Reclamation must ensure that contracts do not continue to promise impossible levels of water that the CVP cannot deliver and lock the taxpayer into providing huge subsidies. Specifically, deeper analysis must be given as to how much water should actually be promised to contractors in renewing their contracts. While certain water levels were promised to these contractors in negotiations for their original contracts, the time has come for these promises to be reassessed based on current and future water needs in a rapidly changing water system. Water allocations must demonstrate an assessment of water actually

TCS
2

available in the system and how to distribute that water to best meet many competing water needs.

TCS
2

If an additional one to two-year interim contract period is truly needed (something that should be fully studied prior to implementation), then the Bureau of Reclamation should use that interim period to do the difficult work of reassessing the entire Central Valley Project. Water in the Central Valley Project is vastly over allocated. The federal government cannot continue to make unrealistic promises of water to the expense of all federal taxpayers.

TCS
3

Inflated promises of water and large subsidies will increase pressure for new dam projects and threaten the delicate balance negotiated in the CALFED Record of Decision (ROD). Such promises will continue a vicious cycle of the federal government promising unreachable amounts of water at cheap prices to CVP contractors and then federal taxpayers being forced to build and pay for massive new water projects to try to meet these assurances. Promising water at an incredibly subsidized rate will further remove market pressures to conserve water and lead to the building of massive water projects that water users cannot afford to fund.

TCS
4

If CVP contract renewals promise inflated levels of water, the policy that was intended to encourage the wise use of water (i.e. tiered pricing as mandated by the CVPIA) will be rendered all but meaningless. Under CVPIA, CVP contracts should be written to initiate tiered water pricing when water consumption exceeds 80% of the annual contract maximum. However, Bureau of Reclamation rarely delivers annual contract maximums, as demonstrated by historical deliveries, thereby making tiered water pricing ineffective. As Bureau of Reclamation continues through the process of contract renewals, we ask that annual contract maximums be reduced to more realistic levels that the CVP will actually be able to achieve.

TCS
5

Long-term CVP contracts are not permanent entitlements. Instead, CVP contracts must receive full review in order to consider the constantly evolving needs of California's diverse set of water users. Bureau of Reclamation should require CVP contracts to go through a rigorous public review process and include clear accountability provisions on the part of the water contractors before contracts are renewed. California's water needs are constantly in flux and full review of these contracts renewals is the only responsible policy.

TCS
6

Mr. Frank Michny
January 7, 2002

TCS strongly urges Bureau of Reclamation to draft Central Valley Project interim and future contract renewals to ensure that the Central Valley Project Improvement Act of 1992 is accurately and legally implemented. Continuing to issue interim contract renewals helps the Bureau of Reclamation avoid making the tough decisions necessary to follow CVPLA. The only way to achieve CVPLA compliance is to conduct a comprehensive and complete study of the full economic impacts of these renewals and renewals of future long-term contracts.

TCS
7

Sincerely,



Aileen D. Roder
California Water Project Coordinator
Taxpayers for Common Sense
651 Pennsylvania Avenue SE
Washington, DC 20003
(202) 546-8500 x130

cc: Environmental Protection Agency
Office of Management and Budget
Fish and Wildlife Service
National Marine Fisheries Service
Council for Environmental Quality

Response to Comments by Taxpayers for Common Sense (TCS)

- TCS-1 NEPA regulations require Federal agencies to study the proposed action's effects on the human environment. NEPA defines human environment as the natural and physical environment and the relationship of people with that environment. Economic effects are not intended by themselves to require preparation of an EIS. An EA need not include an analysis of purely economic effects. Under NEPA, economic effects are discussed if these effects are interrelated with effect of the natural or physical environment.
- TCS-2 The use of Reclamation project water is subject to state and Federal laws requiring beneficial use. The Reclamation Project Act of 1956 and Reclamation Project Act of 1963 mandate renewal of existing contract amounts when beneficially used. Water needs analysis have been completed to identify the amount of water that could be beneficially used by each water service contractor. The contract amounts are constrained to not exceed the beneficial use or the existing contract amount, whichever is less.
- TCS-3 Reclamation is implementing Section 3405 of the CVPIA which addresses water pricing reform and water conservation standards.
- TCS-4 See response TCS-2 and USEPA-10. We believe the action of contract renewal comport with ongoing CALFED efforts.
- TCS-5 See responses TCS-2 and 3.
- TCS-6 Public participation requirements are established in Section 9(f) of the Reclamation Project Act of 1939, 43 U.S.C. 485h, and by RRA rules and regulations (43 CFR 426.22). Public participation procedures for water service, repayment, and other water-related contracts are composed of two basic elements: 1) publicize proposed contract actions, and 2) provide an opportunity for public comment. Generally Reclamation provides public notices of proposed contract actions at least 60 days prior to execution of contracts with a term of greater than 1 year.
- TCS-7 The Central Valley Project Improvement Act Final Programmatic Environmental Impact Statement (PEIS) completed in October of 1999 included programmatic evaluations of Wildlife & Recreation Economics, Agricultural Economics & Land Use, Municipal Water Costs, and Regional Economics. Provisions of the CVPIA covered in the PEIS included CVP water contract renewals.

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AN EQUAL OPPORTUNITY EMPLOYER

Mr. Frank Michny
Regional Environmental Officer
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825-1898

SUBJECT: Draft Supplemental Environmental Assessment and Draft Finding of No Significant Impact for Renewal of Interim Water Service Contracts – Central Valley Project

The Santa Clara Valley Water District is pleased to provide comments on the subject Draft Supplemental Environmental Assessment (DSEA). We agree with the conclusion reached in the DSEA that interim renewal of the proposed water service contracts for additional terms of up to two years, with only minor changes, will not have a significant impact on Water Resources, Land Use, Biological Resources, Cultural Resources, Recreation Resources, Demographics and Environmental Justice, Indian Trust Assets, Economic Resources, or Cumulative Impacts. Therefore, a Finding of No Significant Impact for the proposed action is appropriate.

In addition, we offer for your consideration a comment on Section 1.3 of the DSEA. Contract negotiations and site-specific environmental documentation is being completed for interim contractors and those contractors that have signed a Binding Agreement. Therefore, it is suggested that the second paragraph of Section 1.3 be revised as follows:

"Reclamation is completing the contract negotiations and site-specific environmental documentation for long-term contracts with ~~interim~~ contractors in the American River, Delta, San Felipe, Sacramento River, Shasta and Trinity River Diversions."

Thank you for this opportunity to review and comment on the DSEA.

Sincerely,

Wm. Bennett

Kellye J. Kennedy
Senior Project Manager

[illegible]

SCVW
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SCVW
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Response to Comments by Santa Clara Valley Water District (SCVWD)

SCVWD-1 Comment noted.

SCVWD-2 Text revised as suggested.

APPENDIX E

NATIONAL MARINE FISHERIES SERVICE CONCURRENCE LETTER



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

February 22, 2002

In Response Refer To:
SWR-00-SA-5851:MEA

Mr. Frank Michny
Regional Environmental Officer
U.S. Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

Dear Mr. Michny:

This is in response to your letter dated November 19, 2001 initiating informal consultation under the Endangered Species Act (ESA) for the interim renewal of 42 Central Valley Project (CVP) water service contracts for the period from March 1, 2002 through February 29, 2004. These new interim contracts are similar to the one year interim contracts executed last year, and contain provisions described in current biological opinions addressing CVP operations, the Bay-Delta Accord, and conditions which allow for the reduction of deliveries for various reasons, including the need for CVP operations to be modified to meet the requirements of any amended or new biological opinions.

Species, under the jurisdiction of the NMFS, which may be affected by the Bureau of Reclamation's (Reclamation) proposed action are: 1) endangered Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*); 2) threatened Central Valley spring-run chinook salmon (*O. tshawytscha*); 3) threatened Central Valley steelhead (*O. mykiss*); and, 4) threatened Southern Oregon/Northern California Coast coho salmon (*O. kisutch*). In addition, designated critical habitat for these species may be affected by the proposed action.

Reclamation has determined that executing these interim contracts, in and of themselves, will likely have no adverse effect on winter-run chinook salmon, spring-run chinook salmon, coho salmon, or steelhead. Reclamation's determination is based on the following:

- (1) Contract amounts are limited to established needs or existing contract amounts, whichever is less. There will be no increase in total deliveries.
- (2) Contracts will be for a 2 year period, from March 1, 2002 through February 29, 2002.



- (3) The interim contracts contain shortage provisions that allow for reduction of deliveries for various reasons, including the need for CVP operations to be modified to meet requirements of listed species. Biological Opinions addressing the effects of the hydrologic operation of the CVP on Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon and Central Valley steelhead exist. In addition, Reclamation has reinitiated consultation with NMFS on the effects of the CVP Operations on Central Valley spring-run chinook salmon and Central Valley steelhead to cover the period through April 30, 2004 (expected to be completed by March 30, 2002), and has initiated consultation on long-term operations of the CVP. Reclamation has also consulted on the effects of operations of the Trinity River Division on coho salmon.
- (4) The hydrologic operations of the CVP are, and will continue to be, operated in compliance with existing, amended, or new biological opinions that address the effects of the operation of the CVP on any listed species. A letter dated October 29, 1999, was provided to NMFS to confirm this commitment.
- (5) Reclamation is committed to engaging NMFS in the (b)(2) interagency team to provide recommendations on how to best dedicate and manage 800,000 acre-feet of CVP yield.
- (6) The proposed action is tiered from the CVPIA PEIS and was considered within and is consistent with the programmatic biological opinion (dated November 14, 2000) NMFS prepared on the implementation of the CVPIA.

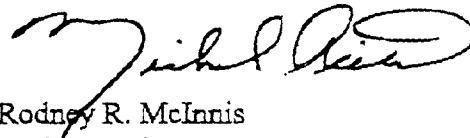
NMFS' interpretation of the letter of October 29, 1999, mentioned in item (4) above, is that Reclamation will continue to operate the CVP in compliance with existing, amended, or new long-term biological opinions and will not commit additional resources (e.g. water withdrawals) which would effect the environmental baseline, absent this action.

Based on the best available information, NMFS concurs with Reclamation's determination that the 2-year interim contracts, identified in the list enclosed with your letter of November 19, 2001, will not likely adversely effect Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon, Southern Oregon/Northern California Coast coho salmon, or Central Valley steelhead, or their designated critical habitat. The contracts shortage provisions should allow Reclamation adequate flexibility to continue to comply with existing biological opinions or any amended or new opinions currently under development that address the effects of CVP operations on listed species. In addition, based on our interpretation of your October 29, 1999 letter, Reclamation, through this action, will not commit resources which will effect the environmental baseline for the long-term. Reclamation should be prepared to exercise its flexibility within these contracts as our agencies proceed with consultations on long-term CVP operations.

This concludes Section 7 consultation for Reclamation's proposed execution of 42 interim water service contract renewals for the period of March 1, 2002 through February 29, 2004. However, if any new information becomes available indicating that listed or proposed species may be adversely affected by this action, further consultation may be necessary.

If you have any questions concerning these comments, please contact Mr. Michael Aceituno in our Sacramento Area Office, 650 Capitol Mall, Suite 8-300, Sacramento, California 95814. Mike may be reached by telephone at (916) 930-3600 or Fax at (916) 930-3629.

Sincerely,



for Rodney R. McInnis
Acting Regional Administrator

cc: Jim Lecky, NMFS, Long Beach, CA
Wayne White, USFWS, Sacramento, CA

APPENDIX F

US FISH AND WILDLIFE SERVICE BIOLOGICAL OPINION



United States Department of the Interior

Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
1-1-02-I-1704

February 27, 2002

Memorandum

To: Regional Director, Mid-Pacific Region, Bureau of Reclamation, Sacramento, California

From: Acting Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Biological Opinion for the Central Valley Project Interim Renewal Contracts

With this memorandum, we are transmitting the Fish and Wildlife Service's Biological Opinion on Central Valley Project (CVP) Interim Renewal Contracts. If you have any questions, please contact David Wright or Joy Winckel at (916) 414-6650.

Cay C. Goude
Cay C. Goude

Attachment

cc: ARD-ES, Portland, Oregon
USFWS, Refuge Mgr. San Luis NWR Complex
NMFS, Sacramento
CDFG, Ecological Services Division, Sacramento

**Biological Opinion,
Interim Water Contract Renewals,
March 1, 2002- February 29, 2004
Central Valley Project**

**February 28, 2002
File Number 1-1-02-F-0070**

**U. S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Endangered Species Division
2800 Cottage Way, W-2605
Sacramento, California 95825-1846**

Interim Biological Opinion, February 27, 2002

Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation

Introduction

This is in response to the request from the U.S. Bureau of Reclamation (Reclamation) and Applicants (listed in Appendix A, 2002 Interim Renewal Contracts - Central Valley Project), for formal consultation with the U.S. Fish and Wildlife Service (Service), dated December 21, 2002, on Interim water contract renewals for Central Valley Project (CVP) contractors. Your request was received in our office on December 21, 2002.

This biological opinion is an amendment to the U.S. Fish and Wildlife Service's (Service) February 29, 2000 biological opinion on Interim Water Contract Renewals (Service File # 1-1-00-F-0056) on the effects to the species listed in Table 1 from the proposed action, Central Valley Project (CVP) Interim Water Contract Renewals, in accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA). This amendment to the February 29, 2000 biological opinion addresses the effects of the proposed renewal and the continued delivery by the U.S. Bureau of Reclamation (Reclamation) of 34 Interim contracts and 8 Cross Valley Canal Division water service contracts, in accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), for a maximum period of 2 years, from March 1, 2002 through February 29, 2004. The water will be used within the Interim and Cross Valley Canal Unit contract service areas for agricultural, municipal, and industrial purposes, and will not exceed water allocations identified by CVP operations criteria in February 2002, including any updates. The Interim water contracts include contractors within the American River Division, Delta Mendota Canal Division, Sacramento River Division, Shasta Division, and the Trinity Division. The Interim and Cross Valley Canal Unit contracts (Interim contracts) that are the subject of this consultation are displayed in Appendix A.

For the purposes of this Interim contract renewal consultation, all conservation measures and non-discretionary terms and conditions described in the biological opinion on long-term contract renewal of Friant Division and Cross Valley Canal Unit Contracts (Friant-Cross Valley Opinion, Service File No. 1-1-01-F-0027) apply to the interim renewal of the Cross Valley Canal Unit contracts for the period of March 1, 2002 through February 29, 2004 or until long-term contracts for the Cross Valley Canal Unit are executed, whichever comes first. Therefore, all conservation measures and non-discretionary terms and conditions of the Friant-Cross Valley Opinion of 2000 relevant to Cross Valley contracts are incorporated by reference into this consultation.

This document represents the Service's biological opinion on the effects of the action on the following species and critical habitat (Table 1A.):

Interim Biological Opinion, February 27, 2002

Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation

Table 1A: Species considered in this biological opinion, including common name, scientific name, Federal status and whether the species has critical habitat.

Note: Entries in bold indicate species or critical habitat not considered in the 2000 Interim opinion.

Common Name	Scientific Name	Federal Status	Critical Habitat
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	Endangered	Yes
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	Threatened	Yes
Blunt-nosed leopard lizard	<i>Gambelia silus</i>	Endangered	
California clapper rail	<i>Rallus longirostris obsoletus</i>	Endangered	
California jewelflower	<i>Caulanthus californicus</i>	Endangered	
California red-legged frog	<i>Rana aurora draytonii</i>	Threatened	Yes
Colusa grass	<i>Neostapfia colusana</i>	Threatened	
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	Endangered	
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	Endangered	
Delta smelt	<i>Hypomesus transpacificus</i>	Threatened	Yes
El Dorado bedstraw	<i>Galium californicum ssp. sierrae</i>	Endangered	
Fleshy owl's-clover	<i>Castilleja campestris ssp. succulenta</i>	Threatened	
Fresno kangaroo rat	<i>Dipodomys nitratoides exilis</i>	Endangered	Yes
Giant garter snake	<i>Thamnophis gigas</i>	Threatened	
Giant kangaroo rat	<i>Dipodomys ingens</i>	Endangered	
Greene's tuctoria	<i>Tuctoria greenei</i>	Endangered	
Hairy Orcutt grass	<i>Orcuttia pilosa</i>	Endangered	
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	Endangered	
Hoover's spurge	<i>Chamaesyce hooveri</i>	Threatened	
Hoover's woolly-star	<i>Eriastrum hooveri</i>	Threatened	
Keck's checker-mallow	<i>Sidalcea keckii</i>	Endangered	
Kern mallow	<i>Eremalche kernensis</i>	Endangered	
Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	Endangered	Yes
Layne's butterweed	<i>Senecio layneae</i>	Threatened	
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	Endangered	

Interim Biological Opinion, February 27, 2002

Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation

Metcalf Canyon jewelflower	<i>Streptanthus albidus ssp. albidus</i>	Endangered	
Mountain plover	<i>Charadrius montanus</i>	Proposed Threatened	
Northern spotted owl	<i>Strix occidentalis caurina</i>	Threatened	Yes
Palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	Endangered	
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	Endangered	
Pine Hill flannelbush	<i>Fremontodendron californicum ssp. decumbens</i>	Endangered	
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	Endangered	
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	Endangered	
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	Threatened	
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	Endangered	
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Endangered	
San Joaquin Valley Orcutt grass	<i>Orcuttia inaequalis</i>	Threatened	
San Joaquin wooly-threads	<i>Monolopia congdonii</i>	Endangered	
Santa Clara Valley dudleya	<i>Dudleya setchellii</i>	Endangered	
Slender Orcutt grass	<i>Orcuttia tenuis</i>	Threatened	
Stebbins' morning-glory	<i>Calystegia stebbinsii</i>	Endangered	
Riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	Endangered	
Riparian woodrat	<i>Neotoma fuscipes riparia</i>	Endangered	
Tiburon paintbrush	<i>Castilleja affinis ssp. neglecta</i>	Endangered	
Tipton kangaroo rat	<i>Dipodomys nitratooides nitratooides</i>	Endangered	
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Threatened	Yes
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	Threatened	
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	Endangered	

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Table 1B: Species removed from consideration in this amendment due to de-listing or change in action area.			
Common Name	Scientific Name	Federal Status	Critical Habitat
Aleutian Canada goose	<i>Branta canadensis leucopareia</i>	De-listed	
Bakersfield cactus	<i>Opuntia basilaris treleasei</i>	Endangered	
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Yes

Changes in this list of species since 2000 are primarily due to the addition of Santa Clara Valley Water District to, and the removal of the Friant Division contractors from, the action area. Critical habitat of the threatened marbled murrelet (*Brachyramphus marmoratus*) also occurs within the service area of the Santa Clara Valley WD; however, we find the action is not likely to adversely affect the murrelet or its critical habitat, because only a few acres occur, in extreme western Santa Clara County, and these only on State lands. In 2000, the Service found the interim contracts not likely to adversely affect Alameda whipsnake, bald eagle, California red-legged frog, and California condor. This amendment alters that finding to *may affect* for Alameda whipsnake and California red-legged frog, again due to the change in action area. Both the whipsnake and the frog have had critical habitat designated since the 2000 Interim opinion.

Federally listed salmonids and their critical habitat occur within or downstream of Interim contract service areas. These species are under the jurisdiction of the National Marine Fisheries Service.

The following actions related to the proposed action are not covered by this opinion and may require separate section 7 authorization:

- Mercy Springs partial assignment delivery to Pajaro Valley Water Management District;
- Any future assignments involving Interim or Cross Valley Canal Unit contractors;
- Transfers involving Interim or Cross Valley Canal Unit contractors;
- Warren Act contracts for conveyance of non-federal water using federal facilities;
- The Mendota Pool Pumpers Exchange Agreement and other non-Central Valley Project waters that are pumped into the Mendota Pool;
- Inclusions and exclusions to Interim contract service area boundaries;
- Future changes in purpose of use from Ag only to Ag/M&I involving Interim or Cross Valley Canal Unit contractors;
- Changes to the CVP M&I shortage policy;
- Supplementary firm supplies of CVP water;

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- Any increases in deliveries above actual allocations identified by CVP operations criteria in February 2002, including any updates, or above historical maximum contract quantities analyzed in the Interim biological opinion of 2000 (Service File No., 1-1-00-F-0056);
- Changes to the existing Operations Criteria and Plan (OCAP).

Interim CVP water contract renewals are consistent with the tiered implementation of the CVPIA, as described in the biological opinion on Implementation of the CVPIA (CVPIA opinion, Service File No., 1-1-98-F-0124). It is the Service's understanding that site specific effects of water deliveries to the 34 Interim contracts and 8 Cross Valley Canal Unit water service contracts will ultimately be in section 7 consultations for long-term contract renewals with the Service and the National Marine Fisheries Service.

This biological opinion is based on information provided in the December 7, 2001 draft Supplemental Environmental Assessment and Draft Finding of No Significant Impact prepared for CVP Interim Renewal Contracts; the December 14, 2001 Interim Renewal Contract Consultation Supplemental Information; February 2001 biological assessment (USDI-BOR 2001a); a telephone conversation with Reclamation's South Central Area Office on May 22, 2001 and a followup e-mail with a map of the Grassland Bypass Project area; data from Reclamation collected as part of its Delta-Mendota Canal water quality monitoring program including data from the sumps in the Firebaugh Canal Water District which pumped into the Delta Mendota Canal (Firebaugh sumps); telephone conversations with staff of Reclamation's South Central California Area Office on June 7, 2001; the Staff Report of the California Regional Water Quality Control Board, Central Valley Region on the Review of Selenium Concentrations in Wetland Water Supply Channels in the Grassland Watershed, dated May 2000; and other sources of information. A complete administrative record of this consultation is on file in the Service's Sacramento Fish and Wildlife Office.

Conclusion

The Service has concluded, following the effects analysis below, that the proposed action described in this opinion is not likely to jeopardize the species listed in Table 1A, above, or destroy or adversely modify designated critical habitat.

Consultation History

April 5, 2000: Reclamation provides a memo to the Service regarding the status of Coordination with California Department of Pesticide Regulation (CDPR) in a

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joint effort to provide endangered species information to pesticide users consistent with conservation measure 2a. of the 2000 Interim Contract Renewal biological opinion.

December 12, 2000: The Service submits an insufficiency memo to Reclamation regarding initiation of formal consultation for the long term contract renewal of contracts in the Delta Mendota Canal Unit of the CVP. The memo includes a review of status and compliance with the Interim Contract Renewal Biological Opinion of 2000.

January 30, 2001: Request from Reclamation to the Service initiating formal consultation for interim CVP water service contracts for the period of February 2001 to February 2002.

February 5, 2001: Reclamation provides to the Service a copy of the Draft Supplemental Environmental Assessment for the Renewal of Interim Water Service Contracts through February 28, 2002, Central Valley Project, California, and the draft Finding of No Significant Impact dated February 2, 2001.

February 28, 2001: Reclamation seeks concurrence (via memo) of the Service that the partial assignment of the Mercy Springs CVP contract will not adversely affect any listed species under the jurisdiction of the Service.

February 28, 2001: The Service extends for 1-year until February 28, 2002, the 2000 Interim Renewal Contract biological opinion and concurs with Reclamation's conclusion that the delivery of the partial assignment of CVP contract water from Mercy Springs Water District to the Santa Clara Valley Water District and Westlands Water District (Mercy Springs partial assignment) for use of up to 6,260 acre-feet of CVP water for 1 year from March 1, 2001 to February 28, 2002, is not likely to adversely affect federally listed species.

June 19, 2001: The Service submits a memo to Reclamation regarding concerns over exceedences of selenium levels in wetland water supply channels in the Grasslands Area, and how actions that Reclamation undertakes may influence these exceedences. The memo asked Reclamation to determine if reinitiation of the Interim contract was warranted, and further asked Reclamation take steps to correct these selenium issues before initiating consultation with the Service on long-term contract renewal for the Delta Mendota Canal Unit, or an additional interim renewal of the contract.

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June 27, 2001: Letters to the Service from the Board of Supervisors, County of Santa Clara and from Board of Directors, Santa Clara Valley Water District which includes commitments on the part of Santa Clara County to 1) prepare a multi-species HCP/NCCP with the goal of completing a draft HCP/NCCP within 3 years and a final HCP/NCCP and incidental take permits within 5 years; and, 2) establish an interim process that will keep conservation and recovery options open for affected species, and to ensure County compliance with ESA and the California ESA during the period prior to approval of the HCP with regard to the issuance of discretionary permits, where federal jurisdiction applies.

October 19, 2001: Memo from Reclamation advising the Service that Reclamation is developing a proposed action of executing Interim Renewal Contracts for a period of 2 years, from 2002 to 2004.

November 19, 2001: Reclamation submits a memo to the Service requesting initiation of informal consultation with the Service on Interim CVP Water Contract Renewals for the period from March 1, 2002 through February 29, 2004.

December 18, 2001: The Service receives a memo from Reclamation dated December 14, 2001 providing supplemental information for the Interim Renewal Contract consultation.

December 19, 2001: The Service submits a memo to Reclamation requesting additional information and requesting that Reclamation initiate formal consultation on Interim Contract Renewals.

January 17, 2002: The Service submits a memo responding to Reclamation's request to initiate formal consultation, and requesting additional information status of implementation of conservation measures/terms and conditions of the Interim biological opinion of 2000.

January 31, 2002: Reclamation submits a memo to the Service responding to the Service's January 17, 2002 for additional information on Interim CVP Contract Renewals.

February 7, 2002: Reclamation and the Service meet to discuss conservation measures proposed by the Service to be added to the project description of the Interim biological opinion.

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February 20, 2002: Reclamation provides a written response to the Service regarding the Service's proposed conservation measures to be added to the project description of the biological opinion of Interim Renewal Contracts.

BIOLOGICAL OPINION

Background

The Service previously consulted with Reclamation on CVP Interim contracts in 1995 (file 1-1-95-F-0039), 1998 (file 1-1-98-I-0383), 2000 (file 1-1-00-F-0056) and 2001 (file 1-1-01-I-1211). The November 21, 2000 opinion on CVPIA implementation (file 1-1-98-F-0124) serves as a programmatic document under which other subsequent CVP consultations are tiered. As described in the 1995 and 2000 Interim opinions, Reclamation agreed to implement mitigation measures including development and implementation of a short-term conservation program for the Interim renewal contract service areas (Conservation Measures). The proposed action included a commitment to reinitiate this consultation to develop and implement a long-term program to address the overall effects of the continued operation of the CVP on listed, proposed, and candidate species and a short-term program to minimize the adverse effects on these species in any areas affected by CVP water deliveries other than those to the Interim renewal contract service areas addressed here and those addressed in the Friant consultation.

The short-term program to minimize adverse effects of continued water delivery to the Interim contract water districts includes the following measures:

- 1(a) Notify districts regarding Endangered Species Act requirements;
- 1(b) Develop information on distribution and habitat of listed, proposed and candidate species;
- 1(c) Map and distribute information developed in 1(b) above;
- 1(d) Monitor land use changes and ongoing activities to ensure project water is not used in a manner that adversely affects listed, proposed or candidate species.
Coordinate with the Service on any activities adversely affecting these sensitive species.
- 2(a) Work with the Service, California Department of Pesticide Regulation and others to develop guidelines and information assessing the effects of pesticides on listed, proposed and candidate species.

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- 2(b) Develop and distribute guidance on construction and maintenance activities.
- 2(c) Amend criteria for water conservation plans.
- 3(a) Identify lands critical to listed and proposed species.
- 3(b) Identify land and water use activities critically impacting listed and proposed species.
- 3(c) Develop and implement critical need plan.
- 4 Develop a long term program to address overall effects of the Central Valley Project and Implementation of the Central Valley Improvement Act.

Implementation Status and Needs of Interim Opinion Conservation Measures to Minimize Adverse Effects

The following text provides the Service's assessment of the status of implementation (Status) of certain of the Conservation Measures identified in the Interim biological opinion and identifies what portions of these measures have yet to be completed (Needs). Timelines for completion of Needs are displayed in bold text.

1a. Notify Districts regarding ESA requirements of the Interim opinion.

Status: Complete. Within the first year of the issuance of the Interim opinion of 1995, Reclamation completed the following: included language in Interim contracts requiring compliance with applicable biological opinions; sent a copy of the Interim opinion to all 65 Interim contractors; held workshops in Folsom, Kingsburg, Tracy, and Willows to explain the compliance requirements of the ESA.

In February 2000 Interim contract renewal biological opinion, the Service and Reclamation believed that additional communication is needed with Interim and Friant contractors identifying their obligation to comply with the ESA. As a result, the Interim Opinion of 2000 included the following commitment: *Reclamation and the Service will develop jointly a letter to be distributed **within 2 months of this opinion** to all Interim and Friant contractors and subcontractors describing their requirements to comply with the ESA.* This notice to the contractors was sent week of July 3, 2000.

Needs: No further action is required for this commitment at this time.

1b. Synthesize existing and new information on distribution and potential habitat of federally listed, proposed, and candidate species within the Districts.

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Status: In progress. See 1c below. Reclamation and the Service have established cooperative Geographic Information System team to work on the Central Valley Habitat Monitoring Workplan.

Needs: This task is currently ongoing (see 1c below).

1c. Map (hard copy and digitized) habitat and potential distribution of listed, proposed and candidate species, and provide information to the Districts, the Service, and the California Department of Fish and Game.

Status: Progress has recently been made on this measure. Reclamation and the Service have established cooperative Geographic Information System team to work on the Central Valley Habitat Monitoring Workplan. Reclamation in coordination with the Service is mapping habitat from 1993 and 2000 acquired satellite imagery. Currently, Reclamation and the Service are working to develop a prioritized action plan to complete this mapping effort.

Needs: Data on recent habitat extend, location, spatial arrangement, barriers, and trends is needed for consultations and recovery efforts. To this end, Reclamation will provide to the Service the best data available from the Central Valley Habitat Monitoring Program (CVHMP) to identify remaining natural habitats within the contract service areas prior to initiation of consultation on more long-term contract renewals, or on another interim contract renewal, whichever comes first. These data will be from the 1993 and 2000 CVHMP.

1d. Monitor land use changes and ongoing activities in the Districts to ensure that project water is not used in a manner that adversely affects listed, proposed, and candidate species.

Status: To date we are not aware of progress on this measure. However, the mapping efforts which are currently underway (see 1c above) will assist the ability to monitor land use changes.

Needs: See 1c above.

2a. See Terms and Conditions of 2000 Interim Biological Opinion, item I.A., below.

2b. Reclamation, working with the Service, will develop and distribute to the Districts and landowners guidance on construction and maintenance activities that are most

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beneficial to listed, proposed, and candidate species. Complete within 1 year of contract renewal.

Status: Reclamation has written 3 CVP-wide documents that constitute an O&M Plan:

- Operation and Management Plan: an Overview;
- Operations and Management Plan: Field Manual;
- Operations and Maintenance Plan: Sensitive, Threatened, and Endangered Species.

Ongoing progress has been made on this commitment. A roughdraft CCAO Field Operations Manual was submitted to the FWS for review. A draft Operations and Management manual was completed by the SCCAO and distributed to contractors. NCAO is just starting to draft their manual patterned after the SCCAO and CCAO manuals.

Needs: Implementation of this measure is progressing. Reclamation has committed to complete and distribute O&M manuals to all CVP contractors prior to long term contract renewal initiation or on or before another Interim contract renewal period (e.g., before March 1, 2004), whichever comes first.

2c. Reclamation will review water conservation plans for the Districts prior to implementation to ensure they do not adversely affect listed, proposed or candidate species.

Status: On July 7, 2000, Reclamation provided the Service with the following water conservation plan information.

Needs: Regarding implementation of water conservation plans in the future, Reclamation, through informal consultation with the Service, will determine if water conservation plans affect listed species prior to finalizing these plans.

2d. Reclamation will amend the criteria for water conservation plans to ensure consistency with the ESA.

Status: The criteria for water conservation plans is amended every 3 years, consistent with CVPIA. The criteria was last amended in 1999, and the next revision is expected in 2002.

Needs: Reclamation has committed to informally consult with the Service by forming an interagency team that will ensure that the 2002 water conservation criteria is in

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compliance with the ESA. Reclamation has committed to send a memo to the Service and NMFS requesting their participation on the team.

3a. Reclamation will identify lands that are critical to the continued survival of listed species and proposed species.

Status: Reclamation and the Service developed the CVP Conservation Program as one of the means to offset the effects of the CVP on endangered species. The Friant and Interim biological opinions specified that Reclamation and the Service would identify critical needs of the species. With time, it became clear the list of conservation actions to be done changed each year with new information. At the time of the Interim Water Contract Renewal consultation in 1995, Reclamation and the Service agreed to annually reexamine the list of actions to be done and identify which ones had the highest priority. This would ensure that important problems were not missed and that money would be used effectively to solve problems. The CVP Conservation Program Framework Document was written to confirm the strategy. All of the species in the area affected by the CVP were included because spending decisions would be done most cost-effectively during the prioritization process. Participation by both agencies would ensure that the interests of Reclamation and the Service would be considered in all decision-making.

The CVP Conservation Program, along with other initiatives [e.g., (b)(1) “other” Program, acquisition of level 2 and level 4 Refuge Water Supplies, and the Wetland Development Program], are intended to ensure that the existing operation of the CVP and implementation of the CVPIA will not jeopardize listed or proposed species or adversely affect designated or proposed critical habitat.

Needs: Reclamation and the Service commit to continue updating and implementing critical needs for listed species survival for all listed species impacted by the CVP. Reclamation and the Service will pursue adequate funding and partners to implement critical needs actions identified through this process. Reclamation is also making a continued commitment to involve other agencies (Federal, State, and local entities) in efforts to cooperatively address the needs of listed species. This will result in cost savings to all involved, will avoid duplication of effort, and will result in an improved cumulative benefit to species.

3b. Reclamation, working with the Service, will implement a critical needs plan. Identify land and water use activities critically impacting listed and proposed species.

Status: Critical needs plans were drafted for Friant and Interim biological opinions. The Recovery Plan for Upland Species of the San Joaquin Valley, California was partially

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funded by the CVPIA (b)(1) “other” Program and Reclamation to help identify recovery needs for listed species in the San Joaquin Valley. Critical needs planning associated with species on Friant Division lands has made significant progress. Reclamation’s south-central California Area Office continues to provide funding to collect data on critical needs species to meet obligations under the Friant biological opinion.

Needs: Reclamation, as deemed necessary by the Service, will expand their critical needs efforts to ensure the existing operation of the CVP (including Interim contractors) will not jeopardize listed and proposed species or adversely affect designated or proposed critical habitat. Refer to needs identified in 3a above.

4. Reclamation, working with the Service, will develop a long-term program to the address overall effect of the CVP and implementation of the CVPIA.

Status: Reclamation has been undertaking actions that have contributed to the survival of listed species throughout the Central Valley. Reclamation has also been implementing measures to prevent/minimize take of species through operations and maintenance actions.

The Service, with assistance from Reclamation, completed a final biological opinion on the Implementation of the Central Valley Project Improvement Act and Continued Operation and Maintenance of the on November 21, 2000 (Service File No., 1-1-98-F-0124). Reclamation’s annual budgets have included approximately \$2.5 million annually since 1998 for meeting listed species critical needs.

Needs: Reclamation and the Service will pursue adequate funding and partners to implement any requirements included in the final biological opinion on the Central Valley Project Operation and Maintenance and implementation of the Central Valley Project Improvement Act.

Future CVP Actions

In addition to the conservation measure referenced above the Interim opinion of 2000 included commitments related to future Reclamation actions. The status and needs associated with implementation of these commitments are presented below.

Changes in purpose of use of contracts: Reclamation will consult on all future changes in purpose of use of in water contracts from Agriculture only to Agriculture/M&I purposes.

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Status: The Service is unaware of any changes of purpose of use executed since the 2000 Interim opinion.

Needs: Reclamation will provide the Service with an analysis of how future changes in purpose of use will affect shortages to districts, and how these changes in allocations will affect CVP-wide water supplies, including water for fish and wildlife, under drought conditions. No changes in purpose of use will be executed unless it can be shown that such changes will not reduce water supplies benefitting listed species authorized by the CVPIA below those predicted in the CVPIA PEIS.

Future Assignments involving Interim contractors: For assignments of Interim water that may affect listed species, Reclamation will initiate informal consultation with the Service. For those contracts or actions with direct or indirect effects that are likely to adversely affect listed species, or result in take, Reclamation will consult formally with the Service. Reclamation, through informal consultation with the Service, will determine if an action will not affect listed species prior to signing of the FONSI or ROD.

Status: The Service is unaware of any new contract assignments being executed since the 2000 Interim Opinion. Reclamation currently is informally consulting with the Service on two proposed assignments: Banta Carbona to City of Tracy and Mercy Springs to Westlands Water District.

Needs: Reclamation will continue implementation of this measure.

Future Inclusions, Annexations and Exclusions to contract service area boundaries: For inclusions or annexations involving the Interim contractors in this opinion that may affect listed species, Reclamation will initiate informal consultation with the Service. For those inclusions with direct or indirect effects that are likely to adversely affect listed species, or result in take, Reclamation will consult formally with the Service. Reclamation, through informal consultation with the Service, will determine if the inclusions or annexations will not affect listed species prior to signing of the FONSI or ROD.

Status: The information package and status tables Reclamation provided for this consultation included documentation of inclusions (annexations) in the Sacramento Valley subsequent to the 2000 Interim biological opinion (e.g., 3930.03 acres annexed to Clear Creek Community Services District and 161.98 acres in Bella Vista Water District). These annexations were completed without informal consultation with the Service. Reclamation has agreed to review these inclusions with us after the fact.

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Needs: Reclamation, through informal consultation with the Service, will determine if their inclusions or annexations affect listed species prior to finalizing the action or signing of the FONSI or ROD. Any listed species effects of annexations in the Redding area that were done since the CVPIA opinion without consultation with the Service should be addressed by Reclamation.

Transfers involving Interim contractors

Reclamation will apply the following criteria to all transfers and exchanges (from the date of this opinion up to long-term contract renewal) involving Interim or Friant Division contractors that have not already undergone section 7 consultation:

- 1. Transfers and exchanges will be executed for **one year only** for any district that does not have an established listed-species baseline as described in the biological opinion on operations and maintenance of the Central Valley Project and implementation of the Central Valley Project Improvement Act of 1992;*
- 2. Transferred or exchanged water will be delivered and applied only to areas that were in cultivation from October 15, 1991 (the date of the Friant biological opinion), until one of the following occur and there is no net loss of potential listed-species habitat as a **direct or indirect** result of the transfer:*
 - a. consultation on the effect of putting the area into cultivation has been completed, or,*
 - b. there is an HCP in place that addresses impacts to the area receiving the water, or,*
 - c. the CVP Conservation Program has a line-item, specific increase in funding to compensate fully for the transfer and is in place prior to the transfer.*
- 3. All other non-historic CVP transfers and exchanges that do not meet the above criteria will require separate section 7 or section 10 authorization.*

Status: Reclamation has consulted on the following transfers since Interim contract renewal, these transfers were renewed for 1-year until listed species baseline could be established: Exchange Contractors Water Authority, Service File No., 1-1-I-00-1288; and Historic Inter-District CVP Transfers, Service File Nos., 1-1-I-00-1118 and 1-1-00-I-1024, Friant Historic and Warren Act, Service File No., 1-1-02-I-0102), and South of Delta Historic, Warren Act, and San Joaquin Exchange Contractors, Service File No., 1-1-02-I-0903.

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The effects on delta smelt of transfers involving CVP water delivered through the Delta Mendota Canal or San Luis Canal, wheeled through the CVP or SWP, and totaling up to 250,000 acre-feet annually were addressed in the 1995 OCAP biological opinion.

Needs: For Warren Act, water wheeling, Surplus Flood Flow water contracts, and water transfers, Reclamation and the Service will establish a tracking program that assures compliance with the ESA.

The effects of additional “transfers” (i.e., exceeding a cumulative 250,000 acre-feet annually) on delta smelt, as well as the indirect effects of all transfers on terrestrial species, have not yet been addressed and will undergo consultation as may be required when such transfers are proposed. Because of the high number of transfers that occur annually, the Service and Reclamation are collaborating on streamlining the consultation process to allow for expedited consultation on water transfers.

Terms and Conditions from 2000 Interim Opinion

In addition to the conservation measures referenced above, the Interim opinion of 2000 included non-discretionary terms and conditions which Reclamation must comply with in order to be exempt from the prohibitions of section 9 of ESA. The status and needs associated with the implementation of these terms and conditions are presented below.

*I.A. Reclamation, with assistance from the Service, will work with the California Department of Pesticide Regulation (CDPR) to develop guidelines that provide an update that on work that has been completed on this measure. Reclamation will provide to the Service **within 1 month** from the issuance of this opinion a status report related to this measure. In addition, Reclamation, working with the Service, will provide information to CDPR generated from mapping efforts described in Conservation Measure 1(c) of the Project Description as information is generated and that new information will be provided to CDPR to be posted on their web site for listed species information. Should CDPR not post this information Reclamation will post this information on their own web site.*

A related conservation measure, numbered 2a, was provided in the project description of the 2000 Interim biological opinion.

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Status: Reclamation provided a memo to the Service regarding the status of Coordination with California Department of Pesticide Regulation (CDPR) in a joint effort to provide endangered species information to pesticide users.

Needs: Reclamation, working with the Service, will provide information to CDPR generated from 1c above, and from other sources, as appropriate, as information is generated and that new information will be provided to CDPR for posting on their web site for listed species information.

II. *Reclamation will identify land and water use techniques or measures within CVP service areas which are critically impacting listed and proposed species or their habitats.*

- A. ***Within 60 days of this opinion*** Reclamation, in consultation with the Service, will prepare a study plan to identify the sources of selenium contamination in the Grasslands, San Joaquin River, and south Delta estuary. The study plan to be developed will identify and quantify all known sources of selenium that contribute to contamination of water supplies to the Federal, State and private wetlands of the Grasslands area, the San Joaquin River, and southern Sacramento-San Joaquin Delta. Included in such a plan should be an analysis identifying and quantifying loads from known sources such as the Delta-Mendota canal pumping project, the Mendota Pool group groundwater pumping project, and discharges into the San Luis Drain from Panoche Creek flood flows. Further, the plan should provide information regarding ongoing efforts to reduce selenium in the Grasslands Area, other studies being conducted related to this venture, and any applicable reports from other investigations that have been completed (e.g, California Central Valley Regional Water Quality Control Board investigations).

Status: In status report tables that Reclamation provided to the Service on July 7, 2000, October 18, 2000, and December 14, 2001, Reclamation stated that this requirement is already being handled through the existing Grassland Bypass Project monitoring program. Although some monitoring is ongoing in the Grasslands, there is no monitoring being conducted, as part of the Grasslands Bypass Project, for selenium contamination in the Mendota Pool, the San Joaquin River downstream of Crows Landing, or the Delta, nor does the Grassland Bypass Project monitoring seek to identify and quantify all sources of selenium contaminant loading as described. To date, no study plan has been provided to the Service fully addressing this term and condition of the Interim Biological Opinion.

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The Grassland Bypass Project biological opinion of September 27, 2001 (Service File No., 1-1-01-F-0153) included non-discretionary terms and conditions to seek funding to complete studies that would 1) track selenium loading, including loads from the Grassland Drainage Area into the San Joaquin River, the Sacramento-San Joaquin Delta, and the North Bay (e.g., Suisun Bay); 2) model and/or monitor effects of Delta hydrodynamics (e.g., including the effects of State and Federal pumps, South Delta Barriers, supplemental flows for anadromous fish and listed species) on the fate of selenium from the San Joaquin River into the Delta and North Bay estuary during differing water year types; and 3) Identify and track the sources of selenium contamination in Grassland wetland supply channels source water responsible for exceedences of the Federal/State 2 $\mu\text{g/L}$ standard for wetland water supplies in the Grasslands area.

Since March 2000, the wetland water supply objective of 2 ppb selenium (monthly mean) was exceeded two months in Camp 13, three months in Agatha Canal, nine months in the San Luis Canal, and two months in the Santa Fe Canal. All of these canals convey water supplies from the Delta Mendota Canal to Grassland wetlands. A water concentration of 2 ppb selenium was exceeded in the DMC 1/2 mile downstream of the Firebaugh sumps in 7 of 24 samples from 1999 through 2001. Data from the DMC upstream (Farm Bridge) and downstream (Washoe Ave) in 1999-2001 show that selenium concentrations in the Delta Mendota Canal increased downstream of the Firebaugh sumps in 30 of 36 samples. The average increase in concentration was 0.94 ppb. Seasonally, the exceedances in 1999-2001 occurred in the winter and spring (December to April).

Needs: The Service believes selenium contamination in the Grasslands area and downstream is of serious concern for the federally threatened giant garter snake and Sacramento splittail. We believe substantial further progress remains to be made in addressing this issue and the relevant terms and conditions. Further, the selenium accounting information requested by the Service is needed to complete the DMC unit long term contract biological opinion as stated in a memo to Reclamation dated December 12, 2000 (file 1-1-01-I-0417). The DMC long-term consultation was initiated, but requested by Reclamation to be placed on hold, or at a lower priority than the present consultation.

- B. *Reclamation will develop and implement a Service approved monitoring program **within 6 months of this opinion** to assess the effects of selenium loading within the San Joaquin River on aquatic listed species or their surrogates (including but not necessarily limited to Sacramento splittail, Delta smelt, and giant garter snake) using the lower San Joaquin River and*

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*southern Sacramento-San Joaquin Delta. Such a program should determine tissue concentration for these species (or appropriate surrogates) collected from these areas. **Initial data from this program will be made available to the Service to be used in the effects analyses of long-term contract renewal on aquatic listed species and used to minimize take.***

Status: Reclamation has partially complied with this term and condition. Reclamation provided the Service with \$15,000 for analytical work on fourteen Sacramento splittail specimens that were collected at the State and Federal pumps in FY 2000. The splittail were analyzed for selenium, boron, and other contaminants. Also see Status write-up under 2.A. above.

Needs: In addition to the Needs under 2.A. it is unknown at this time, how much, selenium from the CVP service areas and the San Joaquin River is reaching the Delta, or how these discharges may be affecting listed species. As a result, Reclamation, together with the Service and other appropriate agencies, will either seek from CALFED direct funding or will prepare a proposal through the CALFED proposal solicitation process to develop a selenium budget, to determine the sources, fate and impact of all selenium discharges in the San Joaquin River including those from the proposed action to presently impaired downstream water bodies used by listed species (e.g., giant garter snake, delta smelt and Sacramento splittail) including Mud Slough (North), the San Joaquin River, and the North Bay (e.g., Suisun Bay) and Sacramento-San Joaquin Delta.

- C. *If selenium concentration in refuge water supplies exceeds the 2ug/l monthly mean standard for wetland water supplies in the Grasslands, and this contamination is a result either directly or indirectly from Reclamation actions, Reclamation will identify and implement corrective actions and initiate separate formal consultation with the Service. **Reclamation will provide quarterly reports to the Service on locations of monitoring and monitoring results.** These reports can be in conjunction with the monitoring and reporting required under the January 20, 1998, Interim Water Contract Renewal Opinion amendment (Service file #1-1-98-I-383).*

Status: Reclamation noted in their Quarterly Status Report Table provided to the Service on July 7, 2000, that this term and condition was being handled with the existing monitoring program and existing quarterly reports. However, the Service believes that Reclamation was not in compliance with this term and conditions on several occasions. The Service contacted Reclamation in two separate memos regarding compliance with this term and condition (December 12, 2000, File, 1-1-1-01-I-0417, and, June 19, 2001, File). In addition, the Service contacted Reclamation on January 17, 2002 requesting

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that Reclamation provide conservation measure(s) to be incorporated into the project description of this consultation relative to the operation and maintenance of the sumps in the Firebaugh Canal Water District that will reduce or eliminate this selenium loading into wetland water supply source water.

Since March 2000, the wetland water supply objective of 2 ppb (monthly mean) was exceeded two months in Camp 13, three months in Agatha Canal, nine months in the San Luis Canal, and two months in the Santa Fe Canal. All of these canals convey water supplies from the Delta Mendota Canal to Grassland wetlands. Reclamation has failed to identify the problem and implement corrective actions, nor has the agency initiated separate formal consultation with the Service as required by the term and condition.

Needs: Reclamation needs to immediately reduce selenium contamination in the area and effectively coordinate with the Service's SFWO Endangered Species Division on this term and condition. Specifically, Reclamation should take necessary steps to correct selenium contamination issues in wetland water supplies in the Grasslands. Information on what measures Reclamation is taking, and their effectiveness, is needed for the DMC long-term contract renewal consultation and the O&M consultation.

III. *Identify, analyze and compensate for past effects since 1995 for Interim contractors.*

B. *Reclamation will identify and analyze the impacts of changes to contract service area boundaries since 1995 for Interim contractors and provide this information and the associated GIS data layers to the Service **prior to initiation of consultation for long-term contract renewal.** Reclamation will fully compensate for any impacts associated with past changes to contract service area boundaries for Interim contracts **prior to long-term contract renewal or an additional interim period.***

Status: Reclamation provided the Service with draft maps in May 2000 showing changes in interim contract service area boundaries (from year 1995 to year 2000) and acreage changes by district. Further information and analysis is expected to be provided in long-term contract renewal BA's.

Needs: Reclamation and the Applicants, as appropriate, should take immediate steps to identify and fully compensate for impacts to listed species resulting from past changes to contract service area boundaries for Interim contracts in compliance with this term and condition.

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- C. *Reclamation will identify and analyze the impacts of changes in purpose of use since 1991 for Friant contractors and 1995 for Interim contractors and provide this information and analysis to the Service **prior to initiation of consultation for long-term contract renewal or reinitiation on OCAP**. Specifically, Reclamation will provide to the Service **prior to long-term contract renewal or an additional interim period** an analysis on how changes in purpose of use will affect shortages to districts, and how these changes in allocations will affect CVP-wide water supplies under drought conditions.*

Status: In their Status Report Tables provided to the Service on July 7, 2000, and December 14, 2001, Reclamation stated that the 1995 Interim contract renewal consultation covered “change of purpose of use from Ag to M&I.” This was not the case. Sixteen of Interim contracts covered under the interim biological opinion of 1995 were changed from Ag only to Ag/M&I Contracts subsequent to the completion of that opinion. The changes of purpose of use were not covered in the Interim biological opinions of 1995 or 2000. The Service has not consulted on the changes to purpose of use in these contracts, and therefore any take associated with these actions is not covered. The 1997 draft CVPIA Administrative Proposal on M&I shortage policy stipulates that the Ag shortage provisions are still applied if contracted purpose of use was changed to include M&I subsequent to 1994. Reclamation proposed changes to the M&I shortage policy on September 11, 2001 (66 FR 54780). The Service provided comments to Reclamation on these proposed changes to the M&I shortage policy on December 5, 2001 (Service File No., 1-1-02-I-0318) and requested that Reclamation initiate formal consultation on this policy.

Needs: Reclamation needs to identify and analyze the impacts to listed species and critical habitat of changes in purpose of use since 1995 for Interim contracts and the revised M&I shortage policy, and to provide this information and analysis to the Service prior to initiation of consultation for long-term contract renewal or reinitiation of OCAP. Specifically, Reclamation should provide a Biological Assessment for the water shortage policy and initiate section 7 consultation to address the effects of the shortage policy on federally listed species and environmental commitments described in the Friant, Interim, CVPIA PEIS, OCAP and CalFed biological opinions.

- D. *Reclamation will identify and analyze the impacts of all water assignments executed since 1995 for Interim contractors and provide this information to the Service **prior to initiation of consultation for long-term contract renewal**. Reclamation will fully compensate for any impacts associated with*

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past water assignments of Interim and Friant Division water allocations prior to long-term contract renewal or an additional interim period.

Status: In Status Report Tables provided to the Service on July 7, 2000, October 18, 2000, and December 14, 2001, Reclamation noted that information gathering and data analysis for this term and condition is ongoing. Reclamation further noted that information will be provided in BA's for Long-Term Contract Renewal.

Needs: Reclamation will identify and analyze in BA's for long-term contract renewals the impacts of all water assignments executed since 1995 for Interim contractors and provide this information to the Service. Reclamation and the Applicants, as appropriate, should compensate for any listed species impacts associated with past water assignments of Interim water allocations.

IV.A-F. *Consult with the Service on future actions including changes in purpose of use of contracts, transfers involving Interim or Friant Division contractors, assignments, and inclusions, annexations and exclusions to contract service area boundaries.*

Status and Needs: See earlier discussion under **Future Impacts**.

V. *Develop and implement a program to compensate for losses of listed species habitat that occur as a result of delivery of Central Valley Project water to the Interim and Friant Division contract service areas.*

A. *Reclamation and the Interim and Friant Division contractors will establish a contingency plan that would develop and implement a process to identify impacts and then address those impacts to listed species or their habitats within the Interim and Friant Division's contract service area that occur as a result delivering CVP water to the contractors.*

And

B. *Reclamation will ensure implementation of the contingency plan to address impacts to species or their habitats within the Interim and Friant Division's contract service area that occur without a Service incidental take authorization.*

And

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- C. *The contingency plan for impacts to listed species or their habitat will be reviewed in a Section 7 consultation with the Service and will incorporate compensation for temporal and other habitat losses. Losses of listed species habitat within the Interim and Friant contract service areas will be compensated at ratios consistent with the recovery needs for those listed species.*

Status: In the Status Report Tables received by the Service on July 7, 2000, October 19, 2000, and December 14, 2001, Reclamation noted that the contingency plan to address impacts to species or their habitats within the Interim and Friant Division's contract service area was "in development" or "pending". The Service is unaware of the specific progress that has been made on these term and conditions for Interim contractors, although a draft document for the Friant Division has been prepared.

Needs: Reclamation and the Applicants, in coordination with the Service should prepare a contingency plan to address impacts to listed species or their habitats within the Interim contract service area. Reclamation and the Applicants should finalize and implement a contingency procedure to compensate for losses of endangered species habitat within the CVP place of use since 1993 before initiating consultation on long-term contract renewals or on another Interim contract renewal.

Project Description

The purpose of the proposed action is to execute 42 interim contracts listed in Appendix A for up to two years between March 1, 2002 through February 29, 2004. The interim contracts fall within the following divisions of the CVP: American River (n=3), Cross Valley Canal Unit (n=8), Delta Mendota Canal (n=14) which includes a partial contract assignment from Mercy Springs that will be shared by Westlands Water District in the San Luis Unit and Santa Clara Valley Water District in the San Felipe Division, Sacramento River (n=14), Shasta (n=1), and Trinity divisions (n=2). Differences between the 2000 Interim contractors and the 2002 Interim contractors are as follows. Covered in 2000 but not included in 2002 are Friant Division, Buchanan and Hidden Unit contractors that have since completed consultation on long-term water contracts (Service file 1-1-01-F-0027). Included in 2002 but not in 2000 is the delivery of water from the partial assignment of Mercy Springs Water District in the Delta Mendota Canal Division to Westlands WD, and Santa Clara Valley WD. The proposed action does not include construction of a conveyance structure nor delivery of the Mercy Springs partial assignment to Pajaro Valley Water Management District (Pajaro VWMD). The construction of a conveyance structure which would allow delivery of water from the Mercy Springs WD assignment to Pajaro VWMD is not expected to be completed during the 2-years of this project (pers. comm. R. Eckart, Reclamation, February 19, 2002). Reclamation will consult with the Service on the effects of the construction of a conveyance structure as well as the delivery of CVP water to Pajaro VWMD. The proposed action also includes the execution of contract No. 14-06-200-7312-IR5 with El Dorado Irrigation District for Lake Hills Estates. However, we are not including deliveries to Lake Hills Estates in the analysis or incidental take authorization of this opinion. It is the Service's understanding that this contract will not be delivered until after long term contracts are executed (Michny in litt., February 20, 2002).

Execution of interim contracts is needed to continue delivery of CVP water to interim contractors until the long-term contracts can be executed. The period of renewal for each contract would be for one year, as permitted under subsection 3404(c)(1) of the CVPIA. The current contract provisions are those that are included in the existing interim renewal contracts. If long-term contracts are not executed by March 1, 2003, a one year extension of these interim contracts (March 1, 2003 through February 29, 2004) may be executed.

A notice was sent to Interim contractors the week of July 3, 2000 describing requirements to comply with the ESA. In addition, Article 3(b) of the Interim contract includes mutual and dependent covenants mutually agreed upon by the parties, related to Water to be Made Available and Delivered to the Contractor as follows, "The

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Contractor shall utilize the Project Water made available to it pursuant to this interim renewal contract in accordance with all applicable requirements of any Biological Opinion addressing the execution of this interim renewal contract developed pursuant to Section 7 of the ESA of 1973 as amended, and in accordance with environmental documentation as may be required for specific activities, including conversion of Irrigation Water to M&I Water.”

Water will continue to be delivered to the Interim Water Service Contractors and Cross Valley Unit Contractors in quantities that approximate amounts provided in Appendix A. Reclamation and the Service will coordinate, for ecosystem-level planning purposes relative to water deliveries to CVP contractors. Reclamation will provide information to the Service on annual deliveries each year, prior to or concurrent with informing the water districts provide on their allocation amounts. However, it is understood that biological opinions for OCAP (1-1-94-F-70) and Los Vaqueros (1-1-95-F-117 and 1-1-95-F-134) are in place, and the total amount of these CVP deliveries cannot exceed the total consolidated amount considered in these opinions.

No changes to district boundaries are part of the proposed action, although the proposed action does include two new districts not considered in the Interim opinion of 2000: Westlands WD and Santa Clara VWD. Reclamation, through informal consultation with the Service, will determine if their inclusions or annexations affect listed species prior to finalizing the action or signing of the FONSI or ROD.

No water transfers are part of the proposed action. Appropriate environmental compliance and section 7 consultation will be completed for any request from interim contractors for Reclamation approval of water transfers. Potential impacts arising from future assignments of water are not included in the proposed action. They are separate independent actions and will require their own environmental compliance and section 7 consultation.

Key Assumptions

Because of the complex history as well as the complex present environmental and regulatory context of Interim Water Contract renewals, and because this action is interrelated and interdependent with a number of other Reclamation actions, we have had to make a number of assumptions about likely future events and context of the action. While not exhaustive, the following list of key assumptions has been central to our effects analysis and jeopardy findings. As such, the failing of any key assumption should be considered reason for reinitiating consultation on the 2002-2004 Interim Water Contract renewals. The Service assumes the following:

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- 1) The County of Santa Clara, the City of San Jose, and the Santa Clara Valley WD will carry out HCP commitments set forth in two letters to the Service, dated June 27, 2001 from Tony Estremera, Chair, Board of Directors, Santa Clara Valley Water District, and from James T. Beall, Jr., Chairperson, Santa Clara County Board of Supervisors, including: completion of an HCP/NCCP within 5 years and establishment of an interim process to ensure County and City compliance with the ESA during the period prior to approval of the HCP with regard to the issuance of discretionary permits.
- 2) Reclamation will implement in a timely manner relevant environmental commitments, mitigation and conservation measures, and terms and conditions from other biological opinions, including but not limited to: the 2000 Interim Opinion (February 29, 2000, Service File No., 1-1-00-F-0056), Implementation of the CVPIA and Continued Operation and Maintenance of the CVP (November 21, 2000, Service File No., 1-1-98-F-0124), the Friant Long Term Contract Renewals (Service File No., 1-1-01-F-0027) and the Grassland Bypass Project (Service File No., 1-1-01-0153). Other CVP-related, non-CVPIA (Central Valley Project Improvement Act) actions benefitting fish, wildlife, and associated habitats and related to effects of Interim Contract Renewals will continue, with at least current funding levels, including:
 - the Comprehensive Mapping Program;
 - implementation of the Land Use Monitoring and Reporting Program
 - CVP Conservation Program and B(1)(other) Habitat Restoration Program.
- 3) Reclamation will implement the Project Description in a manner consistent with implementation of any listed species recovery plans, including the 1998 Recovery Plan for Upland Species of the San Joaquin Valley, the 1999 draft Recovery Plan for Giant Garter Snakes, the 1996 Recovery Plan for the Sacramento / San Joaquin Delta Native Fishes, and the 1998 Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area.
- 4) We understand from Reclamation's memorandum of February 20, 2002, that Reclamation will be beginning action to address selenium concerns relative to the Firebaugh sumps. We assume Reclamation
 - will not contribute to exceedences of the 2 ppb selenium standard for surface waters in the Grasslands Bypass Project Area
 - will not discharge any waterborne selenium in concentrations constituting hazardous waste under State law
 - will not impair, through additions to selenium load, the ability of Grasslands Bypass Project participants to meet Basin Plan water quality objectives

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- 5) The EPA is required under the biological opinion for the California Toxics Rule to propose and promulgate a new selenium standard that would apply to all waters of the Grassland Bypass Project area (see the discussion of the California Toxics Rule in the Background section). We assume that all applicable, selenium-related commitments in the California Toxics Rule biological opinion will be met. Accordingly, EPA should propose revised acute and chronic aquatic life criteria for selenium in California by January of 2003, and finalize the criteria no later than July, 2004. We assume that these revisions for selenium water criteria and standards will be adequately protective of Sacramento splittail, giant garter snake, and other listed species. This process will include adoption of any new selenium objectives for selenium into the State of California, Regional Water Quality Control Board (Central Valley Region) Basin Plan and approval by the State Water Resources Control Board and the State Office of Administrative Law.

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Species Accounts

Please refer to the 2000 Interim opinion for species accounts for most of the species in Table 1A. Accounts for species and critical habitat newly included in this amendment follow alphabetically by common name, below.

Alameda Whipsnake

The Alameda whipsnake was federally listed as threatened on December 5, 1997. A detailed account of the taxonomy, ecology, and biology of the whipsnake is presented in the listing (62 **FR** 64306) and critical habitat determinations for this species (65 **FR** 58933). Supplemental information is provided below.

The Alameda whipsnake inhabits the inner coast range in western and central Contra Costa and Alameda counties, and portions of northern Santa Clara County and western San Joaquin County. There are five remaining populations with little or no genetic flow between them: the Tilden-Briones population, the Oakland-Las Trampas population, the Mount Diablo-Black Hills population, the Hayward-Pleasanton Ridge population, and the Sunol-Cedar Mountain population.

The Alameda whipsnake is distinguished from the more common chaparral whipsnake (*M. l. lateralis*) by a sooty black dorsum, by wider yellow-orange stripes that run laterally down each side, the lack of a dark line across the rostral, an uninterrupted light stripe between the rostral and eye, and the virtual absence of spotting on the venter of the head and neck. The first four populations described above are genetically isolated, and considered to be the listed entity. Alameda whipsnakes found in the Sunol-Cedar Mountain population can hybridize freely with the chaparral whipsnake. Whipsnakes found within this population are the listed entity, if they show the diagnostic characteristics of the Alameda whipsnake and they more closely resemble the listed taxon than the entity intermediate between it and other non-listed conspecifics.

The Alameda whipsnake is typically found in northern coastal scrub or chaparral plant communities, and also occurs in adjacent grasslands and woodlands. The whipsnakes appear to prefer open-canopy stands and habitats with woody debris and exposed rock outcrops, and they tend to be found on southeast, south, and southwest facing slopes. Alameda whipsnakes have been found inhabiting northern exposures in open stands of chaparral.

Alameda whipsnake have been shown to have home ranges varying in size from 1.9 to 8.7 hectares (5.0 to 21.5 acres), and there is considerable overlap of home ranges. Some animals have been recorded to have moved over 1.8 kilometers (1 mile) while crisscrossing their home

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range. Alameda whipsnakes have been shown to travel distances greater than 152.5 meters (500 feet) over grassland to exposed rock outcrops.

The Alameda whipsnake is a lizard-eating specialist, but its diet may include other prey, such as rattlesnakes and nesting birds, depending on the whipsnake's size, sex, age, and location. Alameda whipsnakes utilize open canopy stands of scrub habitat containing rock outcrops because these habitats provide areas for basking, cover from predators, and an ample source of prey. The major prey base for the Alameda whipsnake is spiny lizards (*Sceloporus* spp.), such as the western fence lizard, which spend much of their life cycle around rock outcrops.

Alameda whipsnakes breed from March through June, with mating seeming to occur near the hibernacula of the female. The only evidence of Alameda whipsnake egg-laying is within a grassland community that lies adjacent to a chaparral community. Whipsnakes lay clutches during May through July, and the young hatch and emerge in the late-summer to early-fall. Individuals of the genus *Masticophis* have been described as nervous, restless, and seemingly intent on avoiding human contact.

Current threats to Alameda whipsnake habitat are urban development and associated impacts due to increased human population densities, fire suppression and the resulting likelihood of catastrophic wildfires, increased predator pressure, and incompatible grazing practices. The central and western portions of Alameda, Contra Costa, and Santa Clara counties are highly urbanized and continue to be subjected to increased urbanization. Habitat fragmentation from urban development and associated highway and road construction has reduced the amount of habitat available for whipsnake, and has led to isolation of the five populations by preventing or severely reducing movement of individuals between areas of suitable habitat.

The Alameda whipsnake is threatened directly and indirectly by the effects of fire suppression. Encroaching urban development has necessitated the implementation of rigorous fire suppression practices in and around suitable habitat areas for the Alameda whipsnake to protect people and property. East Bay Regional Park District (EBRPD) guidelines state that prescribed burning on EBRPD lands is limited because of the urban-parkland interface and risk of the fire escaping control lines. This is typical for land management agencies, which are unable to conduct prescribed burns due to the prevailing public sentiment. Prescribed burns would serve to decrease flammable fuel loads and maintain suitable habitat conditions for Alameda whipsnake. The direct effect of fire suppression on the whipsnake is an increased risk of catastrophic wildfire. Fire suppression exacerbates the effects of wildfires through the buildup of fuel (underbrush and woody debris), creating conditions for slow-moving, hot fires that completely burn all sources of cover for the Alameda whipsnake. Highest intensity fires occur in the summer and early fall, when accumulated fuel is dry. During this period, hatchling and adult Alameda whipsnakes are aboveground, and populations are likely to sustain the heaviest losses

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from fires.

The main indirect effect of fire suppression is alteration of canopy structure in scrub habitat, which decreases its suitability for whipsnake. Fire suppression allows plant overgrowth, creating a closed canopy that will tend to create relatively cool conditions. Alameda whipsnakes have a high mean active body temperature (33.4 degrees centigrade) and a higher degree of body temperature stability (stenothermy) than has been documented in any other species of snake under natural conditions. Alameda whipsnakes apparently can maintain this high, stable body temperature by using open and partially open and/or low growing shrub communities that provide cover from predators while providing a mosaic of sunny and shady areas between which Alameda whipsnakes can move to regulate their body temperatures. Tall, shaded stands of vegetation, such as poison oak, coyote brush, and other vegetation may not provide the optimum temperature gradient for Alameda whipsnakes. Survey data show that Alameda whipsnakes are less likely to be found where these plant species create a closed canopy. Optimal habitat for the species has an open canopy, while a closed canopy decreases the suitability of habitat for this snake.

In areas where whipsnake habitat has become fragmented, isolated, or otherwise degraded by human activities, increased predatory pressure may become excessive, particularly where non-native species such as Norway rats (*Rattus norvegicus*), red fox (*Vulpes vulpes*), feral pigs (*Sus scrofa*), feral/domestic cats (*Felis domestica*), and dogs (*Canis familiaris*) are introduced. These situations become particularly acute where urban development immediately abuts Alameda whipsnake habitat. The EBRPD is currently facing increasing public pressure to allow private individuals to maintain feral cats on park lands. Although the actual impact of predation under such situations is not known, feral cats are known to prey on reptiles including yellow racers which are also fast moving, diurnal snakes. In general, Alameda whipsnakes will decline in areas that lie adjacent to urban development due to loss of cover habitats in combination with increased native and non-native predators using these areas.

Grazing may have impacted the habitat of the Alameda whipsnake in many areas. Livestock grazing that significantly reduces or eliminates shrub and grass cover can be detrimental to this snake by reducing cover from predators, and possibly reducing prey populations as well. As with many snake species, Alameda whipsnakes avoid such denuded, open areas.

The breeding of closely related individuals can cause genetic problems in small populations, particularly through the expression of deleterious genes (known as inbreeding depression). Individuals and populations possessing deleterious genetic material are less able to adapt to changes in environmental conditions, even relatively minor changes. Further, small populations are vulnerable to the effects of genetic drift (the loss of genetic variability). This phenomenon also reduces the ability of individuals and populations to successfully respond to environmental

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stresses. Overall, these factors influence the survivability of smaller, genetically isolated populations of the Alameda whipsnake (62 **FR** 64306).

All five Alameda whipsnake populations are essential to the survival and recovery of the species. Further fragmentation or reduction of any of the five populations will undoubtedly affect the ability of the population(s) to rebound from natural or human-made events. This is because (1) small, isolated populations are vulnerable to extinction from random fluctuations in population size due to catastrophic events such as fire or variations in population characteristics (*e.g.*, sex ratios) caused by annual weather patterns, food availability, and other factors; and (2) further reductions will likely result in adverse genetic consequences because many of the populations of Alameda whipsnakes are isolated from other conspecific populations and natural recolonization from other populations is unlikely or impossible.

Alameda whipsnake critical habitat

Critical habitat for the Alameda whipsnake was designated on October 3, 2000 (65 **FR** 58933). Unit 5 of the critical habitat, the Sunol-Cedar Mountain unit, covers part of northern Santa Clara County, from east of Interstate 680, encompassing the area around Calaveras Reservoir and extending to Wauhab/Valpe Ridges. Included within the designated area is primary breeding, feeding, and sheltering habitat for the species. The primary constituent elements of critical habitat for the whipsnake include areas that support scrub communities such as mixed chaparral, chamise-redshank chaparral, and coastal scrub and annual grassland and various oak woodlands that lie adjacent to scrub habitats. In addition, the primary constituent elements may be found in grasslands and oak woodlands that are linked to scrub by substantial rock outcrops or riparian corridors. Other habitat features that provide a source of cover for the whipsnake during dispersal or lie in reasonable proximity to scrub habitats and contain habitat features (*e.g.*, rock outcrops) that support adequate prey populations may also contain primary constituent elements for the Alameda whipsnake.

Bay Checkerspot Butterfly

The bay checkerspot was listed as threatened on September 18, 1987 (52 **FR** 35366). A detailed account of the taxonomy, ecology, and biology of the species is presented in the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* (USFWS 1998). The bay checkerspot is a medium-sized butterfly with a wing span of about 5 cm (2 in.). The forewings have black bands along all veins on upper wing surface, contrasting sharply with bright red, yellow and white spots.

The bay checkerspot formerly occurred around San Francisco Bay, from Twin Peaks and San Bruno Mountain (west of the Bay) and Contra Costa County (east of the Bay) south through

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Santa Clara County. The range of the bay checkerspot is now reduced to patchy distribution in Santa Clara and San Mateo counties. All areas now or recently inhabited by the bay checkerspot are island-like patches of suitable habitat isolated by intervening unsuitable habitat and urban development. The exact distribution of the butterfly varies through time: sites that are unoccupied one year may be occupied the next, and vice versa. The butterfly currently occupies less than 12,000 acres (5,000 ha). Most individuals of the species live only a single year, with high fecundity, high mortality, and sensitivity to weather and other ecological conditions. Large population swings are common; fluctuations of more than 100-fold have been observed. These fluctuations are not always in synchrony among populations at different sites.

Habitat of the bay checkerspot exists on shallow, serpentine-derived or similarly drought and/or infertile soils, which support the butterfly's larval food plants, as well as nectar sources for adults. The primary larval host plant is dwarf plantain (*Plantago erecta*), a native annual. In many years, bay checkerspot larvae (caterpillars) may use a secondary host plant species; for example, when dwarf plantain dries up while pre-diapause larvae are still feeding. Purple owl's-clover (*Castilleja [Orthocarpus] densiflora*) and exserted paintbrush (*Castilleja exserta [Orthocarpus purpurascens]*) are known secondary host plants. Nectar plants for adults commonly visited include desert parsley (*Lomatium* spp.), California goldfields (*Lasthenia californica [=chrysostoma]*), tidy-tips (*Layia platyglossa*), and common muilla (*Muilla maritima*).

The bay checkerspot's life cycle is tied to host plant biology. Host plants germinate from early October to late December and senesce (dry up and die) from early April to mid May. Most of the active parts of the bay checkerspot life cycle occur during this time. Adults emerge from pupae in early spring, feed on nectar, and mate and lay eggs during a flight season that typically lasts for 4 to 6 weeks late February to early May. Eggs hatch, and tiny pre-diapause larvae feed for about 2 to 3 weeks and before entering diapause (a period of dormancy, spent under rocks and deep in soil cracks) in mid to late spring. Post-diapause larvae emerge after winter rains, stimulated by germination of dwarf plantain, and feed and bask until they are large enough to pupate and emerge as adults.

Studies of bay checkerspot have described its distribution as an example of a metapopulation. A metapopulation is a group of spatially separated populations that can occasionally exchange dispersing individuals. The populations in a metapopulation typically undergo interdependent extinction and colonization, where individual populations may go extinct and later be recolonized from another population. Bay checkerspot populations may also exhibit "pseudo-extinction," where the species is not found but nonetheless continues to inhabit a site and reappears in a subsequent year. Larvae that diapause for more than one year may be responsible for pseudo-extinctions, since diapausing larvae are essentially undetectable in practical surveys. Because of pseudo-extinction and metapopulation dynamics, even sites that in some years

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apparently lack the bay checkerspot can be important to species survival and recovery.

The species' Recovery Plan identifies five known core areas of habitat, four of which occur in Santa Clara County. The Service considers these four core areas to provide a population reservoir critical to the survival of the Santa Clara County meta-population. Core areas are moderate to large areas of suitable habitat that support persistent bay checkerspot populations. The pattern of occupancy by the bay checkerspot suggests that core populations provide migrants to colonize unoccupied habitat. The Santa Clara County core areas all flank the Coyote Valley, the portion of the Santa Clara Valley between the cities of San Jose and Morgan Hill. The core areas are mostly in private ownership, and are largely used as grazing land. The Santa Teresa Hills, adjacent to the Coyote Valley to the west, are considered a potential core area because of extensive suitable soils and proximity to other core areas, but are in poor condition in many areas because of lack of management of non-native vegetation. The core and potential core areas and nearby and connecting habitats have been designated as critical habitat for the bay checkerspot.

Bay checkerspot critical habitat

Critical habitat of the bay checkerspot was designated on April 30, 2001 (66 FR 21450), and became effective on May 30, 2001. A total of 9,673 acres (3918 ha) of critical habitat was designated, 8,867 acres (3591 ha) of this in Santa Clara County. The primary constituent elements of bay checkerspot critical habitat are those habitat components that are essential for the primary biological needs of foraging, sheltering, breeding, maturation, and dispersal. The primary constituent elements are one or more of the following: stands of *Plantago erecta*, *Castilleja exserta*, or *Castilleja densiflora*; spring flowers providing nectar; pollinators of the bay checkerspot's food and nectar plants; soils derived from serpentine rock; and space for dispersal between habitable areas. In addition, the following are each primary constituent elements to be conserved when present in combination with one or more of the primary constituent elements above: areas of open grassland, topography with varied slopes and aspects providing surface conditions with warm and moderate to cool temperatures during sunny spring days, stable holes or cracks in the soil and surface rocks or rock outcrops, wetlands providing moisture during times of spring drought.

California Clapper Rail

The clapper rail was federally listed as endangered in 1970 (35 FR 16047). A detailed account of the taxonomy, ecology, and biology of the clapper rail is presented in the Recovery Plan and the references cited therein (USFWS 1984).

The clapper rail is endemic to tidally influenced salt and brackish marshes of California. Historically, the clapper rail occurred in tidal marshes along California's coast from Morro Bay,

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San Luis Obispo County, to Humboldt Bay, Humboldt County. Currently, clapper rails are known to occur in tidal marshes in San Francisco, San Pablo, Grizzly, Suisun and Honker Bays.

The clapper rail is distinguishable from other rails by its large body size of 32-47 cm (12.5-18.3 inches) from bill to tail, and weighs approximately 250-350 g (8.75-12.25 oz). It has a long, slightly decurved orange bill, a rufous breast, black and white barred flanks, and white undertail coverts. Clapper rails are sexually dimorphic, the males are slightly larger than females. Juveniles have a pale bill and dark plumage.

Clapper rails are typically found in the intertidal zone and sloughs of salt and brackish marshes dominated by pickleweed, Pacific cordgrass (*Spartina foliosa*), gumplant (*Grindelia spp.*), salt grass, jaumea (*Jaumea carnosa*) and adjacent upland refugia. They may also occupy habitats with other vegetative components, which include, but are not limited to bulrush (*Scirpus americanus* and *S. maritimus*), cattails (*Typha spp.*), and Baltic rush (*Juncus balticus*).

Clapper rails are capable of producing several vocalizations, most common of which is a series of keks or claps. Pair bonds are typically established during the month of February, and nesting typically occurs from March through August. Estimates of California clapper rail clutch size range from 5-14 eggs. The clapper rail builds a bowl shaped platform nest of marsh vegetation and detritus. The clapper rail typically feeds on benthic invertebrates, but its diet is wide ranging, and includes seeds, and occasionally small mammals such as the harvest mouse.

Suitable habitat has been significantly reduced by approximately 84 percent of historic in the San Francisco Bay Area due to habitat conversions for urban and agricultural uses, and is a primary factor in the species decline. Additional impacts which have contributed to the decline in clapper rail populations include over-harvesting, environmental contaminants, and erosion or subsidence of habitat.

California Red-Legged Frog

The red-legged frog was federally listed as threatened on May 23, 1996 (61 **FR** 25813), effective June 24, 1996. A detailed account of the taxonomy, ecology, and biology of the red-legged frog is presented in the *Draft Recovery Plan for the California Red-legged Frog (Rana aurora draytonii)* (USFWS 2000). This species is the largest native frog in the western United States, ranging from 4 to 13 centimeters (cm) (1.5 to 5.1 inches [in.]). The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers, and dorsolateral folds are prominent on the back. Larvae (tadpoles) range from 14 to 80 millimeters (mm) (0.6 to 3.1 in.) in length, and the background color of the body is dark brown and yellow with darker spots.

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Female frogs deposit egg masses on emergent vegetation so the egg mass floats on the surface of the water. Red-legged frogs breed from November through March with earlier breeding records occurring in southern localities. Individuals occurring in coastal drainages are active year-round, whereas those found in interior sites are normally less active during the cold season.

Breeding sites have been documented in a variety of aquatic habitats. Larvae, juveniles and adult frogs have been observed inhabiting streams, creeks, ponds, marshes, sag ponds, deep pools and backwaters within streams and creeks, dune ponds, lagoons, estuaries, and artificial impoundments such as stock ponds. Furthermore, breeding has been documented in these habitat types irrespective of vegetative cover. Frogs often breed in artificial ponds with little or no emergent vegetation and have been observed to breed in and inhabit stream reaches that are not cloaked in riparian vegetation. The importance of riparian vegetation for this species is not well understood. It is believed the moisture and camouflage provided by the riparian plant community may provide good foraging habitat and may facilitate dispersal in addition to providing pools and backwater aquatic areas for breeding. However, other factors are more likely to influence the suitability of aquatic breeding sites, such as a general lack of introduced aquatic predators. Red-legged frogs often disperse from their breeding habitat to utilize various aquatic, riparian, and upland habitats as summer habitat. However, red-legged frogs also have been found in ephemeral creeks and drainages and in ponds that may or may not have riparian vegetation. When riparian habitat is present, frogs spend considerable time resting and feeding in the vegetation. When riparian habitat is absent, frogs spend considerable time resting and feeding under rocks and ledges both in and out of water. Red-legged frogs also use small mammal burrows and moist leaf litter and incised stream channels with portions narrower and deeper than 18 in. also providing habitat (USFWS 2000).

Red-legged frogs disperse upstream and downstream of their breeding habitat to forage and seek shelter. Sheltering habitat for red-legged frogs potentially includes all aquatic, riparian, and upland areas within the range of the species and any landscape features that provide cover, such as existing animal burrows, boulders or rocks, organic debris such as downed trees or logs, and industrial debris. Agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or hay ricks may also be used. Accessibility to sheltering habitat is essential for the survival of red-legged frogs within a watershed and can be a factor limiting population numbers and survival. During winter rain events, juvenile and adult red-legged frogs are known to disperse up to 1-2 km (0.6-1.25 miles) (66 FR 14628-9).

Red-legged frogs are often prolific breeders, laying their eggs during or shortly after large rainfall events in late winter and early spring. Eggs hatch in 6 to 14 days. Siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae undergo metamorphosis 3.5 to 7 months after hatching. Of the various life stages, larvae probably experience the highest mortality rates, with less than 1 percent of eggs laid reaching metamorphosis. Sexual maturity

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normally is reached at 3 to 4 years of age. Red-legged frogs may live 8 to 10 years.

The diet of red-legged frogs is highly variable. Invertebrates are often the most common food items, although vertebrates, such as Pacific tree frogs (*Hyla regilla*) and California mice (*Peromyscus californicus*), may represent over half the prey mass eaten by larger frogs. Juvenile frogs are active diurnally and nocturnally, whereas adult frogs are largely nocturnal. Feeding activity probably occurs in both terrestrial and aquatic settings. Larvae likely eat algae.

Several researchers in central California have noted the decline and eventual disappearance of red-legged frog populations once bullfrogs became established at the same site. This has been attributed to both predation and competition. Twedt (1993) documented bullfrog predation of juvenile northern red-legged frogs and suggested that bullfrogs could prey on subadult red-legged frogs as well. In addition to predation, bullfrogs may have a competitive advantage over red-legged frogs: bullfrogs are larger, possess more generalized food habits, possess an extended breeding season where a female can produce as many as 20,000 eggs, and are unpalatable to predatory fish as larvae. In addition to competition, bullfrogs interfere with red-legged frog reproduction. Both California and northern red-legged frogs have been observed in amplexus with (mounted on) both male and female bullfrogs (USFWS 2000).

The historic range of the California red-legged frog extended along the coast from the vicinity of Point Reyes National Seashore, Marin County, California, and inland from the vicinity of Redding, Shasta County, California, southward to northwestern Baja California, Mexico. California red-legged frogs have been documented in 46 counties in California, but now remain in only 238 streams or drainages in 31 counties (61 FR 25813). California red-legged frogs are still locally abundant within portions of the San Francisco Bay area and the central coast. Within the remaining distribution of the species, only isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse ranges. The species is believed to be extirpated from the southern Transverse and Peninsular ranges, but is still present in Baja California, Mexico.

The California red-legged frog has sustained a 70 percent reduction in its geographical range in California as a result of several factors acting singly or in combination. Habitat loss and alteration, combined with over exploitation and introduction of exotic predators, were significant factors in the California red-legged frogs' decline in the early to mid-1900s. The California red-legged frog is threatened within its remaining range by a wide variety of human impacts, including urban encroachment, construction of reservoirs and water diversions, land conversions, industrial and non-industrial forest practices, introduction of exotic predators and competitors, livestock grazing, and habitat fragmentation (USFWS 2000). California red-legged frogs population numbers are not precisely known, although the Service estimates that many California red-legged frog populations are declining throughout the range of the subspecies.

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California Red-Legged Frog Critical Habitat

Critical habitat for the California red-legged frog was designated on March 13, 2001 (66 FR 14626). Due to the complex life history and dispersal capabilities of the California red-legged frog, and the dynamic nature of the environment in which they are found, the primary constituent elements of critical habitat for the frog may be found throughout the watersheds—including uplands—that are designated as critical habitat. Habitat rehabilitation efforts (*e.g.* removal of non-native predators) may be necessary in some areas, as well as changes in current management activities, to attain optimal distribution of California red-legged frogs within each critical habitat unit. The primary constituent elements of critical habitat for California red-legged frogs are (a) Suitable aquatic habitat; (b) associated uplands; and (c) suitable dispersal habitat connecting suitable aquatic habitat. Critical habitat for California red-legged frogs will provide for breeding and nonbreeding habitat and for dispersal between these habitats, as well as allowing for expansion of California red-legged frog populations, which is vital for the recovery of the species.

Suitable aquatic habitat is essential for providing space, food, and cover needed to sustain eggs, tadpoles, metamorphosing juveniles, nonbreeding subadults, and breeding and nonbreeding adult frogs. Suitable aquatic habitat for California red-legged frogs consists of virtually all still or slow moving fresh water bodies, including natural and manmade ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds, except deep lacustrine water habitat (*e.g.* deep lakes and reservoirs) inhabited by nonnative predators. The species requires a permanent water source to ensure that water is available year-round. Permanent water sources can include, but are not limited to, ponds, perennial creeks (or permanent plunge pools within intermittent creeks), seeps and springs. Aquatic habitat used for breeding must have a minimum deep water depth of 20.32 cm (8 in) and maintain water during the entire tadpole rearing season (at least March through July). During periods of drought or less than average rainfall, these breeding sites may not hold water long enough for individuals to complete metamorphosis, but these sites would still be considered suitable breeding habitat. To be considered a critical habitat, the aquatic component must consist of two or more breeding sites located within 2 km (1.25 mi) of each other, if at least one of the sites is also a permanent water source, or two or more breeding sites and a permanent water source located within 2 km (1.25 mi), if the breeding sites are not permanent water sources. In addition, the sites must be connected by suitable dispersal habitat.

Associated uplands are essential to maintain the integrity of California red-legged frog aquatic habitat, by providing the conditions essential for providing food, water, nutrients, and protection from disturbances necessary for normal behavior, and provide shelter to frogs inhabiting upland areas adjacent to suitable aquatic habitat. Key conditions include the timing, duration, and extent of water moving within the system, filtering capacity, and maintaining the habitat to favor California red-legged frogs and discourage the colonization of exotic species such as bullfrogs.

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Suitable upland habitat consists of all upland areas within 152.4 m (500 ft), or no further than the watershed boundary, of the edge of suitable aquatic habitat.

Suitable dispersal habitat provides connectivity among California red-legged frog aquatic habitat (and associated upland) patches. While frogs can pass many obstacles, and do not require a particular type of habitat for dispersal, the habitat connecting suitable breeding locations and other aquatic habitat must be free of barriers and at least 152.4 m (500 ft) wide. Suitable dispersal habitat consists of all upland and wetland habitat free of barriers that connect two or more patches of suitable aquatic habitat within 2 km (1.25 mi) of one another. Dispersal barriers include heavily traveled roads (with more than 30 cars per hour), moderate to high density urban or industrial developments, and large reservoirs. Areas where barriers to dispersal occur would not be considered critical habitat. Agricultural lands such as row crops, orchards, vineyards, and pastures do not constitute barriers to California red-legged frog dispersal.

In summary, the primary constituent elements consist of three components. At a minimum, this will include two (or more) suitable breeding locations, a permanent water source, associated uplands surrounding these water bodies up to 152.4 m (500 ft) from the water's edge, all within 2 km (1.25 mi) of one another and connected by barrier free dispersal habitat that is at least 152.4 m (500 ft) in width. When these elements are all present, all other suitable aquatic habitat within 2 km (1.25 mi), and free of dispersal barriers, is also considered critical habitat.

Unit 15 consists of tributaries of San Lorenzo Creek, Alameda Creek, Kellogg Creek, Orestimba Creek, Coyote Creek, Pacheco Creek, Romero Creek, Ortigalita Creek, Los Banos Creek, Panoche Creek, and the San Benito River in Contra Costa, Alameda, San Joaquin, Santa Clara, Stanislaus, San Benito, Merced, and Fresno Counties. The unit encompasses approximately 4,569,265.4 km² (1,129,050 ac), of which 86 percent is privately owned. Much of these privately owned lands have been degraded by grazing and other agricultural activities.

Coyote Ceanothus

The Coyote ceanothus was federally listed as endangered in 1995 (60 **FR** 6671, Service 1995). A detailed account of the taxonomy, ecology, and biology of the species is presented in the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* (USFWS 1998). Coyote ceanothus is an erect evergreen shrub of the buckthorn family (Rhamnaceae) that grows 1 to 2 m (3 to 6 feet) high. The ceanothus grows on dry slopes in serpentine chaparral and valley and foothill grassland.

Coyote ceanothus is known from only three locations: Anderson Dam, Kirby Canyon and Llagas Avenue north of Morgan Hill. Prior to 1993, all of the populations were composed of mature and senescent individuals (large plants with many dead branches). The population in Kirby

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Canyon, the smallest of the three, burned during the summer of 1992. The following spring approximately 2,000 seedlings were observed (USFWS 1998). These seedlings were fenced to protect them from grazing until the plants were established, and 100 plants were individually caged. One year later survivorship of the caged seedlings was good.

Kathy Freas, another *Ceanothus* expert, conducted germination trials using various heat and disturbance treatments (*in litt.*, 1993). Her results suggest that Coyote ceanothus seeds do not require fire for germination. If the seeds do not require fire for germination, the lack of recruitment in natural populations may be due to seed or seedling mortality (Center for Conservation Biology 1990, K. Freas, *in litt.*, 1993). Possible sources of mortality include seed predation, grazing/browsing, lack of sufficient precipitation to maintain young plants through the summer following germination, or some combination of these (K. Freas, *in litt.*, 1993). Despite the results of the germination trials, the only seedlings observed in nature were following a fire in Kirby Canyon (USFWS 1998). Coyote ceanothus is relatively easy to propagate from seed (Center for Conservation Biology 1990, K. Freas, *in litt.*, 1993) and from tip cuttings.

Metcalf Canyon Jewelflower

The jewelflower was federally listed as endangered in 1995 (60 **FR** 6671). A detailed account of the taxonomy, ecology, and biology of the species is presented in the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* (USFWS 1998). The jewelflower is an annual herb of the mustard family (Brassicaceae) that reaches 1 m (3 ft.) or more in height.

The jewelflower flowers from April to June. No detailed data on its reproductive biology or demography are available. Nine populations totaling approximately 20,000 to 25,000 plants have been recorded, all in Santa Clara Valley area (USFWS 1998). The jewelflower is endemic to serpentine outcrops with little soil development within a matrix of serpentine grassland. The species also occurs on roadcuts through serpentine substrate. The jewelflower grows in areas with other rare species including the bay checkerspot and other plants native to serpentine soils in Santa Clara County.

Salt Marsh Harvest Mouse

The harvest mouse was federally listed as endangered in 1970 (35 **FR** 16047). A detailed account of the taxonomy, ecology, and biology of the harvest mouse is presented in the *Salt Marsh Harvest Mouse & California Clapper Rail Recovery Plan* (USFWS 1984) and the references cited therein.

The harvest mouse is a rodent endemic to the salt and brackish marshes of the San Francisco Bay Area and adjacent tidally influenced areas. The harvest mouse closely resembles the western

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harvest mouse (*R. megalotis*). The harvest mouse typically weighs about 10 grams (3.5 oz), has a head and body length ranging from 69-74 mm (2.7-2.9 in), a tail length ranging from 65-82 mm (2.5-3.2 in), and a hind foot length of 17-18 mm (0.66-0.7 in). As stated in the recovery plan, the harvest mouse, when compared to the western harvest mouse, have darker ears, belly and back, and a slightly thicker, less pointed and unicolored tail. The harvest mouse is further distinguished taxonomically into the northern and southern subspecies, *R. raviventris halicoetes* and *R. raviventris raviventris*, respectively. Of the two subspecies, *R. r. halicoetes* more closely resembles *R. megalotis*, and can be difficult to differentiate in the field; body color and color of ventral hairs as well as the thickness and shape of the tail have been used to distinguish the two.

The harvest mouse has evolved to a life in tidal marshes. Specifically, they have evolved to depend mainly on dense pickleweed (*Salicornia virginica*) as their primary cover and food source. However, harvest mice may utilize a broader source of food and cover which includes salt grass (*Distichlis spicata*) and other vegetation typically found in the salt and brackish marshes of this region. In natural systems, harvest mice can be found in the middle tidal marsh and upland transition zones. Upland refugia is an essential habitat component during high tide events. Harvest mice are highly dependent on cover, and open areas as small as 10 meters (32.8 ft) wide may act as barriers to movement (USFWS 1984). The harvest mouse does not burrow. It has been noted that the northern subspecies may build nests of loose grasses.

Male harvest mice are reproductively active from April through September, but may appear active throughout the year. Females are reproductively active from March to November, and have a mean litter size of approximately four offspring.

The historic range of the species included tidal marshes within the San Francisco and San Pablo Bay areas, east to the Collinsville-Antioch areas. It has been estimated that of the 193,800 acres (78,489 ha) of tidal marsh that existed in 1850, about 30,100 acres (12,555 ha) currently remain (Dedrick 1993). Based on this estimate, there has been an 84 percent reduction in tidal wetlands in the Bay Area. Since 1850, agriculture and urbanization has claimed much of the former tidal marshes. At present, the distribution of the northern subspecies occurs along Suisun and San Pablo Bays north of Point Pinole in Contra Costa County and Point Pedro in Marin County. The southern subspecies is found in marshes in Corte Madera, Richmond, and South San Francisco Bay mostly south of the San Mateo Bridge (Highway 92).

Santa Clara Valley Dudleya

The dudleya was federally listed as endangered in 1995 (60 FR 6671). A detailed account of the taxonomy, ecology, and biology of the species is presented in the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* (USFWS 1998). The dudleya is a low-growing

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perennial of the stonecrop family (Crassulaceae) with fleshy, glabrous (hairless) leaves. The roots of *Dudleya setchellii* are at least 15 cm (6 in.) long and often extend into rock crevices of the serpentine outcrops. The rock outcrops themselves have little vegetative cover.

The dudleya produces wind-dispersed seeds, and also reproduces vegetatively by forming rosettes that can separate from the parent plant. Individual plants may live for approximately 10 years. Few detailed data on the reproductive biology or demography of the species are available. However, McCarten has studied demography of the dudleya at Kirby Canyon Landfill. He found seedling germination was high in wet years, but seedling survivorship was often very low in both natural and created habitats. Seedling survival was generally less than 5 percent and may be less than 1 percent after the first year. The primary cause of low survival may be the limited number of rock crevices with soil to provide the necessary nutrient and moisture conditions (USFWS 1998).

The dudleya is found only in rocky serpentine grasslands in the Coyote Valley area, from San Jose south to San Martin in Santa Clara County. A recent survey for the species in Santa Clara County found up to 15 new occurrences and reported seven previously less-documented occurrences from the same general area, together comprising nearly 20,000 individual plants, but did not substantially expand the geographic range of the species (Harvey & Assoc. 2000). This survey brings the number of dudleya occurrences thought to be extant to 50, and the maximum known number of individuals to about 86,000.

Tiburon paintbrush

The paintbrush was federally listed as endangered in 1995 (60 **FR** 6671). A detailed account of the taxonomy, ecology, and biology of the species is presented in the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* (USFWS 1998). The paintbrush is a semi-woody perennial of the snapdragon family (Scrophulariaceae). The paintbrush is a root parasite on other flowering plant species. The primary advantage of the parasitic attachment in *Castilleja* and related plants is reportedly an increased water and nutrient supply. Though the parasitic relationship is not obligate (hemiparasitic), benefits to species of *Castilleja* from the parasitic habit are manifested in increased vigor with more branching, greater height, and earlier flowering (USFWS 1998).

Tiburon paintbrush has never been widespread. Six of the eight populations occur north of the San Francisco Bay, in Marin and Napa counties. Two populations occur in close proximity on Coyote Ridge in Santa Clara County. Populations are small, ranging from less than 100 plants at the Kirby Canyon (Santa Clara County) site (CNDDDB 1996, D. Mayall in litt. 2001) to approximately 600 plants at Ring Mountain Preserve on the Tiburon Peninsula.

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The paintbrush occurs in serpentine grassland. It flowers from April to June. Reproductive biology is not well known, although the species may be pollinated by bees, moths, butterflies, or hummingbirds (L. Heckard, *in litt.*, 1989, M. Wetherwax, pers. comm. June 2001, N. McCarten pers. comm. July 2001)). Seeds are shed in June and July, and the species dies back to its woody base in July and August. New growth from the woody base begins in December or January. Seeds may remain dormant in the soil for several years. Seed germination occurs in January or February and seems to be induced by leaching and low temperatures.

Environmental Baseline and Status of the Species in the Action Area

Please refer to the 2000 Interim biological opinion for a discussion of baseline conditions for most species. This section provides important updates as well as baseline information for species added in the current consultation.

Unlike most other interim water contractors, Santa Clara Valley WD's service area is very broadly defined, to include all of Santa Clara County. Santa Clara Valley WD uses groundwater recharge and subsequent withdrawal extensively as a water management technique. CVP water delivered to Santa Clara Valley WD is likely to be commingled with their underground supply and become indistinguishable from other Santa Clara Valley WD supplies. In Santa Clara Valley WD's arrangement with Pajaro Valley WMA and Westlands WD, deliveries of the assigned water to Santa Clara Valley WD are likely to be greater in drier years, which also represent the limiting factor in Santa Clara Valley WD being able to meet service area demand. Thus CVP deliveries to Santa Clara Valley WD potentially affect water supply throughout the county, and are likely to elevate the base supply available in drier years. Therefore, in this Baseline and status in the action area section, we have treated all of Santa Clara County as part of the action area.

In recent years, Santa Clara County has been one of the most rapidly growing and developing counties in California and the nation. In FY2000 and 2001, thirteen formal and 53 informal consultations were initiated with the Service for projects in Santa Clara County, as well as over 500 requests from the County, City of San Jose, and other non-Federal parties for technical assistance from the Service regarding particular projects and endangered species. These projects have had impacts on nearly all the Santa Clara County species in this consultation.

Alameda Whipsnake Baseline

The Alameda whipsnake occurs within the action area in northern Santa Clara County, the service area of the Santa Clara Valley Water District. Much of the area is undeveloped and used for rangeland, as public water supply watershed, or as parkland. Some urban and suburban development occurs along Calaveras Boulevard, Weller Road, and Felter Road.

Alameda Whipsnake Critical Habitat Baseline

The Service is not aware of any projects that have altered the Alameda whipsnake critical habitat baseline in northern Santa Clara County since the date of critical habitat designation. In the rest of the Sunol-Cedar Mountain unit, the Double Wood golf course in Fremont (file 1-1-00-F-219)

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affected 169 acres (68 hectares) of grasslands and riparian corridor within the critical habitat unit boundary, some of this temporarily. The adjacent Avalon residential development landslide repair and bank stabilization impacted about 9 acres of critical habitat, mostly temporarily (file 1-1-00-F-230). Both Double Wood and Avalon are on the western boundary of the unit, in southern Alameda County near Interstate 680.

Bay Checkerspot Butterfly Baseline

The bay checkerspot butterfly (bay checkerspot) occurs within the action area on serpentine soils in Santa Clara County. Primary reasons for the decline of the bay checkerspot are habitat degradation and loss, caused by non-native plants displacing or reducing native food plants, and by urban and suburban development. The extirpation of several populations has been well documented (Murphy and Weiss 1988). Direct strikes and turbulence due to vehicles driving on public roads also cause an unknown amount of mortality and injury to bay checkerspot annually.

The spring of 2001 was favorable for bay checkerspot numbers in parts of the San Jose area. Large numbers of butterflies were observed at Tulare Hill, Coyote Ridge above Kirby Canyon, and other sites. Weather to date also appears favorable to the species in 2002. In other favorable trends, private and public concerns have acquired title, conservation easement, or lease of nearly 1000 acres of bay checkerspot habitat for the benefit of the species, much of it designated critical habitat in the Silver Creek, Kirby, and Tulare Hill Corridor units.

On the other hand, the only remaining San Mateo County population of the butterfly is at critically low levels, with only two to three adults observed at Edgewood Park in 2001. The Jasper Ridge population in San Mateo County is likely to be extirpated. The Silver Creek Hills population, in south San Jose in Santa Clara County, remains very low, with only 7 butterflies observed in sampling in 2001 (R. White, pers. comm. Jun. 2001). The potential core area of the Santa Teresa Hills, a Santa Clara County park, remains in relatively poor condition over substantial areas due to lack of suitable vegetation management, and supports low densities of the species relative to its potential.

Invasion of native grasslands by non-native species is widely seen as one of the major causes of bay checkerspot decline. Serpentine habitats, although more resistant than most, are not completely immune to invasion by non-natives, so non-native invasive plants present a continuing threat. For example, non-native grass growth in the Silver Creek core recovery area has been observed to choke out dwarf plantain (USFWS 1998). The negative impact of invasive plants on serpentine habitats is increased by fertilization (possibly including deposition of nitrogen, a plant nutrient, from air pollution), watering or irrigation, and frequency of introduction of seeds or other propagules (Huenneke *et al.* 1990, Thomas Reid Associates and Murphy 1992, 1995, Weiss 1999). Weiss (1996, 1999) has presented evidence that some bay checkerspot habitats are more prone to non-native grass invasion because of nitrogen deposition

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from air pollution.

By promoting the invasion and growth of non-native plants in serpentine soils where they compete with larval host plants and adult nectar plants, nutrient deposition from air pollution may seriously reduce the quality of many bay checkerspot habitats. Nitrogen compounds are deposited on soils and vegetation from the air in both wet (during rainfall) and dry conditions. Nitrogen tends to be tightly recycled by the plants and microbes in infertile soils like those derived from serpentines, so fertilization impacts could persist there for years and may be accumulating now. Air pollution is common around all major remaining bay checkerspot populations, in Santa Clara County, so nitrogen deposition is a serious threat that could reduce the likelihood of bay checkerspot recovery (Weiss in litt. 2000).

Automobile traffic and industry are major sources of emissions of nitrogen compounds (both NO_x and ammonia) to the air. Weiss (1999) estimated excess nitrogen deposition rates from air pollution in the area of Santa Clara Valley bay checkerspot habitats at 10 to 15 kg nitrogen per hectare per year. He concluded that these deposition rates are sufficient to affect ecosystem structure and diversity, and that the invasion of serpentine soils by non-native plants and decline of bay checkerspot populations in the area are related to air pollution. Further incremental increases in nitrogen deposition to an already stressed ecosystem will affect the habitat further. A more detailed analysis of air pollution impacts on bay checkerspot is presented in the Service's biological opinions on the Metcalf Energy Center (file 1-1-00-F-235) and U.S. Highway 101 widening and Coyote Valley Research Park development (1-1-00-F-0123).

Throughout the range of the species and in Santa Clara County in general, the status of the bay checkerspot remains tenuous because of the limited number and extent of populations and their sensitivity to environmental conditions. Important habitat areas and actions for survival and recovery of the species are identified in the recovery plan (USFWS 1998).

Bay Checkerspot Critical Habitat Baseline

The majority of bay checkerspot critical habitat, 12 of 15 units, occurs in Santa Clara County in proximity to expanding urban development. More than 80 percent is on private lands.

Since designation of critical habitat for the bay checkerspot, we are aware of two projects that plan to affect it in Santa Clara County. One is the Ranch on Silver Creek project in the Silver Creek critical habitat unit. Construction of a road and golf course features has resulted in less than one acre of permanent and about six acres of temporary impacts. The temporarily impacted areas will be restored to native ecosystem, and a total of more than 500 acres—much of it critical habitat, both on and off-site—has been preserved and will be managed in perpetuity to benefit the butterfly and other native species. The second project is a KB Homes development within the Communications Hill critical habitat unit. More than 100 acres would be eliminated by this

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project.

California Clapper Rail Baseline

In San Francisco Bay, clapper rails are known to occur primarily from Crescent Marsh south through Alviso, and north to the seaplane terminal near San Francisco International Airport. Within the action area, clapper rails occur in salt marsh habitats along the south Bay in northern Santa Clara County. An updated Recovery Plan for the clapper rail is in development, and may refine recovery objectives. Clapper rails are known to occur along outboard levees of the salt evaporation ponds and vegetated sloughs.

As described previously, habitat loss and/or degradation is the primary cause of decline for the clapper rail throughout its range. In south San Francisco Bay, management and maintenance activities associated with salt production and wastewater discharge may be impairing recovery of the clapper rail. Other factors which continue to contribute to the decline of clapper rails include environmental contaminants, predation, and conversion of salt marsh habitat by freshwater sewage treatment discharges. The Service collected data in 1991 and 1992 regarding mercury concentrations in clapper rail eggs in south San Francisco Bay. The data indicated that mercury contamination in clapper rail eggs occurs at potentially harmful levels. The percentage of non-viable eggs in this study ranged from 24-38 percent. Predator management is essential in the recovery of clapper rails. Predators of the clapper rail include, but are not limited to striped skunks (*Mephitis mephitis*), rats (*Rattus norvegicus*), red fox (*Vulpes vulpes*), and feral cats (*Felis catus*).

Salt marsh habitat of clapper rails in the south Bay has been degraded by large and unseasonal discharges of fresh water from sewage treatment facilities in the south Bay area, such as San Jose in Santa Clara County. Salt marsh vegetation required by the clapper rail in turn requires salty conditions. Conversion to fresh conditions has promoted invasion of non-habitat vegetation and harmed the clapper rail. Without major changes in sewage treatment technology, sewage discharges are a direct function of human population and water use: increasing population and sewage load have lead to increasing freshwater effluent discharges in the south Bay.

Other impacts to clapper rails in south San Francisco Bay have included disturbance and habitat alteration from maintenance of levees, increased sedimentation of habitat as a result of upland development and erosion, and habitat alteration by invasion of non-native vegetation.

California Red-legged Frog Baseline

Red-legged frogs have been extirpated or nearly extirpated from more than 70 percent of their historic range. Historically, this species was found throughout the Central Valley and Sierra Nevada foothills. As of 1996, red-legged frogs were known to occur in approximately 240

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streams or drainages from 23 counties, primarily in central coastal California. Monterey, San Luis Obispo, and Santa Barbara counties support the largest extent of currently occupied habitat. Habitat loss, non-native species introduction, and urban encroachment are the primary factors that have adversely affected the red-legged frog throughout its range.

In December 2000, scientists of the U.S. Geological Survey and U.S. Department of Agriculture announced results of a study indicating that organophosphorus pesticides from agricultural areas on the San Joaquin Valley floor, which are transported to the Sierra Nevada on prevailing summer winds, may be affecting populations of amphibians that breed in mountain ponds and streams. These include several amphibian species of concern—the foothills yellow-legged frog, the mountain yellow-legged frog and the Yosemite toad—as well as the California red-legged frog. These species have experienced population declines in California over the last 10 to 15 years.

The addition of Santa Clara County—the service area of the Santa Clara Valley WD—to the action area substantially increases the amount of red-legged frog habitat potentially affected by the action, including designated critical habitat. The species occurs extensively in Santa Clara County, although intensive urbanization appears to have extirpated the species in much of the northernmost Santa Clara Valley and around the south San Francisco Bay (Harvey & Associates 1997). Critical habitat is designated for the red-legged frog in eastern (Unit 15), southern (Unit 16) and northwestern (Unit 14) Santa Clara County.

Santa Clara County and its cities are located within the proposed South/East San Francisco Bay Recovery Unit for the red-legged frog (USFWS 2000). This Recovery Unit contains the largest number of occupied drainages in the northern portion of red-legged frog's range. Henry Coe State Park, discussed in the draft Recovery Plan as part of a core area for the species, is in eastern Santa Clara County. Substantial areas of habitat for the species exist on private lands in the county, lands often used for grazing.

California Red-Legged Frog Critical Habitat Baseline

Units 14, 15, and 16 of critical habitat for the red-legged frog extend into Santa Clara County. The most extensive is unit 15, the East Bay–Diablo Range unit, which stretches from north to south along the eastern side of the county. This unit overlaps broadly with Alameda whipsnake critical habitat in the north. Unit 16, the Pajaro River unit, runs along the southern boundary of the county and extends into it in some places. Unit 14, the San Mateo-Northern Santa Cruz unit, overlaps some Santa Clara County area along the northwest border of the county.

Coyote Ceanothus Baseline

All known locations of the ceanothus are within 6 km (4 mi.) of each other in Santa Clara

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County, straddling Highway 101 just north of Cochrane Road. Fewer than 6,000 plants are known to exist (USFWS 1998). The largest population consists of approximately 5,000 plants near Anderson Dam, partially on Santa Clara County Park property and partially on private property. Another population is recorded north of Morgan Hill and west of 101 on private land. Prior to 1993, Freas (*in litt.*, 1993) monitored the three populations of the ceanothus. She found no evidence of seedling recruitment and observed that all of the populations were composed of mature and senescent individuals (large plants with many dead branches).

The existing populations of ceanothus are threatened by residential and recreational development, unauthorized dumping, landfill activities, lack of natural recruitment (Service 1995), altered fire regimes (C. Schmidt, *in litt.*, 1996, 1998), grazing (CNDDDB 1996) and stochastic (involving random or chance processes) events (K. Freas, *in litt.*, 1993). The Kirby Canyon population which occurs 3.2 km (2 mi.) west of Anderson Dam is on property leased and managed by Waste Management of California, Inc. This population is threatened by cattle grazing and dumping (CNDDDB 1996). The third population (Llagas Avenue north of Morgan Hill), consisting of approximately 500 plants, occurs on private land (Corelli 1991, CNDDDB 1996). Although Coyote ceanothus still occurs there, a portion of the occurrence had been developed as of April, 1997. When the site was last visited, the plants seemed to be rather senescent and all of the same age class (CDFG 1997).

The ceanothus co-occurs with the bay checkerspot and is found in the Kirby and Morgan Hill units of bay checkerspot critical habitat, flanking the southern Coyote Valley. See the bay checkerspot baseline section for a discussion of nitrogen deposition baseline. Nitrogen deposition effects on the Coyote ceanothus are uncertain at this time.

Delta Smelt Baseline Update

During May and June of 1999, over 100,000 smelt were incidentally taken at the State and Reclamation water project pumps. The allocated incidental take for those two months is 20,478. Additionally, in May and June 2000, 92,000 smelt were taken at the project pumps in the south Delta in the spring of 2000, potentially reducing the population's ability to recover (USDI-BOR, unpublished data, 2000). Smelt remained in the Delta for an extended period of time in the spring of 1999 and it was hypothesized that this was a result of cooler water temperatures.

Giant Garter Snake Baseline Update

Surveys over the last two decades have located the giant garter snake as far north as the Butte Basin in the Sacramento Valley. Currently, the Service recognizes 13 separate populations of giant garter snakes, with each population representing a cluster of discrete locality records (58 FR 54053). The 13 extant population clusters largely coincide with historical riverine flood basins and tributary streams throughout the Central Valley (Hansen 1980, Brode and Hansen

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1992): (1) Butte Basin, (2) Colusa Basin, (3) Sutter Basin, (4) American Basin, (5) Yolo Basin--Willow Slough, (6) Yolo Basin--Liberty Farms, (7) Sacramento Basin, (8) Badger Creek--Willow Creek, (9) Caldoni Marsh, (10) East Stockton--Diverting Canal and Duck Creek, (11) North and South Grasslands, (12) Mendota, and (13) Burrel/Lanare. These populations span the Central Valley from just southwest of Fresno (i.e., Burrel-Lanare) north to Chico (i.e., Hamilton Slough). The 11 counties where the giant garter snake is still presumed to occur are: Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo.

In 1994, the BRD (formerly the National Biological Survey [NBS]) began a study of the life history and habitat requirements of the giant garter snake in response to an interagency submission for consideration as an NBS Ecosystem Initiative. Since April of 1995, the BRD has further documented occurrences of giant garter snakes within some of the 13 populations identified in the final rule. The BRD has studied populations of giant garter snakes at the Sacramento and Colusa National Wildlife Refuges within the Colusa Basin, at Gilsizer Slough within the Sutter Basin, and at the Badger Creek area of the Cosumnes River Preserve within the Badger Creek-Willow Creek area (Wylie *et al.* 1997). These populations, along with the American Basin population of giant garter snakes represent the largest extant populations. With the exception of the American Basin, these populations are largely protected from many of the threats to the species. Outside of these protected areas, giant garter snakes in these population clusters are still subject to all threats identified in the final rule. The remaining nine population clusters identified in the final rule are distributed discontinuously in small isolated patches and are vulnerable to extirpation by stochastic environmental, demographic, and genetic processes. All 13 population clusters are isolated from each other with no protected dispersal corridors. Opportunities for recolonization of small populations which may become extirpated are unlikely given the isolation from larger populations and lack of dispersal corridors between them.

Reasons for Decline and Threats to Survival: The current distribution and abundance of the giant garter snake are much reduced from former times. Agricultural and flood control activities have extirpated the giant garter snake from the southern one third of its range in former wetlands associated with the historic Buena Vista, Tulare, and Kern lake beds. These lake beds once supported vast expanses of ideal giant garter snake habitat, consisting of cattail and bulrush dominated marshes. Vast expanses of bulrush and cattail floodplain habitat also typified much of the Sacramento Valley historically. Prior to reclamation activities beginning in the mid to late 1800's, about 60 percent of the Sacramento Valley was subject to seasonal overflow flooding in broad, shallow flood basins that provided expansive areas of giant garter snake habitat (Hinds 1952). All natural habitats have been lost and an unquantifiable small percentage of semi-natural wetlands remain extant. Only a small percentage of these wetlands currently provide habitat suitable for the giant garter snake. Valley floor wetlands are subject to the cumulative effects of upstream watershed modifications, water storage and diversion projects, as well as urban and agricultural development. Although some giant garter snake populations have persisted at low levels in artificial wetlands associated with agricultural and flood control activities, many of

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these altered wetlands are now threatened with urban development. Cities within the current range of the giant garter snake that are rapidly expanding include: (1) Chico, (2) Yuba City/Marysville, (3) Sacramento, (4) Galt, (5) Stockton, (6) Gustine, and (7) Los Banos.

A number of land use practices and other human activities currently threaten the survival of the giant garter snake throughout the remainder of its range. Ongoing maintenance of aquatic habitats for flood control and agricultural purposes eliminate or prevent the establishment of habitat characteristics required by giant garter snakes and can fragment and isolate available habitat, prevent dispersal of snakes among habitat units, and adversely affect the availability of the garter snake's food items (Hansen 1988, Brode and Hansen 1992). Livestock grazing along the edges of water sources degrades habitat quality in a number of ways: (1) eating and trampling aquatic and riparian vegetation needed for cover from predators, (2) changes in plant species composition, (3) trampling of snakes, (4) water pollution, (5) and reducing or eliminating fish and amphibian prey populations. Overall, grazing has contributed to the elimination and reduction of the quality of available habitat at four known locations (Hansen 1982, 1986).

In many areas, the restriction of suitable habitat to water canals bordered by roadways and levee tops renders giant garter snakes vulnerable to vehicular mortality. Fluctuation in rice and agricultural production affects stability and availability of habitat. Recreational activities, such as fishing, may disturb snakes and disrupt basking and foraging activities. Non-native predators, including introduced predatory game fish, bullfrogs, and domestic cats also threaten giant garter snake populations. While large areas of seemingly suitable giant garter snake habitat exist in the form of duck clubs and waterfowl management areas, water management of these areas typically does not provide summer water needed by giant garter snakes. Although giant garter snakes on National Wildlife Refuges are relatively protected from many of the threats to the species, water quality continues to be a threat to the species both on and off NWRs.

Populations in the Vicinity of Selenium Contamination: San Joaquin Valley sub-populations of giant garter snakes have suffered severe declines and possible extirpations over the last two decades. Prior to 1980, several areas within the San Joaquin Valley supported populations of giant garter snakes. Until recently, there were no post-1980 sightings from Stockton, San Joaquin County, southward, despite several survey efforts (Hansen 1988). Surveys during 1986 of prior localities did not detect any giant garter snakes. During 1995 surveys of prior locality records and adjacent waterways, one road-killed giant garter snake was found, and three presumed giant garter snakes were observed but not captured. Two sightings occurred at Mendota Wildlife Area, and two occurred several miles south of the town of Los Banos (Hansen 1996). In April 1998 the Dixon Field Station of the Western Ecological Research Center (U.S. Geological Survey) began a survey for giant garter snakes in the San Joaquin Valley. The effort yielded the capture of seven female and four male giant garter snakes, for a total of 11 individuals. The majority of the snakes were caught in the North Grasslands; seven were caught in Los Banos Creek west of Kesterson National Wildlife Refuge, three were caught at the Volta

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State Wildlife Area, and one was caught in the South Grasslands. Snake densities in the San Joaquin Valley seemed extremely low in comparison to study areas in the Sacramento Valley (Wylie 1998). In 1999, surveys for giant garter snake were conducted by the California Department of Fish and Game out of the Los Banos Wildlife Area and were performed according to U.S. Geological Survey protocols. Fourteen new giant garter snakes were captured and eleven were recaptured as part of this effort. No captures were made in the Los Banos Wildlife Area. Fifteen snakes were captured in Los Banos Creek, and eleven at Volta State Wildlife Area. All of these recent sightings were in areas to the west of surface waters that have been impacted by agricultural drainage discharges.

In addition to California Department of Fish and Game surveys in 1999, M. Paquin of the U.S. Geological Survey conducted walking surveys in the South Grasslands during May and June 1999. Three snakes were located as a result of the surveys, two road kills and one live-capture. The live snake was captured in the Agatha Canal, one road kill was found on Santa Fe Grade Road, and one on Mallard Road near the Agatha Canal (Beam *et al.*, 1999). The sightings are within or near the Grassland Wetland Supply Channels, where water quality has improved since the onset of the Grassland Bypass Project.

Although habitat has been lost or degraded throughout the Central Valley, there have been many recent sightings of giant garter snakes in the Sacramento Valley while there have been very few recent sightings within the San Joaquin Valley. The 1995 report on the status of giant garter snakes in the San Joaquin Valley (Hansen 1996) indicates that Central San Joaquin Valley giant garter snake numbers appear to have declined even more dramatically than has apparently suitable habitat. Factors in addition to habitat loss may be contributing to the decline. These are factors that affect giant garter snakes within otherwise suitable habitat and include interrupted water supply, poor water quality, and contaminants (Hansen 1996). The recent survey data indicate that giant garter snakes are still extant in two localities within the San Joaquin, but in extremely low to undetectable numbers.

Selenium contamination and impaired water quality have been identified in the final rule listing the giant garter snake as a threat to the species and a contributing factor in the decline of giant garter snake populations, particularly for the North and South Grasslands subpopulation (i.e., Kesterson NWR area). The bioaccumulative food chain threat of selenium contamination on fish, frogs, and fish-eating birds has been well documented. Though there is little data specifically addressing toxicity of selenium (Se), mercury (Hg), or metals to reptiles, it is expected that reptiles would have toxicity thresholds similar to those of fish and birds. (58 **FR** 54053 under Factor E - Contaminants)

Threats Due to Contaminants and Impaired Water Quality: The range of the giant garter snake occurs entirely within the Central Valley of California, putting giant garter snakes at risk of exposure to numerous contaminants from agricultural, urban, and industrial/mining runoff.

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Current water sources and supplies to areas supporting giant garter snakes indicate that the species is at risk of exposure to both mercury and selenium. Many areas that once supported populations of giant garter snake have received water from agricultural drainage, which may contain elevated levels of selenium or other contaminants. Selenium contamination of drain water has been identified in the San Joaquin Valley giant garter snake subpopulations (58 FR 54053 and references therein). In addition, streams draining the coastal ranges may contribute selenium to aquatic systems within the Central Valley.

Summary of Contaminants Threats to Giant Garter Snakes: The giant garter snake has a restricted distribution and is entirely dependent on its aquatic ecosystem. The thirteen population clusters identified in the final rule are distributed discontinuously in small isolated patches and are vulnerable to extirpation by stochastic environmental, demographic, and genetic processes. The small number of individual giant garter snakes found within the extensive wetland areas of the Grasslands Water District of the San Joaquin Valley, which for much of the last twenty years received seleniferous irrigation drainage water, may be circumstantial evidence of a selenium effect on this top aquatic predator. It is that elevated selenium levels in the San Joaquin Valley contributed to the severe decline or extirpation of the giant garter snake from the majority of this area. The remaining giant garter snake populations are exposed to impaired water bodies and existing or potential sources of selenium. As top predators, giant garter snakes are at risk of exposure to elevated levels of contaminants such as mercury and selenium. Over the life of the giant garter snake it is possible to accumulate contaminants that can impact the growth, survival, and reproduction of individuals, leading to declines in distribution. Water quality impairment of aquatic habitat that supports giant garter snakes could also reduce the prey base, contribute to bioaccumulation, impair essential behaviors, and reduce reproductive success.

Metcalf Canyon Jewelflower

The jewelflower always has been rare. The known historical distribution is as restricted as its current distribution. It is found only in the north-central Santa Clara Valley area of Santa Clara County, primarily on the east side of the valley. It can be locally abundant, but its range is limited, extending less than 20 miles from San Jose south to Anderson Lake. Furthermore, the serpentine outcrops on which the jewelflower occurs are patchily distributed and comprise only a small percentage of the area within its range (McCarten 1992). Fourteen occurrences are listed in the CNDDDB, with nine occurrences more recently documented and known to be extant (CNDDDB 1996). Because of genetic differences among populations, all populations of the jewelflower are valuable genetic resources (Mayer *et al.* 1994, M. Mayer, *in litt.*, 1998).

The jewelflower is threatened by urbanization, overgrazing, dumping, and off-road vehicle use. Many of the extant populations are in areas of Santa Clara County being rapidly urbanized (CNDDDB 1996). All nine populations are wholly or partially privately owned. One population is known to have been extirpated by being covered with fill from a housing development, and one

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was probably extirpated by the construction of Anderson Dam. Three occurrences are known from historic records. Cattle grazing has contributed to reduced population sizes and could result in local extinction of the species within its range. Cattle eat or trample individual plants before they mature and set seed (K. Freas, *in litt.*, 1993). Grazing threatens one population in southeast San Jose and populations in the Metcalf Canyon area (CNDDDB 1996). Road maintenance or construction threaten populations that occur on roadcuts (McCarten 1992, Service 1998). One population is adjacent to an active quarry and could be threatened by activities associated with its operations (CNDDDB 1996).

The jewelflower often co-occurs with the bay checkerspot and is found in areas of bay checkerspot critical habitat within or to the east of the Coyote Valley. Serpentine habitat protection discussed under the bay checkerspot baseline has also preserved at least one significant jewelflower locality (Silver Creek Hills). See the bay checkerspot baseline section for a discussion of nitrogen deposition baseline. Nitrogen deposition effects on the jewelflower are uncertain at this time, but if the deposition enhances non-native plant survival and growth, its effect is likely to be negative.

Sacramento Splittail Baseline Update

The Interagency Ecological Program's spring 1999 20mm survey showed a significant decrease in abundance of splittail young of the year (R. Baxter, pers. comm.). This survey and spring 2000 20 mm surveys also identified a portion of the splittail population in the central and south Delta during the spring and early summer (Department unpublished data 1999). During May and June 2000, the State and Federal Water Projects in the south Delta entrained over 79,000 splittail (California Department of Fish and Game, unpublished data, 2000).

The current distribution of splittail is similar to the historic in terms of the maximum upstream limits of occurrence in main stem rivers, but the areal extent has been significantly reduced. Reclamation of land has appreciably reduced the areal extent of the distribution. The diking and reclamation of river channels, Delta Islands, and Tulare Lake have removed formerly suitable aquatic habitats. The splittail has evidently been extirpated from Coyote Creek in south San Francisco Bay. The Napa and Petaluma marshes have been diked in a manner similar to the Delta. The splittail appears to have made a transition from a widely ranging Central Valley species primarily to a species largely confined to the Delta and Suisun Marsh/Suisun Bay.

Reasons for Decline and Threats to Survival: Splittail habitat continues to be lost through the retention of water in reservoirs for municipal, agricultural, and environmental purposes, diking of formerly flooded areas, riprapping, and reductions in flow. Water diverted to storage is unavailable to inundate splittail habitat during the spring spawning season. Current efforts to save peak runoff for later release, to benefit delta smelt and listed salmonids, also reduce the effects of peak flow events downstream. splittail habitat thus is inundated less frequently and for

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shorter durations.

Sand mining in Suisun Bay is also a threat to the splittail, as it disturbs the benthos upon which splittail feed. Sand mining also further depletes sediment supply in an already sediment-poor ecosystem.

Non-native species also threaten the splittail via competition for finite habitat and food resources and predation. Introduced fish, such as red shiners, golden shiners, and inland silversides may use the same floodplain habitat and their larvae compete with splittail larvae for food. Non-native jellyfish are also a threat as they compete with larval splittail for food. The jellyfish, as have Chinese mitten crabs, could also reach concentrations sufficient to impede the operation of fish screens and salvage facilities. Lastly a native copepod has been largely supplanted by three non-native forms. One of these non-native forms is difficult for larval fishes to catch because it is fast swimming and has an effective escape response. Reduced feeding efficiency and ingestion rates can weaken and slow the growth of splittail young and make them more vulnerable to starvation or predation. Reduced recruitment of new fish results in fewer fish in the population, and fewer fish which may spawn in the future.

Exports of water from the CVP and SWP pumps continue to threaten the splittail. Fish entrained at these pumps can suffer mortality from salvage, handling, and release. Predation is likely to be elevated at the release point. Continued mortality at the pumps may reduce the resilience of the splittail population and put at risk the long-term viability of the species in the estuary.

Environmental contaminants are a threat to the continued survival of splittail. Particularly near inputs of acid mine drainage within the Sacramento River watershed and in the vicinity of highly industrialized near shore areas of the lower San Francisco Bay estuary, metals such as copper, zinc, and cadmium can be directly toxic to splittail, especially in their sensitive larval stages. These metals damage gills and alter liver and nervous system functions causing death, behavioral changes, and reduced growth and reproduction. These metals can have the same effects on food items of the splittail, reducing their prey base and placing additional stress on the splittail.

Three other contaminant threats are of far greater strategic concern specifically for the continued existence of the splittail: (1) mercury, (2) selenium, and (3) agriculturally-applied organochlorine compounds. In part, these contaminant threats are of great concern because they are focused, to varying degrees, on habitat features and biological characteristics tentatively identified as particularly relevant to splittail conservation (Moyle *et al.*, 2001 Draft White Paper).

There are substantive contaminant threats that specifically apply to the splittail because of their reliance on flooded agricultural lands for spawning areas, because of their shifting dietary reliance on Asiatic clams in a region where the clams already contain enough selenium to be toxic to fish (and the clams' selenium content is still climbing), because artificial stressors, such

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as salvage operations associated with entrainment at the State and Federal pumping plants make splittail especially vulnerable to interaction effects with contaminants, and because juvenile growth rates prior to out-migration are crucial for successful recruitment, yet current levels of contaminant exposure are consistent with the growth inhibition already showing up in splittail growth curves. Dangerously elevated exposures to mercury, selenium, toxaphene, and DDE have already been directly confirmed for various portions of splittail populations. Foreseeable trends in contaminant loadings to splittail environments, and in splittail feeding ecology, will lead to a worsening of contaminant threats in the near-term future.

Salt Marsh Harvest Mouse

Although information is available regarding the presence of harvest mice throughout its range, little information is available regarding harvest mice populations in a spatial or temporal scale. Typically, the baseline of the harvest mouse correlates to the condition and presence of its habitat. Historically, there has been an 84 percent reduction in tidal wetlands in the Bay Area. *R. raviventris raviventris* is currently known from the Hayward/San Leandro marshes south to Alviso and north to Bair Island. As previously described, habitat loss and/or degradation is the primary cause of decline for the harvest mouse throughout its range. Several acquisition and salt marsh restoration projects are in progress that may eventually enhance the salt marsh harvest mouse baseline in the south Bay. Management and maintenance activities associated with salt production and wastewater discharge may be impairing recovery of the harvest mouse in the area. Other factors which may contribute to the decline of the species include predation, environmental contaminants, and non-native species.

Salt marsh habitat of the salt marsh harvest mouse in the south Bay has been degraded by large and unseasonal discharges of fresh water from sewage treatment facilities in the south Bay area, such as San Jose. Salt marsh vegetation required by the salt marsh harvest mouse in turn requires salty conditions. Conversion to fresh conditions has promoted invasion of non-habitat vegetation and harmed the salt marsh harvest mouse. Increasing population and sewage load in Santa Clara County have lead to increasing freshwater effluent discharges in the south Bay.

Santa Clara Valley Dudleya

The dudleya is found only in Santa Clara County, from San Jose south about 20 miles to San Martin, on patches of serpentine soil and rock (McCarten 1993, Skinner and Pavlik 1994). Twenty occurrences are currently documented at the CNDDB; 50 are listed by Harvey & Associates (2000) in the same geographic range.

The species has been impacted by development, landfill activities, unauthorized dumping, quarry expansion, and off-road vehicles. Many occurrences are on private land, and many of these are subject to various levels of threat from development (CNDDB 1996, CDFG 1997).

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In addition, grazing (McCarten 1993, K. Freas, *in litt.*, 1993, D. Mayall, *in litt.*, 1998 as cited in USFWS 1998) and collecting (USFWS 1995) may have impacted *Dudleya setchellii*. Grazing occurs on much of the grassland where the dudleya is located (McCarten 1993) and may result in reduced vigor or death of mature the dudleya individuals and the failure of seedling establishment (K. Freas, *in litt.*, 1993). Unrestricted collecting for scientific or horticultural purposes or excessive visits by individuals interested in seeing rare plants could threaten the dudleya. Due to the slow growth rate of this species and the rarity and desirability of large succulents, mature plants found in the wild are particularly susceptible to collection (USFWS 1995).

A large dudleya population occurs on the Ranch on Silver Creek property in the Silver Creek Hills. Approximately 18,000 of the original dudleya individuals remain untouched by construction operations and will be preserved in their original locations. More than 1,000 individuals salvaged from grading operations survived in transplanted locations after two years. Other serpentine habitat protection discussed under the bay checkerspot baseline has also preserved dudleya localities at Kirby Canyon and Tulare Hill.

The dudleya co-occurs widely with the bay checkerspot and is found in most areas of bay checkerspot critical habitat around the Santa Clara Valley. See the bay checkerspot baseline section for a discussion of nitrogen deposition baseline. Nitrogen deposition effects on the dudleya are uncertain at this time.

Tiburon Paintbrush Baseline

All paintbrush plants in Santa Clara County grow approximately one mile (1.61) east of Highway 101, north of Cochrane Road and south of the Kirby Canyon landfill. The northern Kirby Canyon paintbrush population may be on a leased conservation area for bay checkerspot butterfly (N. McCarten, *in litt.*, 1998). The conservation area is a 107-ha (267-acre) lease held by Waste Management Inc. to offset effects of the Kirby Canyon Landfill (Murphy 1988, Thomas Reid Associates and Murphy 1992), however, this is not currently a permanent protection. The other population, discovered following the publication of the Recovery Plan for serpentine species, is located near Pigeon Point north of Anderson Dam (D. Mayall, *in litt.* 1999, pers. comm. Jun. 2001).

The populations of Tiburon paintbrush in Santa Clara County occur on private land. Cattle grazing has been reported to impact some occurrences of the paintbrush (Hunter 1989). As of the early 1990s, the northern Santa Clara County population consisted of 13 plants and was subject to low levels of grazing (R. Bittman, pers. comm., 1993). Exact grazing levels at the Anderson Dam property are unknown.

The paintbrush in Santa Clara County is found in the Kirby unit of bay checkerspot critical

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habitat, east of the southern Coyote Valley. See the bay checkerspot baseline section for a discussion of nitrogen deposition baseline. Nitrogen deposition effects on the Tiburon paintbrush are uncertain at this time, but if the deposition enhances non-native plant survival and growth, its effect is likely to be negative.

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Effects of the Proposed Action

This biological opinion analyzes the reasonably foreseeable effects of execution of CVP Interim renewal contracts from March 1, 2002 to February 29, 2004, as described in the Project Description of this opinion.

Please refer to the 2000 Interim opinion for an analysis of many of the effects of the action. This section of the present amendment addresses only changes since 2000 or interrelated actions not considered in 2000, notably the removal of Friant, Buchanan, and Hidden contractors from the action area, the addition of Westlands WD and Santa Clara Valley WD, and an analysis of selenium loading into the DMC and downstream waters. Addition of Westlands and Santa Clara Valley WDs adds approximately 605,000 acres in western Fresno and northwestern Kings counties (Westlands WD and surrounding area) and all of Santa Clara County (service area of Santa Clara Valley WD) to the action area.

We do not address Pajaro Valley WMA in this biological opinion, because this contractor currently cannot receive their contracted CVP water, and due to infrastructure and legal constraints is not likely to during the next two years. A 50 acre-feet contract with El Dorado Irrigation District (for Lake Hills Estates) also is not addressed, since Reclamation has indicated that this contract will not be supplied under the proposed Interim Contracts. We therefore find no need to analyze the effects of these contracts at this time.

Santa Clara Valley Water District

This contractor may receive up to 6,260 acre-feet. of CVP water in any given year, typically in drier years. While a relatively small contract, this amount augments Santa Clara County's limiting supply—the amount available during droughts—and consequently could support continued growth in the county, including municipalities within the district. For example, assuming average residential use of about 100,000 gallons per year, the contract amount is capable of supplying water for about 20,000 new single-family detached homes. Because of the commingling of supplies in underground aquifers, Santa Clara Valley WD may not be able to control growth-inducing effects of this increase in supply. In the service area of the Santa Clara Valley WD, unlike most contractors, conversion of habitats supporting listed species may be more likely to result from residential and commercial development than agriculture.

Sizeable and vitally important areas of remaining serpentine habitat for the bay checkerspot butterfly, Coyote ceanothus, Santa Clara Valley dudleya, Metcalf Canyon jewelflower, and Tiburon paintbrush lie within the limits of growing Santa Clara County, including the City of San Jose and other municipalities. The California Court of Appeals recently ruled, in response to a

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citizens' suit, that the City of San Jose's zoning need not be consistent with its General Plan (San Jose Mercury News, May 10, 1997, p. 2B). The City, therefore, may be limited in its ability to guide growth and development in environmentally sensitive areas. Development is somewhat restricted by the City's voter-initiative "greenline," or urban growth boundary. However, development outside the greenline can occur, and within the City is governed by a slope density formula, generally resulting in lot sizes of 20 acres (8.1 ha) or larger. Outside of the incorporated areas, important serpentine habitats and associated listed species are threatened by development in unincorporated Santa Clara County.

Human population growth and associated development in Santa Clara County have other, less direct, impacts on listed species. Increased automobile use, power generation, and industrial activity cause increases in nitrogen-bearing air pollution. This excess airborne nitrogen is then deposited through atmospheric processes on surrounding areas, including sensitive serpentine soil habitats supporting listed species. The effects of excess nitrogen deposition are discussed in detail in the bay checkerspot Environmental Baseline section, above. In summary, the nitrogen addition acts as a fertilizer, and enhances the growth of non-native invasive plants that crowd out or shade out food plants of the bay checkerspot, and also likely compete with endangered Tiburon paintbrush and Metcalf Canyon jewelflower plants. Adverse effects on Santa Clara Valley dudleya and Coyote ceanothus are possible but uncertain at this time. Since air pollution in much of the county is already at levels likely to be affecting many serpentine habitats, additional pollution with exacerbate the problem.

Another indirect effect of growth in Santa Clara County arises from sewage effluent and the resulting freshening of salt marshes. This effect was discussed in the Baseline section for California clapper rail and salt marsh harvest mouse. In summary, human population increase and increased total water use leads to increases in sewage load and ultimately to treated effluent. Treated effluent in northern Santa Clara County has lower salinity than the south San Francisco Bay waters into which the effluent flows. These fresh and unseasonal flows (remaining high in summer and fall when natural flows are minimal) result in the degradation of salt marsh habitat of clapper rails and salt marsh harvest mice, because their habitat requires saline conditions. Most of Morgan Hill and south in Santa Clara County are in the Pajaro River watershed and do not drain to the south San Francisco Bay. Use of the contract water in this southern watershed would not be likely to adversely affect California clapper rail or salt marsh harvest mouse. . . Construction of a water recycling (high-level treatment) facility and distribution system in the greater San Jose area, funded in part by Reclamation, will reduce somewhat the volume of freshwater effluent reaching the south Bay in the short term.

Overall, the growth-inducing effects of the proposed water contract deliveries to Santa Clara Valley WD are reduced by the following considerations: the relatively small amount of the contract (6,260 acre-feet maximum); the short term of the Interim water contract authorization (two years); the County, City of San Jose, and District's commitment to develop an HCP to

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address long term conservation needs; and the County and City's commitments as part of the HCP process to develop and implement, in coordination with the Service, short term ("interim") measures to minimize impacts to listed species until the HCP is approved. However, the Service is not currently aware of any significant progress in developing and implementing these interim procedures.

Westlands Water District

Much of the effects discussion in the 2000 Interim biological opinion is generally applicable to Westlands WD. Westlands WD includes habitat types with value to listed species, including lands that have not been irrigated. San Joaquin kit fox, kangaroo rats, blunt-nosed leopard lizards, and other listed species are likely to use the area. Also within the CVP "consolidated place of use" are so-called expansion lands, which are not irrigated but have been approved as part of the CVP place of use. Many of the "expansion" lands have habitat value, and are adjacent to and connected to other habitat.

Otherwise, most of Westlands is converted, irrigated farmland. Reclamation has taken steps to assure that the Interim contracts do not result in conversion of listed species habitat, and according to Westlands WD the water would be used on existing irrigated croplands. The maximum 6,260 acre-feet proposed would be adequate to irrigate perhaps 2,000 to 5,000 acres. We therefore expect that the impact of the proposed action to the conservation status of listed species would not be appreciable for the two year interim period.

Selenium-Related Effects

Project water deliveries, and their consequent use on crops on seleniferous soils or soils with a shallow selenium-bearing water table, result in selenium-bearing drainage. Such drainage sometimes reaches listed species habitats and affects them either directly or through food chain concentration and ingestion. Problematic areas for irrigation because of selenium-bearing drainage were identified in the final report of the San Joaquin Valley Drainage Program (SJVDP 1990, sometimes known as the "Rainbow Report"), and overlap the service areas of several proposed Interim contractors. Although an essential micronutrient, selenium has a very narrow range of beneficial effect and quickly shows toxic effects at higher concentrations. Recent information has become available on the prevalence and effects of selenium in the action area. Effects of the proposed action on selenium exposure of giant garter snake and Sacramento splittail are discussed below.

Giant garter snake

Selenium Toxicity in Giant Garter Snake: Toxicity information on reptiles such as the giant

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garter snake is very limited. Studies on pine snakes (*Pituophis melanoleucus*) have shown that, unlike metals such as lead and mercury, selenium concentrations are greater in body tissue than in skin tissue (Burger, 1992). Endemic to wetlands in the Sacramento and San Joaquin Valleys, the giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, and other waterways and agricultural wetlands, such as irrigation and drainage canals and rice fields. Giant garter snakes feed on small fishes, tadpoles, and frogs (Fitch 1941; Hansen 1980; Hansen 1988). These habitat preferences and predatory foraging habits put the giant garter snake at risk of selenium exposure.

As top predators, giant garter snakes are at risk of exposure to elevated levels of contaminants that bioaccumulate such as mercury and selenium. Over the life of the giant garter snake it is possible for snakes to accumulate contaminants that can impact the growth, behavior, survival, and reproduction of individuals, leading to declines in numbers and distribution. Water quality impairment of aquatic habitat that supports giant garter snakes could also reduce the prey base for the species.

The Department of the Interior's *Guidelines for the Interpretation of the Biological Effects of Selected Constituents in Biota, Water and Sediment* (USDI Guidelines) summarize background selenium levels in lizards, pine snake hatchlings from New Jersey (USDI-BOR/FWS/GS/BIA 1998), and snakes collected from the San Joaquin Valley. Alligator eggs from Florida suggest that reptile eggs are at the same selenium background level as fish and bird eggs (1-3 ppm). In the San Joaquin Valley, background levels of selenium in frog tissue range from 1.0 ppm to 3.6 ppm dry weight. Livers from gopher snakes in reference sites near Kesterson contained 1 - 4 ppm selenium. Skinless, whole-body pine snake hatchlings (considered representative of snake eggs) from New Jersey averaged 2.6 ppm. The USDI Guidelines state that it is probably safe to assume whole body concentrations at or above 10 times normal background (or ≥ 20 ppm) are toxic to populations of sensitive species (USDI-BOR/FWS/GS/BIA 1998). Further, the USDI Guidelines state that reproductive impairment is likely to be the most sensitive response and snake eggs with selenium concentrations ≥ 10 ppm are being reproductively impaired.

In the absence of a species-specific selenium toxicity model for the giant garter snake the Service would recommend using an avian risk model for selenium based on the close phylogenetic relationship of birds to reptiles (e.g., Romer 1966; Porter 1972; Storer *et al.* 1972). Although giant garter snakes are live-bearing, newly born garter snakes have yolk sacs like other egg-laying species. Using such an avian risk model, the Service concluded in the draft California Toxics Rule biological opinion that a selenium criterion of 5 ppb in water would jeopardize the giant garter snake. The Service has stated that a 2 ppb (monthly mean) standard for wetland water supply channels in the Grasslands (which was adopted by the State in the Grasslands Amendments) should be protective of giant garter snakes and their habitat. However, various results for water concentrations of selenium as low as 0.5 ppb suggest that bioaccumulation can sometimes result in problematic selenium levels in benthic organisms and fish (trout) even at

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selenium levels below 2 ppb in water (Saiki and Palawski 1990; Luoma and Presser 2000).

Mercury levels in fish from the lower San Joaquin River and Mud Slough have been found to be elevated (Davis *et al.* 2000; Slotton *et al.* 2000). The ultimate source is likely the New Idria Mine located in the Panoche/Silver Creek watershed. It has been shown that mercury added to a selenium-enriched test diet of mallards increased the amount of selenium stored in the mallards eggs (Heinz and Hoffman 1998). The potential for this interactive effect between mercury and selenium to occur in giant garter snakes in the Grassland Bypass Project area is of concern and warrants study.

Selenium in Grassland Wetlands Source Water: In water year 2000, the average selenium concentrations of all composite samples of fish collected from Salt Slough (a Grassland wetland supply channel where biological monitoring has occurred) was 2.6 ppm (n=66), below the Grassland Bypass Project warmwater fish level of concern threshold (4 ppm), and significantly below the pre-Project average (6.7 ppm, n=78). A composite sample of four bullfrog tadpoles collected in Salt Slough in August 1999 had about half the selenium concentration (2.6 ppm) of a single bullfrog tadpole collected in March 1993 (5.8 ppm). However, the selenium concentration was higher in a composite sample of three bullfrog tadpoles in June 2000 (2.9 ppm), and still higher in August 2000 (7.5 ppm in a composite sample of three tadpoles), the August samples being within the level of concern range for warmwater fish (4-9 ppm) from Grassland Bypass Project Guidelines (Beckon *et al.*, 2001). The August 2000 tadpole data indicate that selenium in the foodchain of the giant garter snake may still be of concern in the Grassland wetland supply channels, at least during some times of the year and during some water year types.

Although selenium levels in the Grassland wetland water supply channels have decreased substantially since the implementation of the first Grassland Bypass Project in September 1996, the 2 ppb (monthly mean) water quality objective promulgated by U.S. EPA and adopted by the State to protect Grassland wetland habitat has been exceeded in at least some of these canals on numerous occasions since 1996 (Chilcott, May 2000). Of note are exceedences of the 2 ppb water quality standard observed in wetland water supply channels during the months of March and April 2001. According to Reclamation data, there were elevated selenium concentrations during March and April 2001, with water concentrations of 2.38 and 3.32 ppb, respectively, reported at Bass Avenue, the Delta Mendota Canal (DMC) terminus. The DMC is the water supply source for the Grassland wetland supply channels and the agricultural lands in the Grasslands Drainage Area (GDA). These elevated DMC concentrations likely influenced the significant exceedences of the 2 ppb water quality standard for Grassland wetland water supply standard during March and April 2001 at 5 sampling locations in the Grasslands, where measured concentrations reached a high of 7.6 ppb at station K (Agatha Canal) on March 7, 2001 (Grassland Bypass Project, Monthly Data Report, May 2001). It is possible that some of this peak in selenium in source waters of the DMC during March and April 2001 could be explained by surface water runoff from Panoche/Silver Creek watershed (outside of the GDA) that occurred

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on March 5, 2001, subsiding after March 10, 2001 (McGahan, in litt., June 21, 2001). However, the Data Collection and Reporting Team of the Grassland Bypass Project noted that, while the McGahan memo could serve as one hypothesis for exceedences of the 2 ppb (monthly mean) standard, the peaks in selenium concentrations in many cases came either before or too long after this storm event to explain all the exceedences.

Sacramento splittail

Selenium Toxicity to Fish: Recently, research on toxic effects of selenium on fish was reviewed and summarized by Lemly (1996b). Lemly reported that salmonids are very sensitive to selenium contamination and exhibit toxic symptoms even when tissue concentrations are quite low. Survival of juvenile rainbow trout (*Oncorhynchus mykiss*) was reduced when whole-body concentrations of selenium exceeded 5 ppm (dry weight.). In juvenile chinook salmon (*Oncorhynchus tshawytscha*), smoltification (the process by which fish morphologically, behaviorally and physiologically adapt to living in seawater after living in freshwater) and migration to seawater were impaired when whole-body concentrations of selenium reached about 20 ppm (dry weight). Mortality among larvae, a more sensitive life stage, occurred when concentrations exceeded 5 ppm (dry weight). Whole-body concentrations of selenium in juvenile striped bass (*Morone saxatilis*) collected from areas in California impacted by irrigation drainage ranged from 5 to 8 ppm (dry weight).

Summarizing studies of warm-water fish, Lemly (1996b) reported that growth was inhibited at whole-body concentrations of 5 to 8 ppm (dry weight) selenium or greater among juvenile and adult fathead minnows (*Pimephales promelas*). Several species of centrarchids (sunfish) exhibited physiologically important changes in blood parameters, tissue structure in major organs (ovary, kidney, liver, heart, gills), and organ weight-body weight relations, when skeletal muscle tissue contained 8 to 36 ppm selenium. Whole-body selenium concentrations of only 4 to 6 ppm (dry weight) were associated with mortality when juvenile bluegill (*Lepomis macrochirus*) were fed selenomethionine-amended commercial diets in the laboratory. When bluegill eggs contained 12 to 55 ppm selenium (dry weight), transfer of the selenium to developing embryos during yolk-sac absorption resulted in edema, morphological deformities, and death prior to the swim-up stage. In a laboratory study of "winter stress syndrome," juvenile bluegill exposed to a diet containing 5.1 ppm selenium (dry weight) and water containing 4.8 ppb selenium exhibited blood changes and gill damage that reduced respiratory capacity while increasing respiratory demand and oxygen consumption. In combination with low water temperature (4 degrees centigrade) these effects caused reduced activity and feeding, depletion of 50 to 80 percent of body fats, and significant mortality within 60 days. Winter stress syndrome resulted in the death of about one-third of the exposed fish at whole-body concentrations of 5 to 8 ppm selenium (dry weight).

Based upon a review of more than 100 papers, Lemly (1996b) recommended the following toxic

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effects thresholds in freshwater and anadromous fish exposed to elevated concentrations of selenium (dry weight basis): 4 ppm whole body; 8 ppm skinless fillets; 12 ppm liver; and 10 ppm ovary and eggs. He also recommended 3 ppm as the toxic threshold for selenium in aquatic food-chain organisms consumed by fish. Lemly reported that when waterborne concentrations of inorganic selenium (the predominant form in aquatic environments) are in the 7- to 10-ppb range, bioconcentration factors in phytoplankton are about 3,000 (i.e., selenium concentrations in these plankton are 3,000 times higher). He concluded that patterns and magnitudes of bioaccumulation are similar enough among various aquatic systems that a common number, 2 ppb (for filtered samples of water), could be given as a threshold for conditions “highly hazardous to the health and long-term survival of fish”.

Selenium Toxicity to Sacramento splittail: Selenium contamination of splittail has major implications for the species’ ability to successfully tolerate at least two sources of stress that have been identified in the P. Moyle *et al.* draft White Paper on Sacramento splittail (Moyle *et al.* 2001). Splittail apparently experience substantive post-spawning stress. Toxic thresholds for fish and wildlife dietary exposure to selenium have been identified primarily by means of controlled feeding experiments with captive animals (e.g., see reviews by NRC 1980, 1984, 1989; Heinz 1996; Lemly 1996a; Skorupa *et al.* 1996; USDI-BOR/FWS/GS/BIA 1998). Such experiments are carefully designed to isolate the toxic effects of selenium as a solitary stressor. Consequently, the toxic thresholds identified by such studies are prone to overestimating the levels of selenium exposure that can be tolerated without adverse effects in an environment with multiple stressors, whereas multiple stressors are typical of real ecosystems (Cech *et al.* 1998).

Excessive environmental selenium weakens the immune defenses of fish and wildlife, and can also trigger pathogen and toxin challenges that would not otherwise have occurred (Tully and Franke 1935; Whiteley and Yuill 1989; Larsen *et al.* 1997; Wang *et al.* 1997).. For example, a red tide flagellate (*Chattonella verruculosa*) that causes mortality of fish such as yellowtail, amberjack, red and black sea bream, has recently been discovered to require above-normal exposure to selenium (Imai *et al.* 1996). Only when selenium extracted from contaminated sediments is added to growth media can *C. verruculosa* sustain rapid growth (i.e., toxic blooms). The level of contamination required to sustain rapid growth is only about twice normal background. Potential effects of selenium-mediated vulnerability to non-chemical stressors must be considered when assessing the threats of exposure of splittail and other listed species to selenium. Current artificial hydrological conditions and altered ecological conditions are subjecting splittail populations to levels of stress unprecedented in the species prior history, while exposing splittail to artificially elevated selenium concentrations. Each of these factors alone poses serious threats to splittail; together they may pose synergistic threats greater than the sum of the parts. Under current conditions of reduced population and range and environmental stress, splittail are vulnerable to major impacts from epidemic disease, contaminant spills, or other catastrophic events.

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Some fish are known to concentrate selenium in their eggs, or in live young in the case of live-bearers. Concentrations of 3 times the female body concentration are not uncommon (W. Beckon, Service, pers. comm. August 2001). This may be of concern because eggs are a highly active developmental stage, and as such are sensitive to developmental disruptors like selenium. We are not aware of studies of this phenomenon in splittail, but given findings of elevated selenium in some splittail we believe it needs further investigation.

Moyle *et al.* (2001) hypothesize that success of juvenile splittail downstream migration is strongly linked to the size they achieve prior to leaving the spawning areas. A minimum size of 25 mm appears to greatly enhance success. Selenium and other contaminants are known to impair juvenile growth rates (Jarvinen and Ankley 1999), which would reduce the number of splittail juveniles reaching the critical 25 mm length in time for migration.

Effects in Salt Slough: In 1998, Sacramento splittail were caught in Salt Slough for the first time in the eight year sampling history of the Grassland Bypass Project monitoring program. This was likely due to El Nino storms and extended high flows allowing the fish greater access to potential shallow water breeding areas in the San Joaquin Valley. Based on studies of its selenium effects on salmonids, that negative effects of selenium could be expected to be seen at in splittail within a level-of-concern ranging from 4 to 9 ppm (dry weight). The splittail composite sample of 10 fish collected from Salt Slough had a selenium concentration somewhat below this level-of-concern range (3.19 ppm, dry weight basis; Beckon *et al.* 1999). Because of the averaging effect of the composite sample, however, it is entirely possible that some of these individual fish had body burdens of selenium within the level of concern, and were experiencing adverse effects, while others had lower levels. Such variation is typical of data on fish contaminant burdens.

Effects in the San Joaquin River: The San Joaquin River is the only current means by which drainage is removed from the San Joaquin Valley. The disposal of selenium-laden drainage is problematic because of the potential for ecological damage from selenium contamination in receiving waters and downstream in productive estuarine waters. Segments of the lower San Joaquin River, Mud Slough (North), and the San Francisco Bay-Delta Estuary, all downstream of the agricultural discharge from the Grassland Drainage Area, are listed by the State as water-quality impaired under the Clean Water Act. From 1965-1994 the flows of the San Joaquin River were almost completely diverted and recycled through the State and Federal pumping facilities in the south Delta (CSWRCB, 1994; Luoma and Presser 2000).

Toxicity problems may not appear equally in all components of a hydrologic unit because some components may be more sensitive than others. For example, the San Joaquin River, as a flowing water system, may be less sensitive to selenium effects (especially if selenate dominates inputs as is the case with drainage from the San Joaquin Valley) than adjacent wetlands, the Delta or the Bay, where residence times and biogeochemical transformations of selenate are more likely. The sources and fate of selenium in the Delta will be a key to determining what actions are

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necessary to restore the estuary and aid in the recovery of splittail (T. Presser, USGS, in litt., February 26, 2001).

Effects in the Delta: It is not currently well understood how much of the San Joaquin River flows into the Bay-Delta estuary. After the 1994 Bay-Delta Water Accord (CSWRCB, 1994), water management changed, and more selenium may reach the Bay-Delta as less recycling of the San Joaquin River occurs. The amount of selenium-bearing San Joaquin River flow reaching specific locations in the Bay-Delta is can be influenced by: tidal cycles; variable flows of the Sacramento River and San Joaquin River due to seasons and upstream withdrawals, quantity of water diverted from the Delta to the Central Valley Project, State Water Project and local water users; discharge of agricultural drainage from the San Joaquin Valley and drainage inputs within the Delta itself; channel configurations and capacity; and artificial barriers which periodically are constructed to route flows in the Delta. Manipulations of barriers, modification of the channels, or construction of alternative diversion facilities could all affect (or are affecting) how much San Joaquin River flow reaches the Bay-Delta. Better understanding of water movement from the San Joaquin River through the Bay-Delta and processes within the estuary are critical to future evaluations of the effects selenium-laden drainwater on Delta fish and wildlife resources including Sacramento splittail (Luoma and Presser, 2000).

Data from the Tracy Fish Collection Facility from 1997 indicate that water being pumped into the Tracy Pumping Plant can at times contain elevated selenium concentrations. Waterborne selenium concentrations at the Tracy Fish Facility ranged as high as 4.5 ppb in the month of March 1997 (Craft *et al.*, January 2000). Although this concentration is below the current U.S. EPA and State adopted 5 ppb selenium water quality standard, this value is still above background concentrations in water, above the 2 ppb the Service considers to be a level above which adverse effects in wildlife occur, and is well above the selenium concentration in the Sacramento River (0.06 ± 0.2 ppb) (Cutter and San Diego-McGlone, 1990). It has been shown that even in waters containing 1 ppb or less selenium (e.g., Suisun Bay), sufficient bioaccumulation can occur in the food chain to pose a hazard to higher trophic level organisms (Luoma and Presser, 2000). This data suggests that at least during some water years types or months, much of the San Joaquin River flow can be redirected into the Tracy Pumping Plant and influence water quality in CVP diversions and potentially affect splittail that forage near the pumps.

Recent results of chemical analyses from samples of splittail collected at the Tracy Pumping Plant from May 31 to August 2, 2000, revealed whole body selenium concentrations ranging as high as 3.8 ppm (dry weight). Ten of the fourteen samples exhibited selenium concentrations of less than 2 ppm (normal range; W. Beckon, U.S. Fish and Wildlife Service, unpublished data, August 2001). These fish ranged from 9 to 30 centimeters in length. It is unknown if splittail are being affected by selenium in the south Delta, or why the splittail collected at the Tracy Pumping Plant were less contaminated than focused sampling of splittail in Suisun Bay (see

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below) and Mud Slough (data discussed in Grassland Bypass Project biological opinion, issued September 27, 2001, file 1-1-01-F-0153). Further research on the effects of selenium on splittail in the south Delta is warranted.

Biological sampling in the Suisun Bay has shown that tissue selenium residues in predators and selenium concentrations in their food chain both point to threats to the reproductive health of aquatic listed species in the Delta (Luoma and Presser 2000) when compared to laboratory and field studies conducted elsewhere (Lemly 1996a, Skorupa 1998, Engberg *et al.* 1998). The magnitude of existing contamination is sufficient to threaten reproduction in key species within the ecosystem. The most severely threatened species appear to include Sacramento splittail. Populations and catches per unit effort (where known) of all these species are in decline. “Restoration” of the Bay-Delta must include stabilizing or increasing the populations of these species, and one way to facilitate that goal is to control the stress selenium imposes on these animals (Luoma and Presser 2000).

Selenium is readily bioaccumulated in the introduced Asiatic clam (*Potamocorbula amurensis*), which became the most common bivalve in the Delta during the 1990s (Luoma and Presser 2000). These clams have selenium concentrations ranging from 6 to 20 ppm (dry weight), the variation coinciding with seasonal changes in mean monthly river inflows to the north Bay—higher concentrations are observed during low flow periods. Asiatic clams are, in turn, consumed by splittail (Stewart *et al.* 2000). The splittail “White Paper” addresses the recent shifting dietary emphasis of splittail toward Asiatic clams (Moyle *et al.* 2001) and Stewart *et al.* (2000) have used stable isotope analyses to confirm that splittail diets are more characteristic of the clam food chain than the crustacean food chain. Dietary concentrations of 5 to 20 µg selenium per gram dry weight (i.e., almost exactly the range found in Asiatic clams) are known to cause severe reproductive problems in fish (Lemly 1997a, 1997b, 1997c). Stewart *et al.*’s unpublished splittail data cluster relatively close to the data for white sturgeon. Eggs of white sturgeon have already been documented to contain selenium concentrations exceeding those levels that resulted in 65 percent failure of selenium-exposed bluegill eggs (USDI-FWS and NMFS 2000). Stewart *et al.*’s study found that selenium liver concentrations in Sacramento splittail (greater than 170 mm in length) in Suisun Marsh in the fall of 1999 were at levels associated with adverse reproductive effects in fish and ranged as high as 20 ppm (dry weight; Stewart *et al.* 2000). Additionally, the selenium concentrations of Asiatic clams in the lower San Francisco Bay estuary have risen significantly in recent years and several realistic future scenarios evaluated for U.S. EPA by USGS scientists predict even further increases of selenium loading to the estuarine Asiatic clam food chain (Luoma and Presser 2000). The relationship between the bioaccumulation of selenium in the clam and its predation by splittail also threatens the splittail in the near-term future because the clam, via its predation on typical splittail prey items such as estuarine copepods (*Eurytemora affinis*, and *Acartia* sp.) (Kimmerer and Peñalva 2000), is creating conditions that promote increasing reliance of splittail on the clam as an alternate food source (Feyrer and Matern 2000). Thus, the most likely near-term scenario for the

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future is greater reliance of splittail on Asiatic clams as a food supply and possibly further increases of selenium concentrations in both Asiatic clams and splittail.

Moyle *et al.* 2001 (draft White Paper) have already presented data demonstrating statistically significant declining growth rates in Suisun Marsh splittail between 1980 and 1995 (prior to the onset of the first Grassland Bypass Project). The declines in growth rate are likely to be associated with the invasion by the Asiatic clam in the estuary, and the subsequent dietary shift of splittail to a clam-dominated diet. Moyle *et al.* suggested that this trend might reflect poorer energetics of a non-mysid shrimp dominated diet, but it can just as plausibly be suggested that it reflects the cachexia (contaminant-induced weight loss despite calorically sufficient dietary intake) that is a classic symptom of non-lethal selenium poisoning. Contaminant-induced growth depression among juveniles in spawning and rearing areas would mean that longer times would be required to allow enough growth for optimal out-migration of juveniles. Increasing levels of contamination (via the yolk sac or post-larval dietary exposure; i.e., from contamination of the adults or juveniles), as are already foreseeable (Luoma and Presser 2000), conceivably could lead to juvenile growth rates too slow for even the longest contemporary durations of flood plain inundation. Reduced growth also causes a reduction in fecundity because fecundity in splittail is related to female body size, as is common among fish.

The U.S. Geological Survey (USGS), developed a model to forecast effects of selenium from various sources in the Delta estuary (Luoma and Presser 2000). At the request of the U.S. EPA and the Service, the USGS used this model to provide monthly forecasts for selenium concentrations in the Delta in a dry year (1994 hydrology) and a wet year (1997 hydrology) using selenium loads limits from Appendix A of the Use Agreement from the Grassland Bypass Project for 2005 (total = 3,996 pounds per year) (Presser, August 2001). Greater detail on this analysis is provided in the Grassland Bypass Project biological opinion. In the model run using wet year flow data, the model indicated Asiatic clams in the Delta would contain above 3 ppm selenium, dry weight (a level of concern threshold for invertebrates in the GBP Guidelines), during seven months of the year, including all months during the low flow period (June - November). During September and October, the clams were projected to exceed the toxicity threshold for invertebrates in the GBP Guidelines, with projected clam tissue selenium concentrations of 8.1 and 7.2 ppm, respectively (Presser, August 2001).

In the model run using flow data from a dry year, the model outcome indicated that Asiatic clams in the Delta would fall above 3 ppm selenium (dry weight) in all months of the year. In addition, the clams were projected to be above the toxicity threshold for selenium in invertebrates during the entire low flow period (June -November). The highest concentrations occurred in August and October with projected clam tissue concentrations of 12.5 and 10.5 ppm, respectively (Presser, August 2001).

Although this model was run based on a number of the assumptions, it does show a potential for

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significant accumulations of selenium in biota of the Delta especially during dry water years and low flow months. These periods of low San Joaquin River flow combined with selenium loading could result in an increased risk of adverse effects to Sacramento splittail from selenium exposure in the Delta. These outcomes are consistent with those reported by Luoma and Presser (2000). The most significant impacts of irrigation drainage disposal into the San Joaquin River and the Bay-Delta appear most likely to occur during low flow seasons and especially during low river flow conditions in dry or critically dry years. Dry or critically dry years have occurred in 31 of the past 92 years (34 percent), with critically dry years comprising 15 of those years (16 percent). Any analysis of selenium effects must take the influences of variable river flows into account (Luoma and Presser, 2000). Years of low flow are also the most difficult for splittail reproduction, with spawning and rearing restricted to channel shallows with appropriate habitat.

In Appendix I (Response to Comments), pages I-61 of the Grassland Bypass Project Final EIS/EIR (USDI-BOR 2001), the following was noted, “The elevated selenium levels in these Suisun Bay organisms are caused by selenite discharges from oil refineries around Suisun Bay, entering the food chain through bioconcentration by phytoplankton that preferentially take up selenite...Because selenate is the thermodynamically stable form of selenium in oxygenated water, it is not transformed to selenite and makes a much smaller contribution to selenium in the Suisun Bay food chain than the refinery selenite.” While it is true that the refineries once did account for the majority of selenium contamination in Suisun Bay, and the form of selenium discharged was selenite, this is no longer the case. As a result of regulations imposed by the San Francisco Bay Regional Water Quality Control Board, refinery inputs to the Bay-Delta declined after July 1998. Oil refinery loads from 1986 to 1992 ranged from 11 to 15 pounds of selenium per day; but with treatment and cleanup, loads decreased to 3 pound of selenium per day in 1999. Further, treatment technologies in the refineries remove only selenite, so the selenium discharged is mostly selenate since 1999, while historic discharges were over 50% selenite (Luoma and Presser, 2000). Despite the radical decline in refinery discharges of selenium, particularly selenite, the concentration of selenium in suspended particulates in the estuary essentially has not changed between the 1980's and late 1990's (Cutter *et al.*, 2000).

At this time, the source(s) of the selenium contamination in the Delta and Suisun Bay is/are not fully understood, although agricultural drainwater disposal into the San Joaquin River appears likely to be a contributing source of this contamination, given the data discussed above. Additional information is needed to determine the fate and impact of selenium discharges from the west-side San Joaquin Valley and oil refineries in the North Bay, and to assess the impacts that agricultural drainage discharges in the San Joaquin River may have in the Delta ecosystem.

Selenium from Firebaugh Sumps and in the DMC

In the vicinity of the Firebaugh Canal Water District, a San Joaquin Exchange Contractor (not an Interim contractor) receiving deliveries from Reclamation out of the Delta Mendota Canal,

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Reclamation operates sumps that pump water into the DMC. The DMC was completed in July 1951. It is lined with concrete to Milepost 98.64, and the remaining 18 miles to Mendota are earth-lined. In October 1951, local interests objected to the earth lining of the DMC. They were concerned that canal seepage might raise groundwater levels in adjacent lands. Also, the DMC might act as a subsurface dike, impeding subsurface cross-drainage, and causing elevated groundwater levels on the upslope side. In response to these concerns, Reclamation constructed closed drains between Mileposts 99 and 110 parallel to the Canal. The drains collect small quantities of seepage water or surface runoff to prevent accumulation and possible damage to canal bank or adjacent lands. The drains discharge into ten sump pits from which the accumulated water is automatically removed by pumping. Water from the sumps is discharged into the DMC through six drainage inlet structures. The Firebaugh sumps are located within 1-3 miles of the San Luis Drain, the conveyance structure used to remove selenium contamination in the Grasslands and used to convey drainage from the Grassland Bypass Project. The San Luis & Delta-Mendota Water Authority (Authority) has operated the DMC (including the Firebaugh sumps) for Reclamation since 1992.

Flows from the sumps are not routinely measured, but are correlated to electricity drawn by each sump pump. This information is consolidated by Reclamation. Seasonal conversion factors were used to derive the discharge in cubic feet per second. The average daily flow, from all of the sumps together, is estimated to be 1.5 cubic feet per second (cfs), based on 933 observations of electrical usage.

Water from the sumps has been sampled and tested by Reclamation in accordance with the 1987 Monitoring and Reporting Program Order Number SJR027 issued by the California Regional Water Quality Control Board. Reclamation collected water quality samples of water in each drainage inlet monthly from March 1985 through September 1994. Since 1995, samples have been collected twice a year, in April and October. Based on 661 samples, the flow-weighted concentration of water discharged from the six drainage inlets is 228 ppb selenium. Based on an average flow of 1.5 cfs and a flow-weighted concentration of 228 ppb selenium, the annual selenium load from the Firebaugh sumps to the Delta Mendota Canal is estimated to be 679 pounds selenium/year, based on the best available data (USBR in litt.).

Through a variety of water conveyances, an unknown amount of the selenium load from the Firebaugh sumps is added to the Grasslands wetlands, San Joaquin River, and Delta loads. Approximately 93 miles of natural and human-made water channels deliver freshwater to the Grassland wetlands, as listed in Appendix 40 of the 1996 Basin Plan Amendment. For the purposes of this biological opinion, these water supply channels are referred to as the "Grasslands wetland supply channels." The Grassland wetland supply channels have been and are currently used to convey some agricultural drainage to the San Joaquin River. The water quality objective in these channels is 2 µg/L (ppb) selenium or less (monthly mean) as adopted by the Regional and State Water Resources Control Board in the Basin Plan amendments of

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1996.

Since March 2000, the wetland water supply objective of 2 ppb (monthly mean) was exceeded during two months in Camp 13, three months in Agatha Canal, nine months in the San Luis Canal, and two months in the Santa Fe Canal. All of these canals convey water supplies from the Delta Mendota Canal to Grassland wetlands.

The source(s), quantities, and seasonal variation of selenium contamination in Grassland wetland supply channels are not currently known. Inflow from the Firebaugh sumps is a likely contributor to this contamination. Additional sources of contamination may include: surface runoff from the Panoche/Silver Creek watershed, flood flows through existing check drains, and groundwater pumping into the Mendota Pool (Chilcott 2000). Selenium concentrations in supply water tend to increase between O'Neill Forebay and the DMC terminus, especially in the reach between Farm Bridge and Washoe Avenue where the sumps are located. A water concentration of 2 ppb selenium was exceeded in the DMC one-half mile downstream of the sumps in 7 of 24 samples from 1999 through 2001. Data from the DMC upstream (at Farm Bridge) and downstream (at Washoe Ave) in 1999-2001 show that selenium concentrations increased downstream of the sumps in 30 of 36 samples. The average increase in concentration was 0.94 ppb. Seasonally, the exceedances in 1999-2001 occurred in the winter and spring (December to April), coinciding with the period when flow in the DMC is stopped for maintenance of the Mendota Dam or when flood water is flowing through the Mendota Pool from the San Joaquin River (USBR unpublished data).

Multiplying the DMC inflow in March and April 2001 by the selenium concentrations at the DMC terminus results in a calculated load to the Mendota Pool of 352 pounds in March and 464 pounds in April (G. Browning, Luhdorff and Scalmanini, Consulting Engineers, in litt., July 17, 2001). Flow and concentration data from Reclamation, collected at the DMC terminus from 1996 to 2000, indicate that annual loading of selenium in the DMC averaged 3,238 pounds of selenium per year with a high of 6,194 pounds of selenium in 1996 (USBR, unpublished data). Much of this selenium comes from unspecified sources other than the Firebaugh sumps, including selenium "recycled" through the San Joaquin River to the south Delta water project pumps and thence back to the DMC.

The selenium load in the DMC, which has contributed to exceedences of 2 ppb in Grassland wetland water supplies, adds to elevated levels of selenium in the aquatic food chain and may cause adverse effects in the giant garter snake in the Grasslands wetlands area (see above). Selenium loading downstream from the DMC, through the Grasslands, Grasslands Bypass Project and other routes to the San Joaquin River and Delta, also adds to cumulative selenium load in the Delta, with resulting intensification of selenium contamination effects to Sacramento spittail (see above). Exactly how much of the selenium reaching the Grasslands wetlands and the Delta comes from the Firebaugh sumps or other sources under the close control of Reclamation is

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still unclear from the data provided, but it is clear that an appreciable fraction of the cumulative load is contributed by such sources. Given that selenium in Delta food chains is already at levels likely to be impairing splittail reproduction and growth, we expect that additions to the cumulative load are injuring the species.

Cumulative Effects

Please refer to the 2000 Interim biological opinion for a discussion of cumulative effects. For the Santa Clara County species added in this amendment, cumulative effects are likely to result from a variety of non-federal activities, including continued non-native plant impacts, fire and fire suppression, grazing, collecting, off-road vehicle use, and residential and commercial development, nitrogen deposition and sewage effluent discharge unrelated to the proposed action.

Conclusion

After reviewing the current status of the species in Table 1A, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the species listed in Table 1A, and is not likely to destroy or adversely modify critical habitat, where designated. This conclusion is based on the assumption that the action is implemented as described in this biological opinion.

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Incidental Take Statement

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Reclamation in order for the exemption in section 7(o)(2) to apply. Reclamation has a continuing duty to regulate the activity covered by this incidental take statement. If Reclamation (1) fails to assume and implement the terms and conditions or fails to require the contractors to adhere to the terms and conditions of the incidental take statement, for example, through enforceable terms that are added to any permit, grant, or contract document, or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Reclamation must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

Sections 7(b)(4) and 7(o)(2) of the ESA, which refer to terms and conditions and exemptions on taking listed fish and wildlife species, do not apply to listed plant species. However, section 9(a)(2) of the ESA prohibits removal, reduction to possession, and malicious damage or destruction of listed plant species from areas under Federal jurisdiction, as well as any act that would remove, cut, dig up, or damage or destroy any such species on any area in knowing violation of any State law or regulation, including the California Endangered Species Act, or in the course of any violation of a State criminal trespass law. Actions funded, authorized or implemented by a Federal agency that could incidentally result in the damage or destruction of such species on Federal lands are not a violation of the Act, provided the Service determines in a biological opinion that the actions are not likely to jeopardize the continued existence of the species.

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Amount or Extent of Take

Implementation of the terms and conditions in this biological opinion and in the Interim opinions of 1995 and 2000, the Friant opinion of 2001, the Grassland Bypass opinion of 2001, and the CVPIA opinion of 2000 are expected to substantially reduce, but not eliminate, the potential for incidental take of listed species resulting from the renewal of 42 Interim water contracts.

The Service anticipates incidental take of fish and wildlife species listed in Table 1A as a result of Interim renewal contracts for the period of March 1, 2002 through February 28, 2004. Take is authorized within the 41 contract service areas considered in this opinion (excluding the El Dorado Irrigation District contract for Lake Hills Estates) on lands within cultivation since 1995 or that Reclamation or the Interim contractors have otherwise demonstrated compliance with the ESA. We anticipate that listed wildlife will be harassed, injured, or killed over two years by normal farming practice, as described below, on existing irrigated lands irrigated with CVP water in the action area, would be taken as a result of the proposed action. Normal farming practice means activities typical of agricultural production, except pesticide use, on similar crop types from year to year (such as annual row crops), not intended to harm listed wildlife species or degrade habitat. Excluded from normal farming practice for the purposes of this incidental take statement are the following conversions: from irrigated pasture to any other type of irrigated agriculture or M&I use; from orchards or vineyards to row crops or M&I use; from non-irrigated habitat useful to listed species to agriculture, M&I use, or plowed, disced or graded land; or from land four or more years fallow that is useful to listed species to active agriculture, M&I use, or plowed, disced or graded land. Take resulting from pesticide use is not covered by this incidental take statement, because consultation on pesticide registration is not within Reclamation's jurisdiction.

In addition, the Service anticipates take due to selenium contamination in giant garter snakes and Sacramento splittail, as follows:

Giant Garter Snake. The Service expects that incidental take of giant garter snakes will be difficult to quantify for the following reasons: (1) the snakes are secretive and sensitive to human activities, (2) the difficulty of finding a dead or injured snake, (3) natural fluctuations in abundance may mask project effects, and (4) selenium contamination effects on giant garter may be sublethal and laborious to quantify. According to Service policy, as stated in the Endangered Species Consultation Handbook (March 1998) (Handbook), some detectable measure of effect should be provided, such as the relative occurrence of the species or a surrogate species in the local community, or amount of habitat utilized by the species, to serve as a measure for take. Take also may be expressed as a change in habitat characteristics affecting the species, such as water quality or flow (Handbook, p. 4-47 to 4-48).

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For these reasons, the Service is estimating the level of take as injury to all giant garter snakes present from March 1, 2002 to March 31, 2002, in the Grassland wetland supply channels, resulting from transient food chain exposure to waterborne selenium concentrations above two parts per billion (2 ppb) caused in whole or in part by loading of selenium into the DMC under the discretion of Reclamation. Take resulting from exceedence of a monthly mean selenium concentration of 2 ppb in the Grassland wetland supply channels is not authorized. This 30-day incidental take coverage will allow Reclamation time to develop a short-term plan to address selenium loading from the Firebaugh sumps and perhaps other sources, into Grassland wetland source waters from the Delta Mendota Canal.

Sacramento Splittail. The Service expects that incidental take of Sacramento splittail will be difficult to quantify for the following reasons: (1) the aquatic nature of the fish make injury and mortality difficult to observe, (2) natural fluctuations in abundance may mask project effects, and (3) selenium contamination effects on splittail may be sublethal and difficult to measure. Take also may be expressed as a change in habitat characteristics affecting the species, such as water quality or flow (Handbook, p. 4-47 to 4-48).

For these reasons, the Service is estimating the level of take as injury to all Sacramento splittail present, from March 1, 2002 to March 31, 2002, downstream of the San Joaquin River, resulting from transient food chain exposure to waterborne selenium concentrations above two parts per billion (2 ppb) caused in whole or in part by loading of selenium into the DMC under the discretion of Reclamation. The preceeding notwithstanding, no take is authorized that results from selenium loads exiting the Grassland Bypass Project in excess of the approved Grassland Bypass project load schedule.

Upon implementation of the following reasonable and prudent measures, Reclamation will become exempt from the prohibitions described under section 9 of the ESA for the species, forms of take, and areas described in this section. This exemption does not extend to forms of take other than those described in this opinion. Individual users of the Federal water not explicitly exempted from section 9 of the ESA under this incidental take statement may seek incidental take authorization through the section 10(a)(1)(B) permit process or by separate section 7 consultation.

Effect of the Take

The Service has determined in the accompanying amendment to the Interim water contracts biological opinion that this level of anticipated take is not likely to result in jeopardy to the species.

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Reasonable and Prudent Measures

The reasonable and prudent measures below are added to the reasonable and prudent measures set forth in the Interim opinion of 2000. The reasonable and prudent measures in the Interim opinion of 2000 remain in effect. The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the direct and indirect impacts on listed fish and wildlife species of the incidental take described in this biological opinion.

- I. Reclamation will comply with conservation measures and non-discretionary terms and conditions in applicable biological opinions.
- II. Reclamation and the Interim Contractors will develop and implement a program to compensate for any losses of listed species habitat that occur as a result of delivery of Central Valley Project water to Interim contract service areas.
- III. Reclamation and Santa Clara Valley Water District will establish and implement interim conservation measures to protect listed species and their habitats in Santa Clara County until an approved HCP is implemented.
- IV. Reclamation will identify land and water use techniques or measures within CVP service areas that are critically impacting listed and proposed species or their habitats.

Terms and Conditions

The terms and conditions below are added to the terms and conditions set forth in the Interim opinion of 2000. Any terms and conditions in the Interim opinion of 2000 that have not been fully discharged remain in effect. In order to be exempt from the prohibitions of section 9 of ESA, Reclamation must comply with the following terms and conditions, which implement the reasonable and prudent measures above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

- I. Reclamation will implement in a timely manner relevant environmental commitments, mitigation and conservation measures, and terms and conditions from other biological opinions issued to Reclamation and overlapping the Interim action area, including but not limited to: the 2000 Interim Opinion (February 29, 2000, file 1-1-00-F-0056), Implementation of the CVPIA and Continued Operation and Maintenance of the CVP (November 21, 2000, file 1-1-98-F-0124), Friant Long Term Contract Renewals (January 19, 2001, file 1-1-01-F-0027) and the Grassland Bypass Project (September 27, 2001, file 1-1-01-0153).

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- II. Reclamation and the Interim Contractors will develop and implement a program to compensate for any losses of listed species habitat that occur as a consequence of Interim contracts:
 - A. Reclamation and the Interim contractors will establish a contingency plan(s) that specify a process to identify impacts and then address those impacts to listed species or their habitats since 1993 within the Interim contract service areas. The plan will include reporting results of impact identification and compensation to the Service. The procedure will be in place before initiating consultation on long-term contract renewals or on another Interim contract renewal.
 - B. Reclamation will ensure implementation of the contingency plan to address impacts to species or their habitats within the Interim contract service areas that occur without a Service incidental take authorization. Implementation will occur by long-term contract renewal execution or another Interim contract renewal, whichever comes first.
 - C. The contingency plan(s) for impacts to listed species or their habitat must be reviewed and approved by the Service and will incorporate compensation for temporal and other habitat losses. Losses of listed species habitat documented within the Interim contract service areas will be compensated at ratios consistent with the recovery needs for those species.
- III. Reclamation and Santa Clara Valley Water District interim conservation measures:
 - A. As part of the ongoing Santa Clara County HCP planning process, Santa Clara Valley Water District, Reclamation, and the Service will work with Santa Clara County and other appropriate parties to create a forum to facilitate information exchange, decision-making, and implementation of listed species conservation measures. The forum will promote development and implementation of short-term conservation measures. The forum will be made up of the Santa Clara Valley Water District, Reclamation, the Service, Santa Clara County and other appropriate agencies, and will meet quarterly or more often until conservation measures are in place.
 - B. Reclamation and Santa Clara Valley Water District will work with Santa Clara County and other appropriate parties to ensure that interim conservation measures acceptable to the Service to protect listed species and their habitats within the District's service area are developed and implemented within one year of this biological opinion.
- IV. Reclamation will identify land and water use techniques or measures within CVP service areas that are critically impacting listed and proposed species or their habitats.

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- A. Reclamation will develop and implement--within 30 days--short-term measures to minimize the effects of the selenium load from the Firebaugh sumps. At a minimum the measures will address actions to take to prevent selenium concentration in the DMC from contributing to exceedences of the 2 ppb monthly mean selenium standard in the Grassland wetland water supply channels. The measures implemented and their effectiveness will be reported to the Service.
- B. Reclamation will develop longer-term measures to minimize take from selenium contamination in the DMC and its downstream consequences, including the operation of the Firebaugh sumps, and will incorporate these longer term measures in its proposed action in the pending CVP O&M consultation (or the South Central California Area Office O&M consultation). Sufficient information for the O&M consultation and an initiation request will be provided to the Service by August 1, 2002, to assure consultation is completed before the next winter-spring season of selenium peaks in Grassland wetland water supplies.
- C. Reclamation's plan to address the selenium loading in the DMC, including the Firebaugh sump discharges, will be provided to the Service for consideration in the DMC long term contract renewal consultation (file 1-1-01-F-0309, initiated August 14, 2001, temporarily suspended until completion of this Interim consultation).
- D. Reclamation will monitor and report to the Service concentrations and loads of Se from the sumps and in the DMC on at least a monthly basis, and more frequently when downstream DMC water concentrations of selenium exceed 2 ppb and remedial actions are being taken and monitored.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take on the species that might otherwise result from the proposed action. If, during the course of the action, the anticipated level of incidental take described above is exceeded, such incidental take would represent new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. Reclamation must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Reporting Requirements

The following reporting requirement below is added to the reporting requirements set forth in the Interim opinion of 2000. The reporting requirements in the Interim opinion of 2000 remain in effect.

Within 30 days of this opinion, Reclamation shall report to the Service short-term measures Reclamation plans to implement to minimize the effects of the selenium load from the Firebaugh

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sumps discharged into the DMC. Additionally, Reclamation will monitor and report to the Service concentrations and loads of Se from the sumps and in the DMC on at least a monthly basis, and more frequently when downstream DMC water concentrations of selenium exceed 2 ppb and remedial actions are being taken and monitored.

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term “conservation recommendations” has been defined as suggestions from the Service regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. The recommendations provided here relate only to the proposed action and do not necessarily represent complete fulfillment of the agency’s 7(a)(1) responsibilities for these species. In order for the Service to be kept informed of actions that either minimize or avoid adverse effects or that benefit listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

The following conservation recommendations below are added to the conservation recommendations set forth in the Interim opinion of 2000. The Service recommends that Reclamation:

1. Reclamation should take affirmative actions to offset the impacts of past and present CVP implementation and its consequences on listed species. In particular, assist the Service or other organizations in permanently conserving lands important as habitat or movement corridors for listed species.
2. Reclamation should proactively encourage and fund retirement of seleniferous agricultural lands, including but not limited to those within or adjacent to the Grassland Drainage Area. This support could take the form of land purchases, incentives for withdrawing such lands from irrigation, disincentives for applying Federal water, reclassifying seleniferous lands, et cetera, and should be pursued by Reclamation whether independently or in cooperation with other appropriate Federal, State, and local agencies.
3. Reclamation should reallocate Central Valley Project water from retired lands to meet listed species water supply needs.
4. Reclamation should assist the Service in the implementation of recovery actions in the Draft Recovery Plan for California red-legged frog (USFWS, 2000), Draft Recovery Plan for the Giant Garter Snake (USFWS, 1999), Draft Recovery Plan for gabbro soil plants of the Central Sierra Nevada foothills (USFWS, December 1998), Recovery Plan for serpentine soil species of the San Francisco Bay Area (USFWS, September 1998a), Recovery Plan for Upland Species in the San Joaquin Valley (USFWS, September

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- 1998b), Draft Recovery Plan for the least Bell's vireo (USFWS, 1998), Recovery Plan for the large-flowered fiddleneck (USFWS, 1997), Recovery Plan for the Sacramento/San Joaquin Delta Native Fishes (USFWS, 1995), and Recovery Plan for valley elderberry longhorn beetle (USFWS, 1984).
5. Reclamation should assist the Service and other relevant parties in implementation of recommended actions to reduce the extent and severity of drainwater contamination identified in the San Joaquin Valley Drainage Program's Final Report: A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley.
 6. Reclamation and the Interim contractors should provide education to their staff(s) on identifying and protecting listed species in the project area.
 7. Reclamation should provide outreach to the public and to schools on protecting listed species.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

Reinitiation—Closing Statement

This concludes formal consultation on the proposed 2002-2004 Interim water contracts. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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Appendix A.
Interim Renewal Contracts
Central Valley Project
March 1, 2002-February 29, 2004

Division/Unit/Contractor	Existing Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
American River Division				
San Juan Water District	14-06-200-152A-IR4	11,200		X
El Dorado Irrigation District	14-06-200-949-IR4	23,000	X	X
El Dorado Irrigation District	14-06-200-7312-IR5	50		X
Cross Valley Canal				
* Fresno, County of	14-06-200-8292A-IR4	3,000	X	X
* Hills Valley Irrigation District	14-06-200-8466A-IR4	3,346	X	X
* Kern-Tulare Irrigation District	14-06-200-8601A-IR4	40,000	X	X
* Lower Tule River Irrigation District	14-06-200-8237A-IR4	31,102	X	X
* Pixley Irrigation District	14-06-200-8238A-IR4	31,102	X	X
* Rag Gulch Water District	14-06-200-8367A-IR4	13,300	X	X
* Tri-Valley Water District	14-06-200-8565A-IR4	1,142	X	X
* Tulare, County of	14-06-200-8293A-IR4	5,308	X	X
Delta Division/Delta-Mendota Canal				
Banta-Carbona Irrigation District	14-06-200-4305A-IR4	25,000	X	X
Broadview Water District	14-06-200-8092-IR4	27,000	X	X
Centinella Water District	7-07-20-W0055-IR4	2,500	X	X
Del Puerto Water District	14-06-200-922-IR6	140,210	X	X
Eagle Field Water District	14-06-200-7754-IR4	4,550	X	X
Laguna Water District	2-07-20-W0266-IR4	800	X	X
Mercy Springs Water District	14-06-200-3365A-IR4A	7,040	X	X
Oro Loma Water District	14-06-200-7823-IR4	4,600	X	X
Patterson Water District	14-06-200-3598A-IR4	16,500	X	X
Plain View Water District	14-06-200-785-IR6	20,600	X	X
West Side Irrigation District, The	7-07-20-W0045-IR4	7,500	X	X
West Stanislaus Irrigation District	14-06-200-1072-IR6	50,000	X	
Widren Water District	14-06-200-8018-IR4	2,990	X	X

* These contracts were included in the January 19, 2001 Fish and Wildlife Service biological opinion for Friant Division and Cross Valley Unit long-term contract renewals.

Appendix A. (Continued)
Interim Renewal Contracts
Central Valley Project
March 1, 2002-February 29, 2004

Division/Unit/Contractor*	Existing Contract Number	Contract Quantity (acre-feet)	Authorized Water Use	
			Agricultural	Municipal & Industrial
Sacramento River Division/Corning Canal				
Corning Water District	14-06-200-6575-IR4	23,000	X	X
Proberta Water District	14-06-200-7311-IR4	3,500	X	X
Thomes Creek Water District	14-06-200-5721A-IR4	6,400	X	X
Sacramento River Division				
Feather Water District	14-06-200-171A-IR5	20,000	X	
Sacramento River Division/ Tehama-Colusa Canal				
Colusa County Water District	14-06-200-304-A-IR4	62,200	X	X
Colusa, County of	14-06-200-8310A-IR4	See Subcontractors below		
Four-M Water District		5,700	X	X
Glenn Valley Water District		1,730	X	X
Holthouse Water District		2,450	X	X
Myers Marsh Mutual Water Company		255	X	X
LaGrande Water District		2,200	X	X
Cortina Water District		1,700	X	X
Westside Irrigation District		40,000	X	X
Colusa County Water District		5,965	X	X
Davis Water District	14-06-200-6001A-IR4	4,000	X	X
Dunnigan Water District	14-06-200-399A-IR4	19,000	X	X
Glide Water District	7-07-20-W0040-IR4	10,500	X	X
Kanawha Water District	14-06-200-466-A-IR4	45,000	X	X
Kirkwood Water District	7-07-20-W0056-IR4	2,100	X	X
La Grande Water District	7-07-20-W0022-IR4	5,000	X	X
Orland-Artois Water District	14-06-200-8382A-IR4	53,000	X	X
Westside Water District	14-06-200-8222-IR4	25,000	X	X
Shasta Division				
Shasta Lake, City of	4-07-20-W1134-IR6	2,750		X
Trinity Division				
Bella Vista Water District	14-06-200-851-A-IR5	24,000	X	X
Clear Creek CSD	14-06-200-489-A-IR5	15,300	X	X

APPENDIX D

MAPS SHOWING THE EXISTING HABITAT AND SERVICE AREA LOCATION FOR THE 17 NEW INTERIM RENEWAL CONTRACTORS*

*** CONTRACTORS SHOWN ON TABLE 2.**

Appendix D

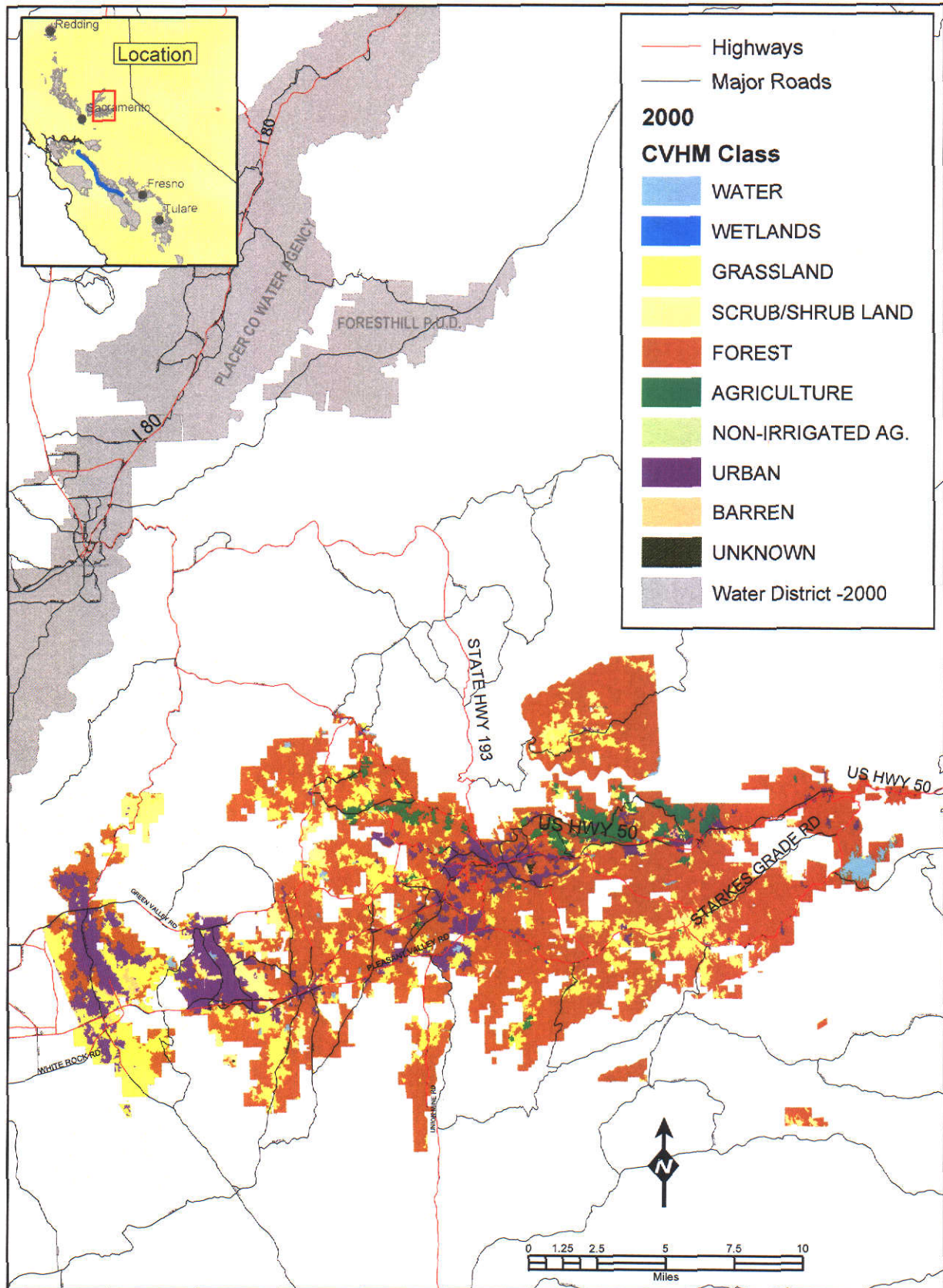
Table 2. Map number (IDCON) for the Central Valley Project 2004 Interim Renewal Contracts, the proposed 2004 contract number, the existing contract expiration date, and the water contract quantity. The 17 new Interim Renewal Contracts are indicated*

IDCON	CVP CONTRACTOR	Proposed 2004 Contract No.	Existing Contract Expiration Date	Water Quantity (A/F)
AMERICAN RIVER DIVISION				
	FOLSOM LAKE:			
201780	El Dorado ID*	14-06-200-1357A	12/31/2004	7,500
	El Dorado ID--Lake Hills Estates	14-06-200-7312-IR7	2/29/2004	50
201760	San Juan WD	14-06-200-152A-IR8	2/29/2004	11,200
	SLY PARK UNIT:			
	El Dorado ID (transferring title to EID, but will include in consultation)	14-06-200-949-IR8	2/29/2004	23,000
DELTA DIVISION				
	DELTA-MENDOTA CANAL:			
201840	Banta-Carbona ID	14-06-200-4305A-IR8-A	2/29/2004	20,000
201850	Broadview WD	14-06-200-8092-IR8	2/29/2004	27,000
201860	Centinella WD	7-07-20-W0055-IR8	2/29/2004	2,500
202130	Coelho Family Trust * (formerly Traction Ranch)	14-06-200-7859A-IR2	12/31/2003	2,080
201890	Del Puerto WD,	14-06-200-922-IR10	2/29/2004	140,210
	(Davis WD, Foothill WD, Hospital WD, Kern Canon WD,			
	Mustang WD, Orestimba WD, Qunito WD, Romero			
	WD, Salado WD, & Sunflower WD combined with			
	Del Puerto WD)			
201900	Eagle Field WD	14-06-200-7754-IR8	2/29/2004	4,550
201920	Fresno Slough WD*	14-06-200-4019A-IR2	12/23/2003	4,000
201950	James ID*	14-06-200-700-A-IR2	12/23/2003	35,300
201970	Laguna WD	2-07-20-W0266-IR8	2/29/2004	800
201980	Mercy Springs WD	14-06-200-3365A-IR8-A	2/29/2004	2,842
	Pajaro Valley, WMA, Santa Clara Valley WD,	14-06-200-3365A-IR8-B	2/29/2004	6,260
	& Westlands WD Distr. District # 1			
203220	Westlands WD Distr. District # 2* (assignment final)	14-06-200-3365A-IR8-C assignment from Mercy Springs WD	2/29/2004	4,198
202010	Oro Loma WD	14-06-200-7823-IR8	2/29/2004	4,600
202040	Patterson ID	14-06-200-3598A-IR8	2/29/2004	16,500
202050	Plain View WD	14-06-200-785-IR10	2/29/2004	20,600
202070	Reclamation District 1606*	14-06-200-3802A-IR2	12/23/2003	228
202120	The West Side ID	7-07-20-W0045-IR8-A	2/29/2004	5,000
	Tracy, City of * (assignment pending)	14-06-200-4305A-IR8-B	2/29/2004	5,000
202135		partial assign. from Banta Carbona ID		
	Tracy, City of * (assignment pending)	7-07-20-W0045-IR8-B	2/29/2004	2,500
		partial assign. from The West Side ID		
202140	Tranquillity ID*	14-06-200-701-A-IR2	12/23/2003	13,800
	Tranquillity PUD (formerly Hughes, Melvin)*	14-06-200-3537A-IR2	12/23/2003	70
202095	US Department of Veterans Affairs	3-07-20-W1124-IR1	2/29/2004	450
	(San Joaquin National Cemetery)*			
202180	West Stanislaus ID	14-06-200-1072-IR10	2/29/2004	50,000
202192	Widren WD	14-06-200-8018-IR8	2/29/2004	2,990
FRIANT DIVISION				
	FRIANT-KERN CANAL:			
202420	Lewis Creek WD- (did not renew but will include in consultation)	14-06-200-1911A-IR2	2/29/2000	1,450

Appendix D

IDCON	CVP CONTRACTOR	Proposed 2004 Contract No.	Existing Contract Expiration Date	Water Quantity (A/F)
SACRAMENTO RIVER DIVISION				
CORNING CANAL:				
202690	Corning WD	14-06-200-6575-IR8	2/29/2004	23,000
202720	Proberta WD	14-06-200-7311-IR8	2/29/2004	3,500
202740	Thomes Creek WD	14-06-200-5271A-IR8	2/29/2004	6,400
TEHAMA-COLUSA CANAL:				
202770	Colusa County WD	14-06-200-304-A-IR8	2/29/2004	62,200
	Colusa, County of	14-06-200-8310A-IR8	2/29/2004	60,000
	Subs: Colusa County WD, Cortina WD, 4-M WD, Glenn Valley WD, Holthouse WD, La Grande WD, Myers-Marsh MWC)			
202776	Davis WD	14-06-200-6001A-IR8	2/29/2004	4,000
202778	Dunnigan WD	14-06-200-399A-IR8	2/29/2004	19,000
202780	Glide WD	7-07-20-W0040-IR8	2/29/2004	10,500
202790	Kanawha WD	14-06-200-466-A-IR8	2/29/2004	45,000
202800	Kirkwood WD	7-07-20-W0056-IR8	2/29/2004	2,100
202810	La Grande WD	7-07-20-W0022-IR8	2/29/2004	5,000
202820	Orland-Artois WD	14-06-200-8382A-IR8	2/29/2004	53,000
202834	Westside WD	14-06-200-8222-IR8	2/29/2004	25,000
202834	Westside WD* (assignment final)	14-06-200-8310X-IR2 assignment from County of Colusa	2/29/2004	40,000
FEATHER RIVER :				
202890	Feather WD	14-06-200-171A-IR9	2/29/2004	20,000
SHASTA DIVISION				
203129	Shasta Lake, City of	4-07-20-W1134-IR10	2/29/2004	4,400
203126	Mountain Gate CSD*	14-06-200-6998-IR2	2/29/2004	350
203127	Shasta County WA*	14-06-200-3367A	12/31/2004	5,000
TRINITY RIVER DIVISION				
203110	Bella Vista WD	14-06-200-851A-IR9	2/29/2004	24,000
203090	Clear Creek CSD	14-06-200-489-A-IR9	2/29/2004	15,300
203078	Shasta CSD*	14-06-200-862A-IR2	12/31/2003	1,000
MISCELLANEOUS				
COLUSA BASIN DRAIN:				
202875	Colusa Drain MWC (New Contract - 1988)*	8-07-20-W0693	12/31/2004	100,000
CROSS VALLEY CANAL:				
202325	Fresno, County of	14-06-200-8292A-IR8	2/29/2004	3,000
202350	Hills Valley ID-Amendatory	14-06-200-8466A-IR8	2/29/2004	3,346
202385	Kern-Tulare WD	14-06-200-8601A-IR8	2/29/2004	40,000
202460	Lower Tule River ID	14-06-200-8237A-IR8	2/29/2004	31,102
202500	Pixley ID	14-06-200-8238A-IR8	2/29/2004	31,102
202520	Rag Gulch WD	14-06-200-8367A-IR8	2/29/2004	13,300
202600	Tri-Valley WD	14-06-200-8565A-IR8	2/29/2004	1,142
204600	Tulare, County of	14-06-200-8293A-IR8	2/29/2004	5,308
*new IRC, was not included in the 2002 Supplemental EA				

El Dorado I.D. Land Cover - 2000



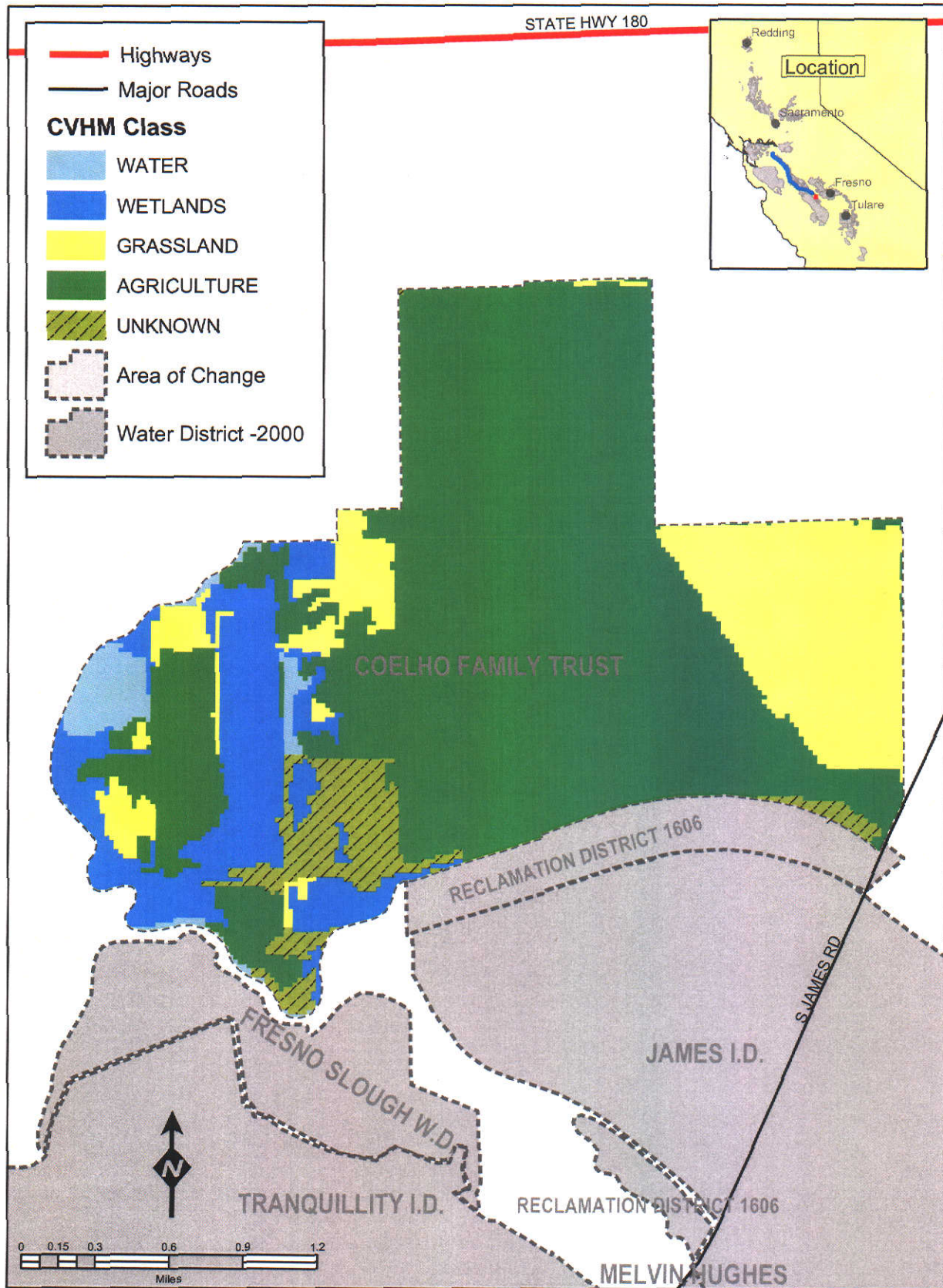
USBR, Division of Environmental Affairs
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201780

9/30/2003

Note: This data is subject to
change as refinements
are made to processes.

Coelho Family Trust Land Cover - 2000



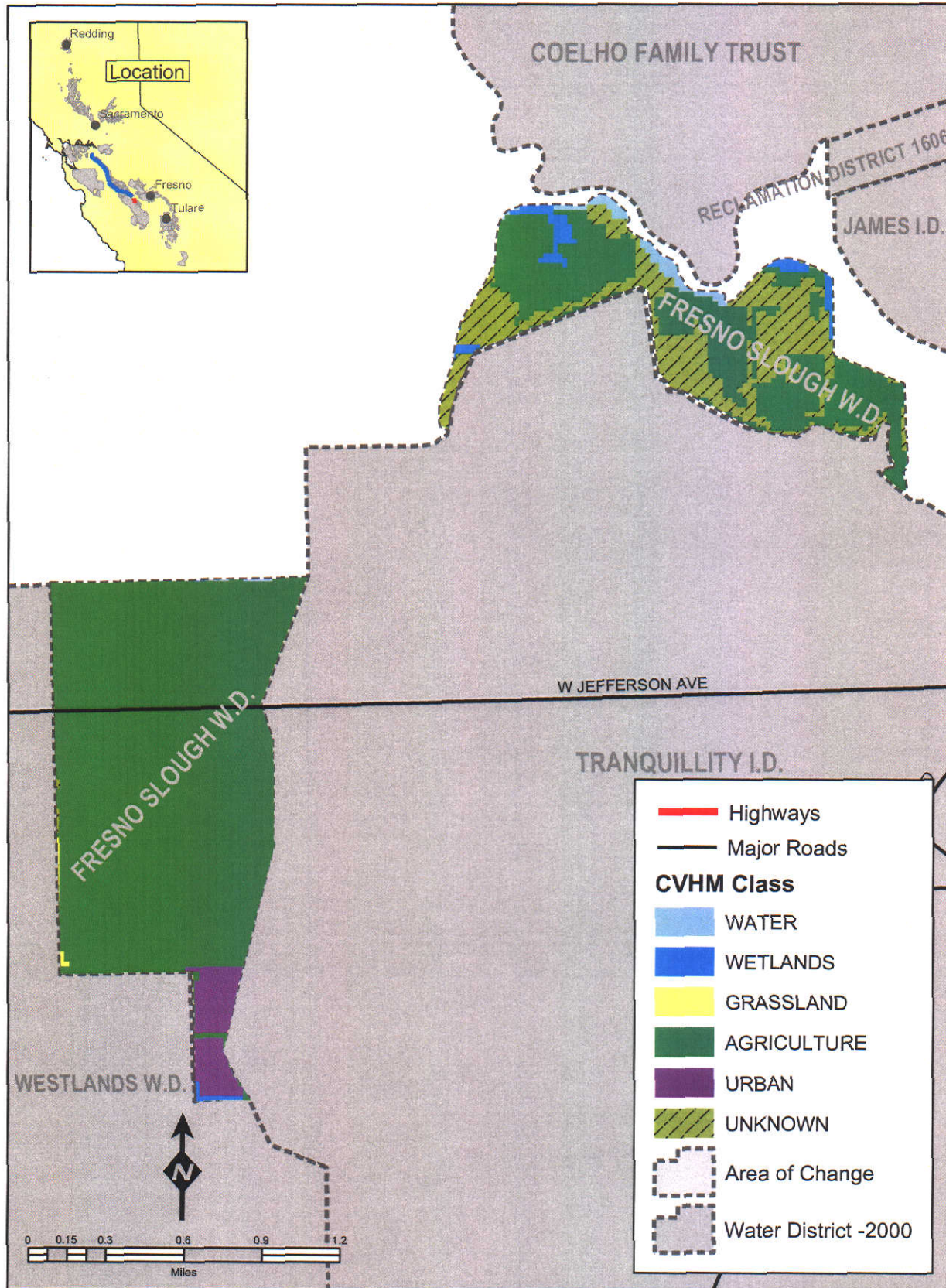
USBR, Division of Environmental Affairs
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202130

3/11/03

Note: This data is subject to
change as refinements
are made to processes.

Fresno Slough Water District Land Cover - 2000



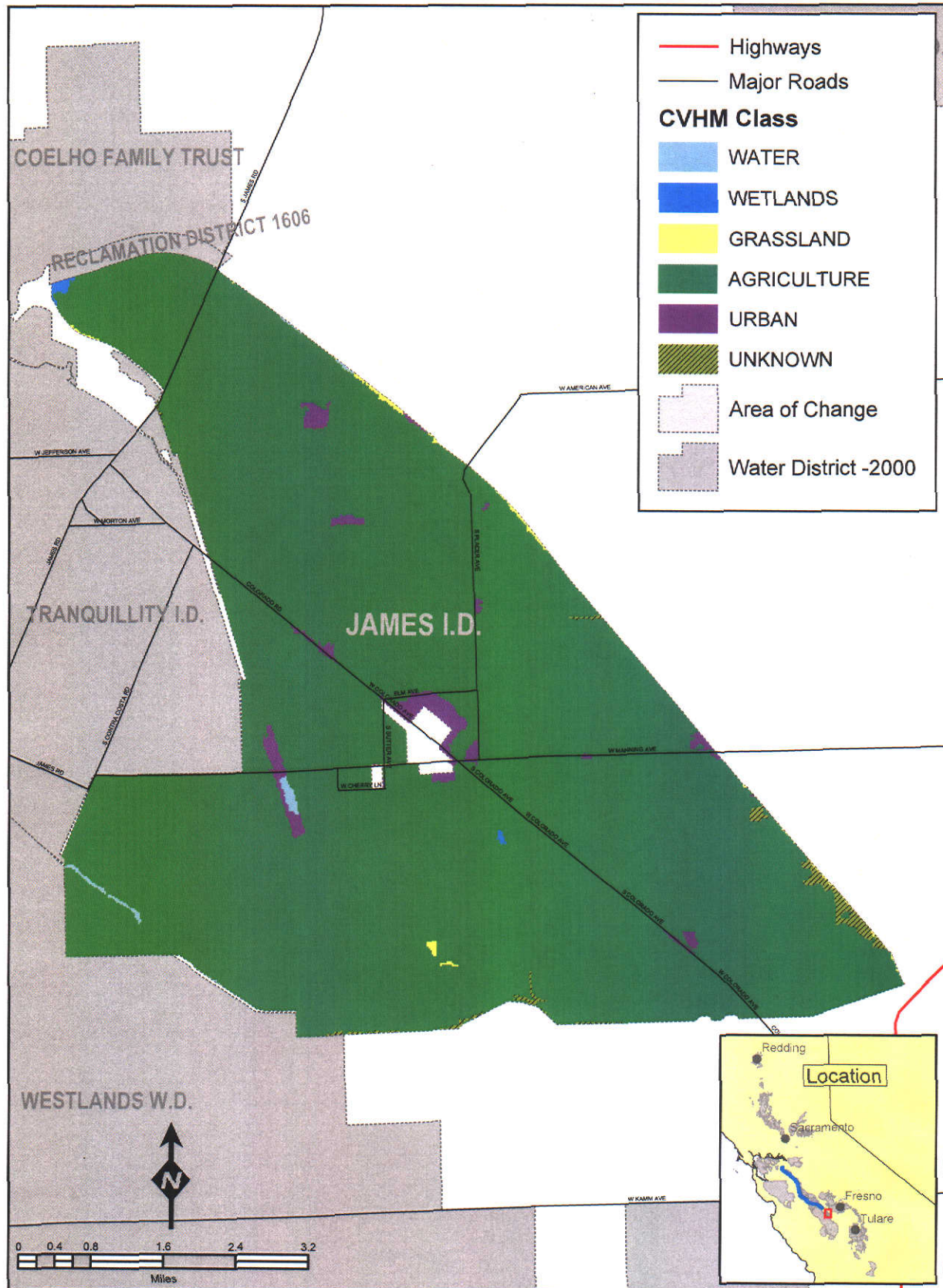
USBR, Division of Environmental Affairs
P:\cvhm\arcmap

IDCON 201920

3/12/03

Note: This data is subject to
change as refinements
are made to processes.

James I.D. Land Cover 2000



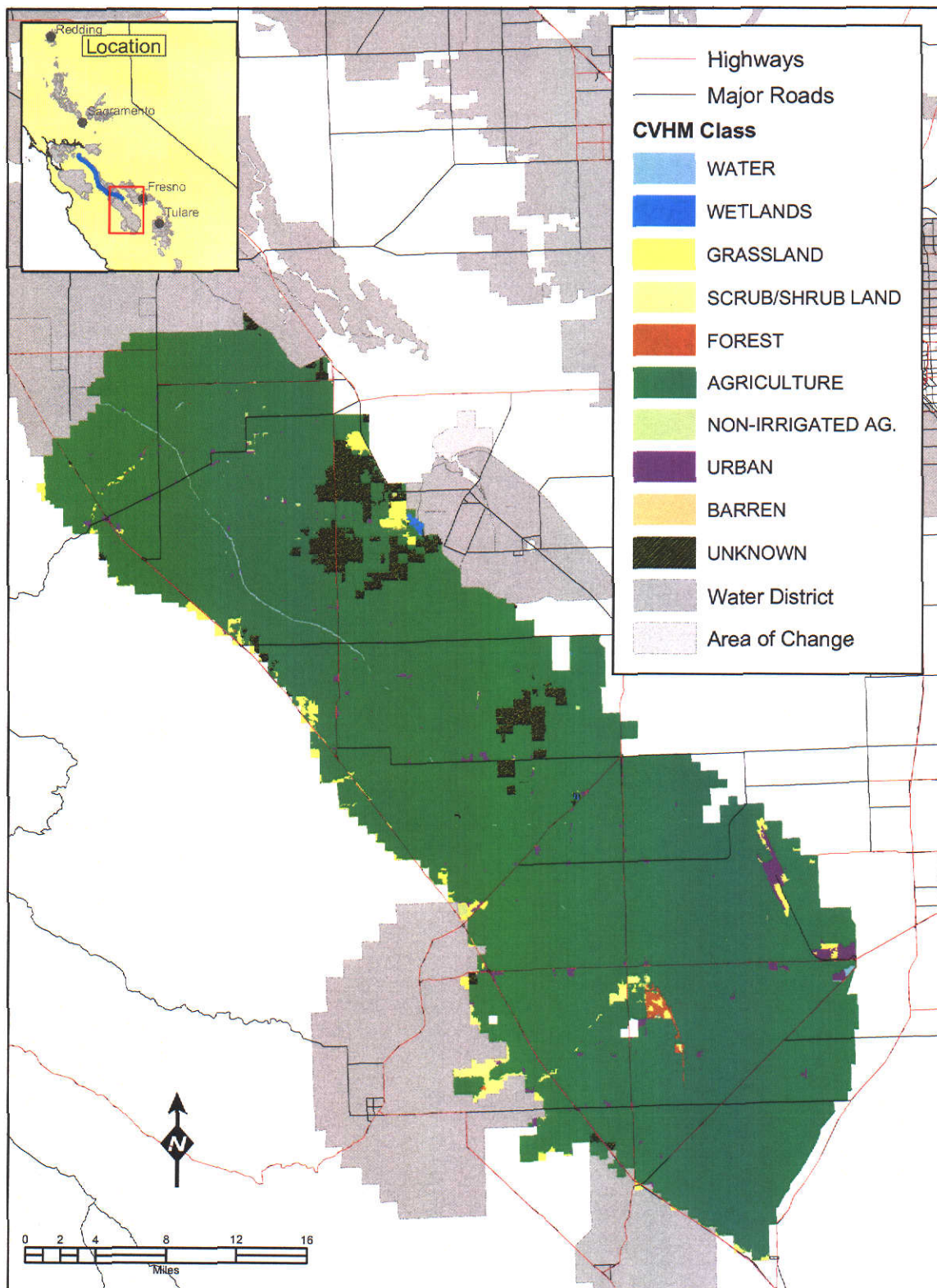
USBR, Division of Environmental Affairs
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IDCON 201950

3/12/03

Note: This data is subject to
change as refinements
are made to processes.

Westlands Water Service Contract 2000



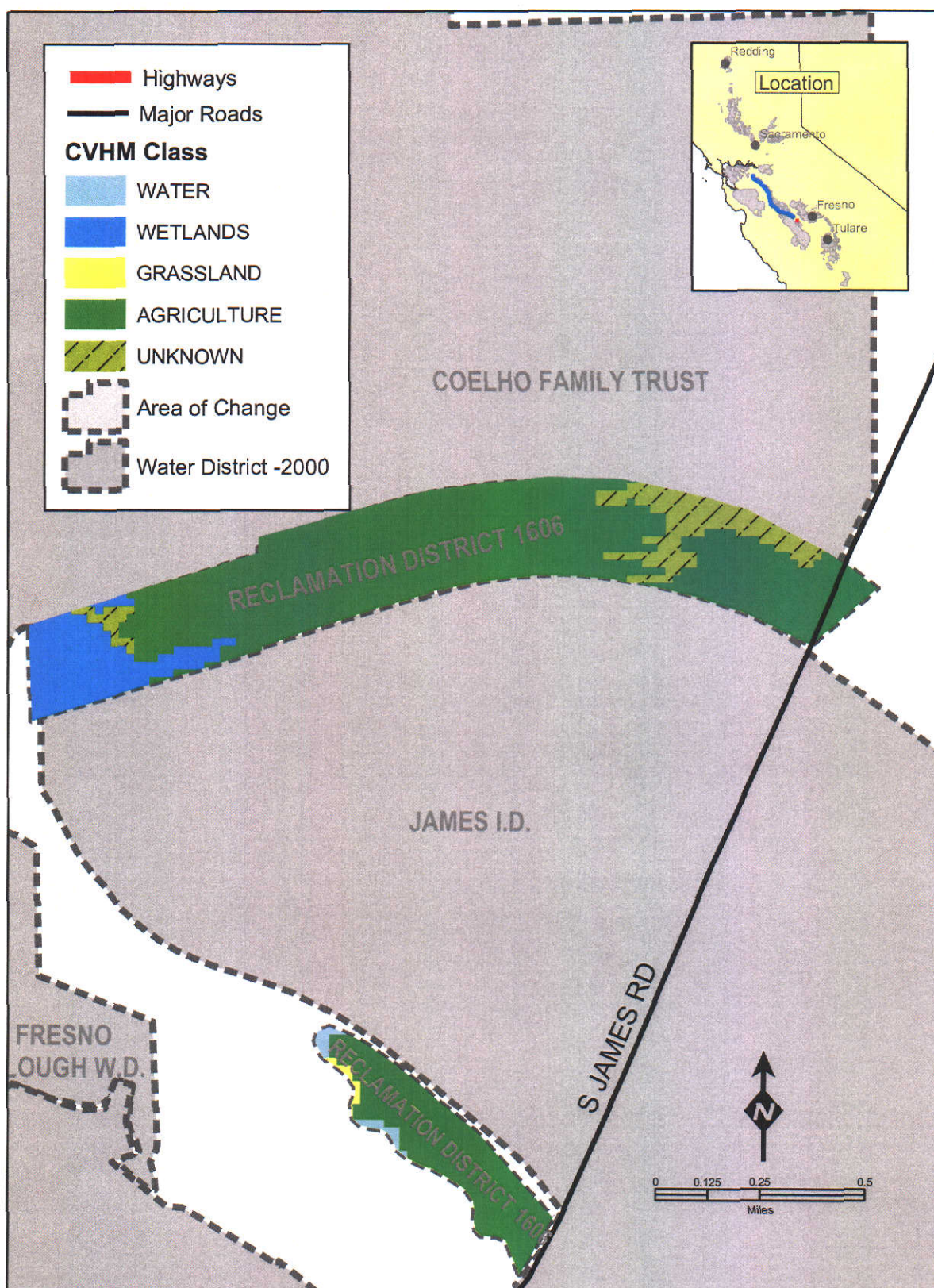
USBR, Division of Environmental Affairs
P:\cvhm\arcmap

IDCON 203220

10/27/2003

Note: This data is subject to
change as refinements
are made to processes.

Reclamation District 1606 Land Cover 2000



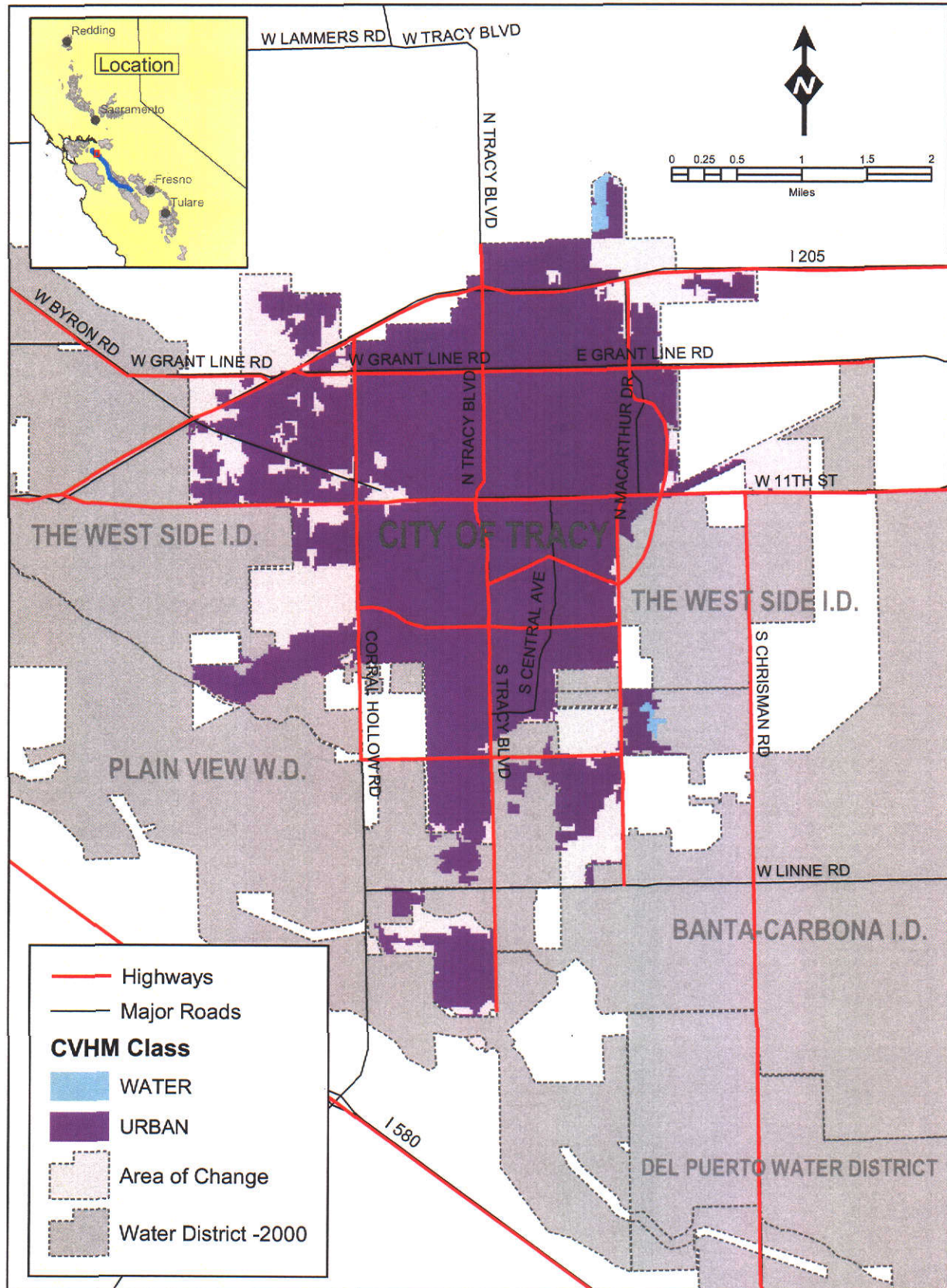
USBR, Division of Environmental Affairs
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02/21/2003

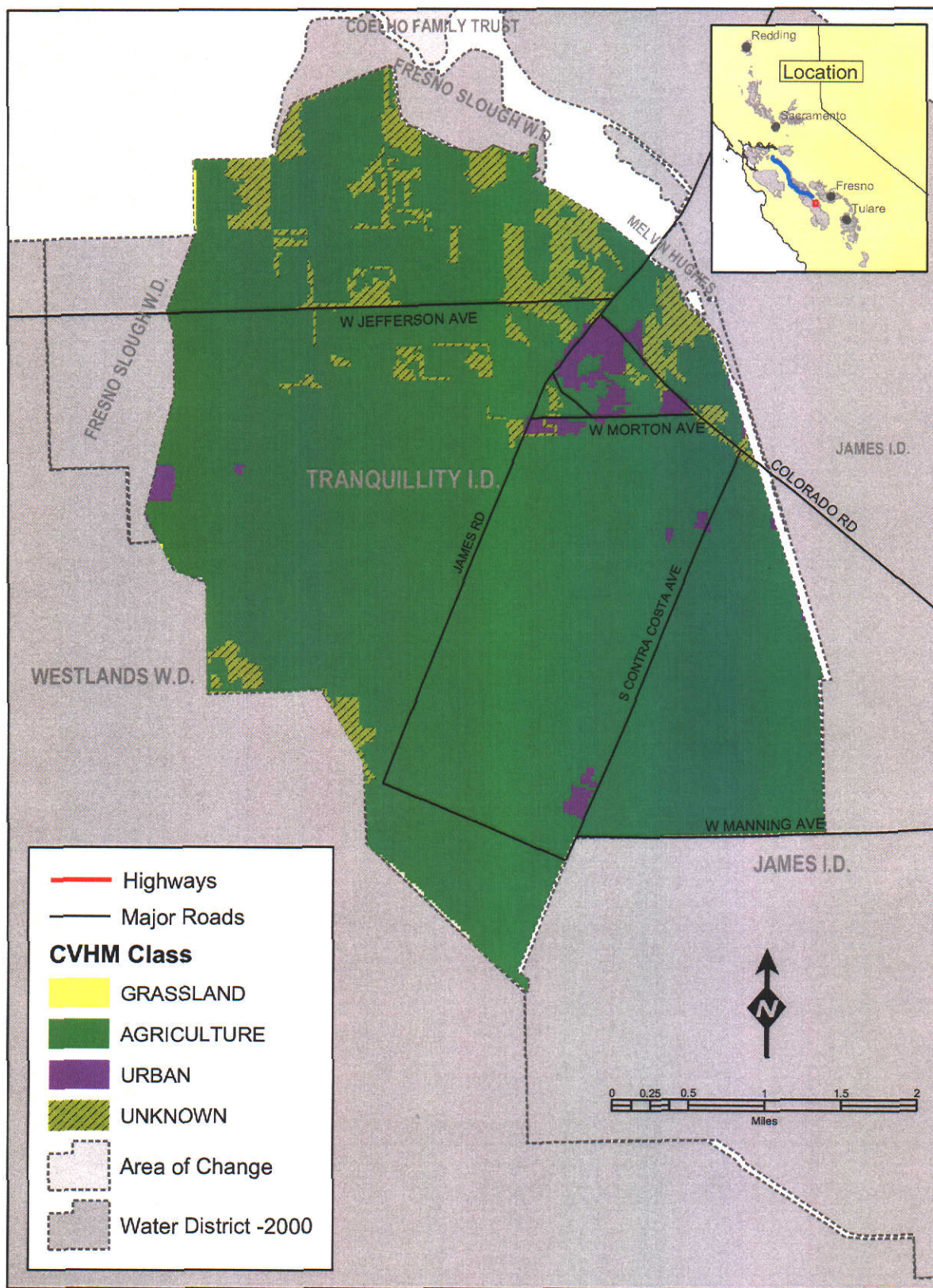
IDCON 202070

Note: This data is subject to
change as refinements
are made to processes.

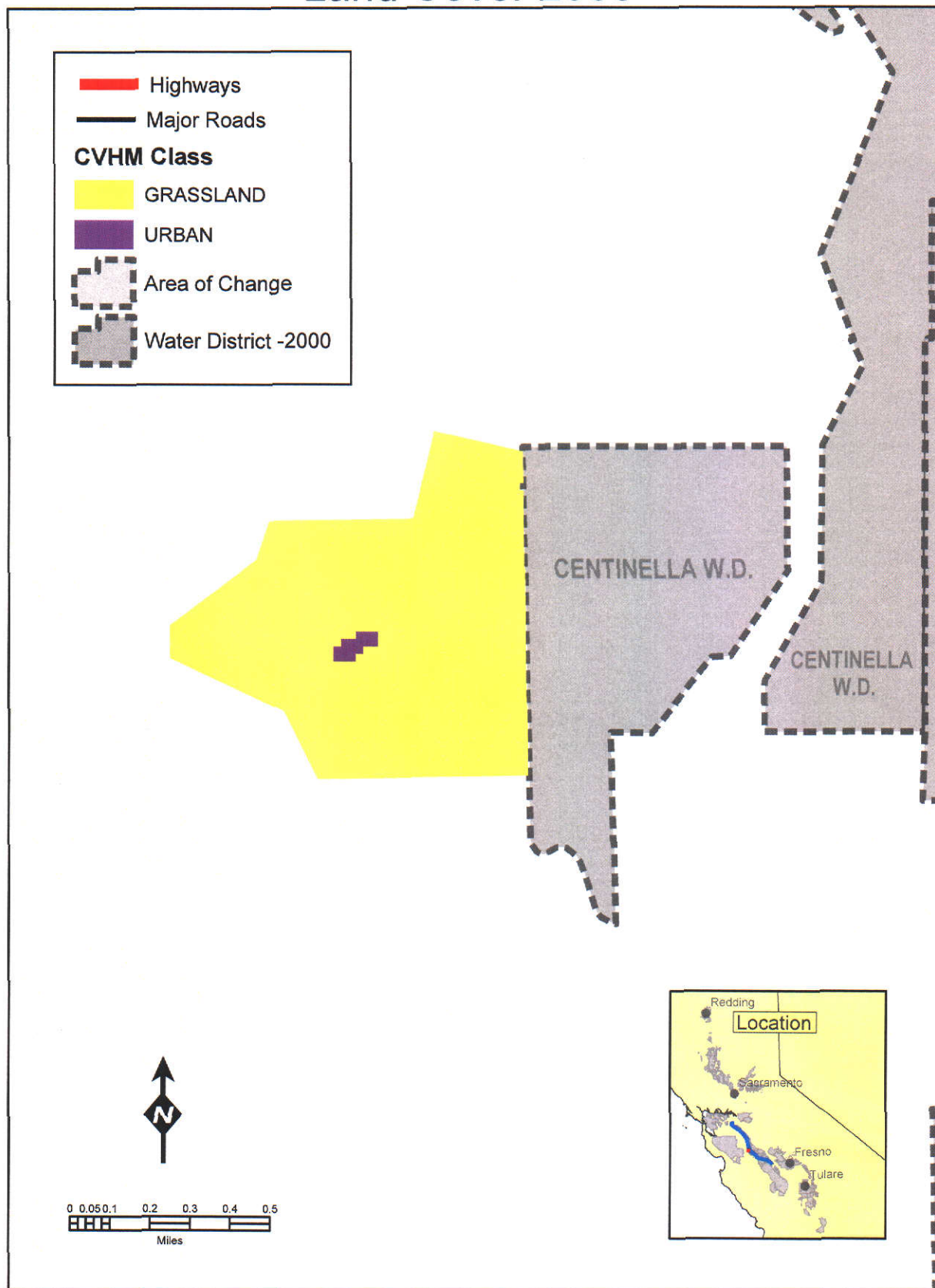
City of Tracy Land Cover 2000



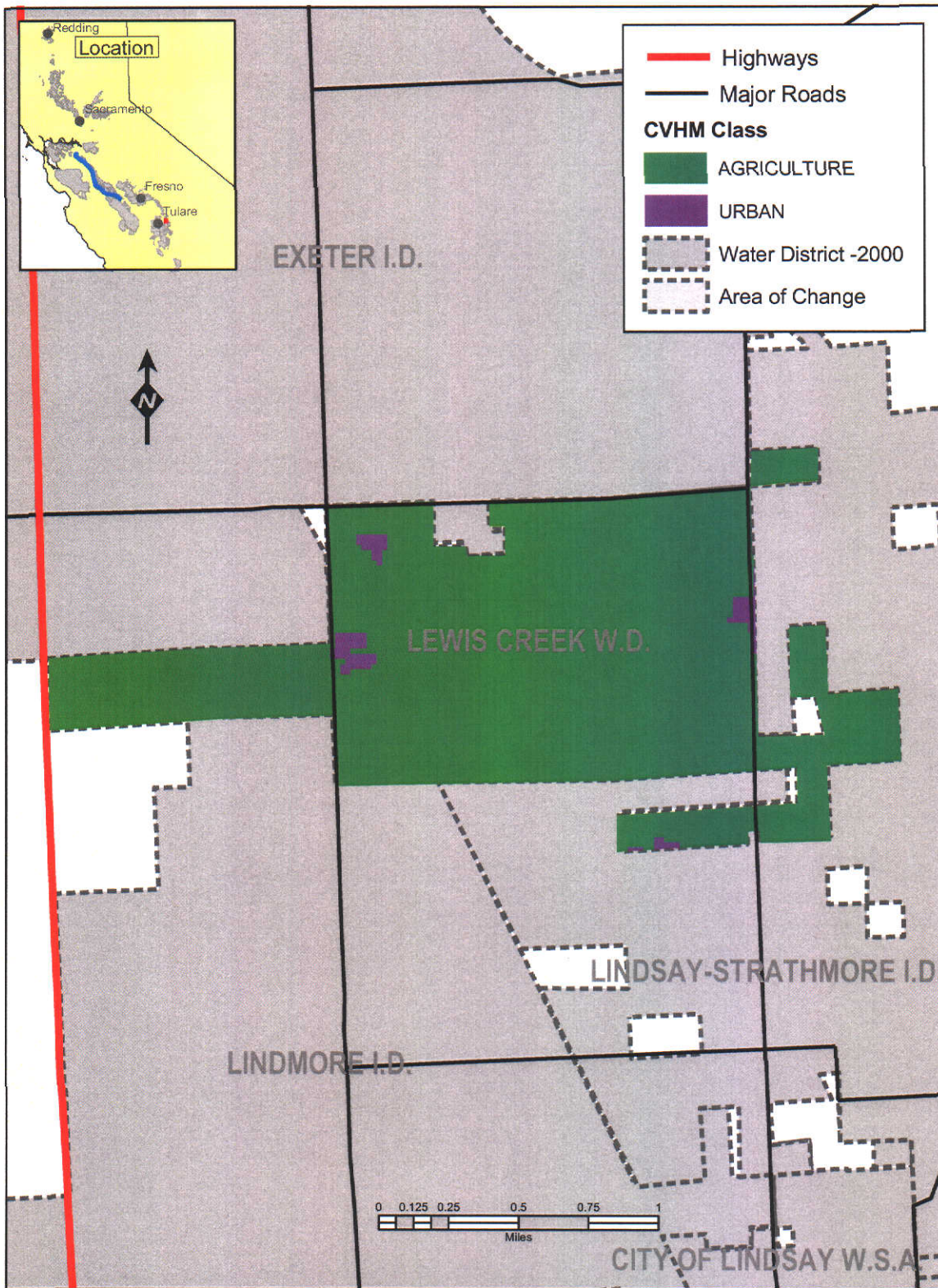
Tranquillity I.D. Land Cover 2000



San Joaquin Valley National Cemetery Land Cover 2000



Lewis Creek Water Service Area 2000



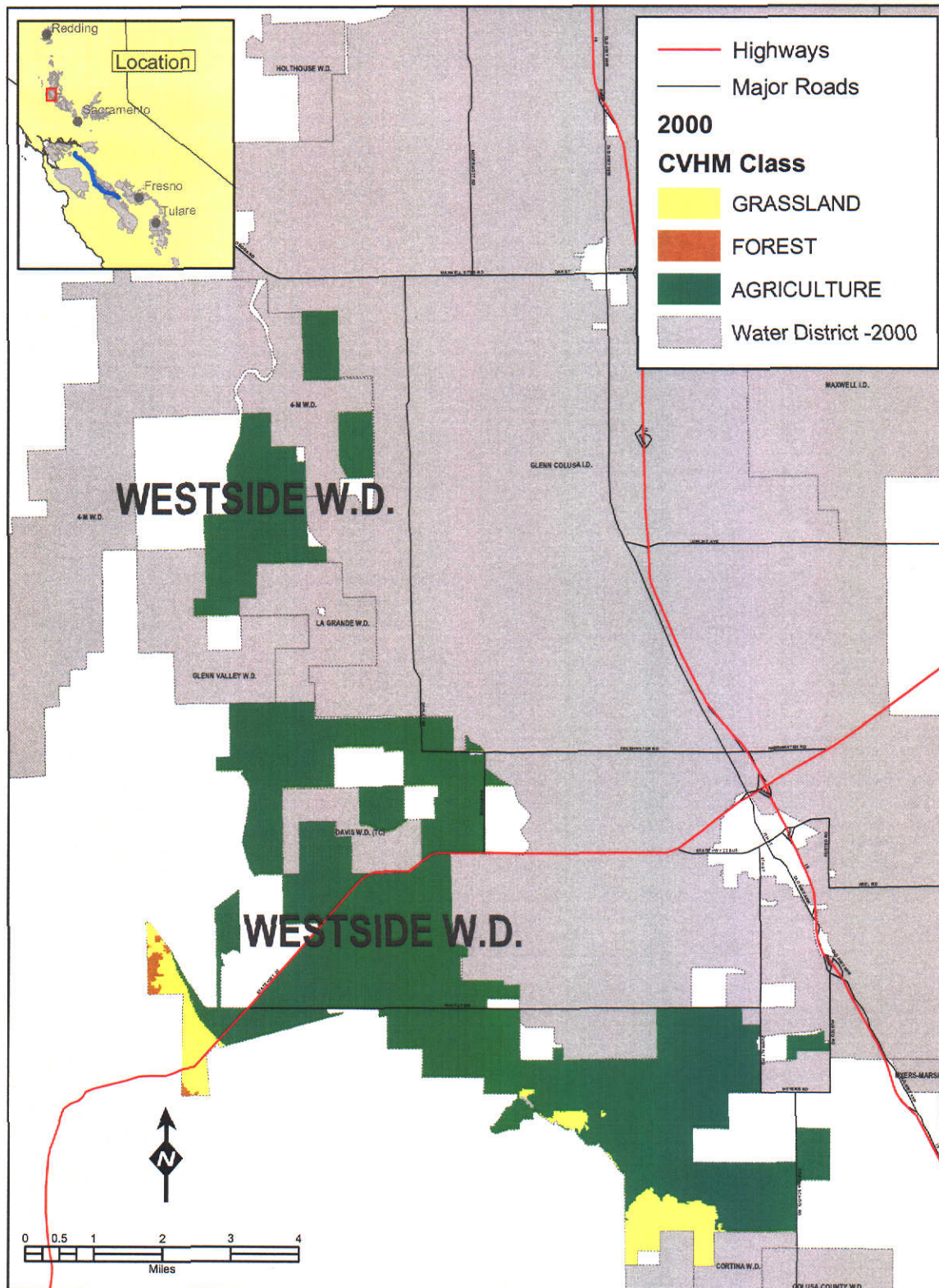
USBR, Division of Environmental Affairs
P:/cvhm/arcmap

IDCON 202420

12/19/2003

Note: This data is subject to
change as refinements
are made to processes.

Westside W.D. Land Cover - 2000



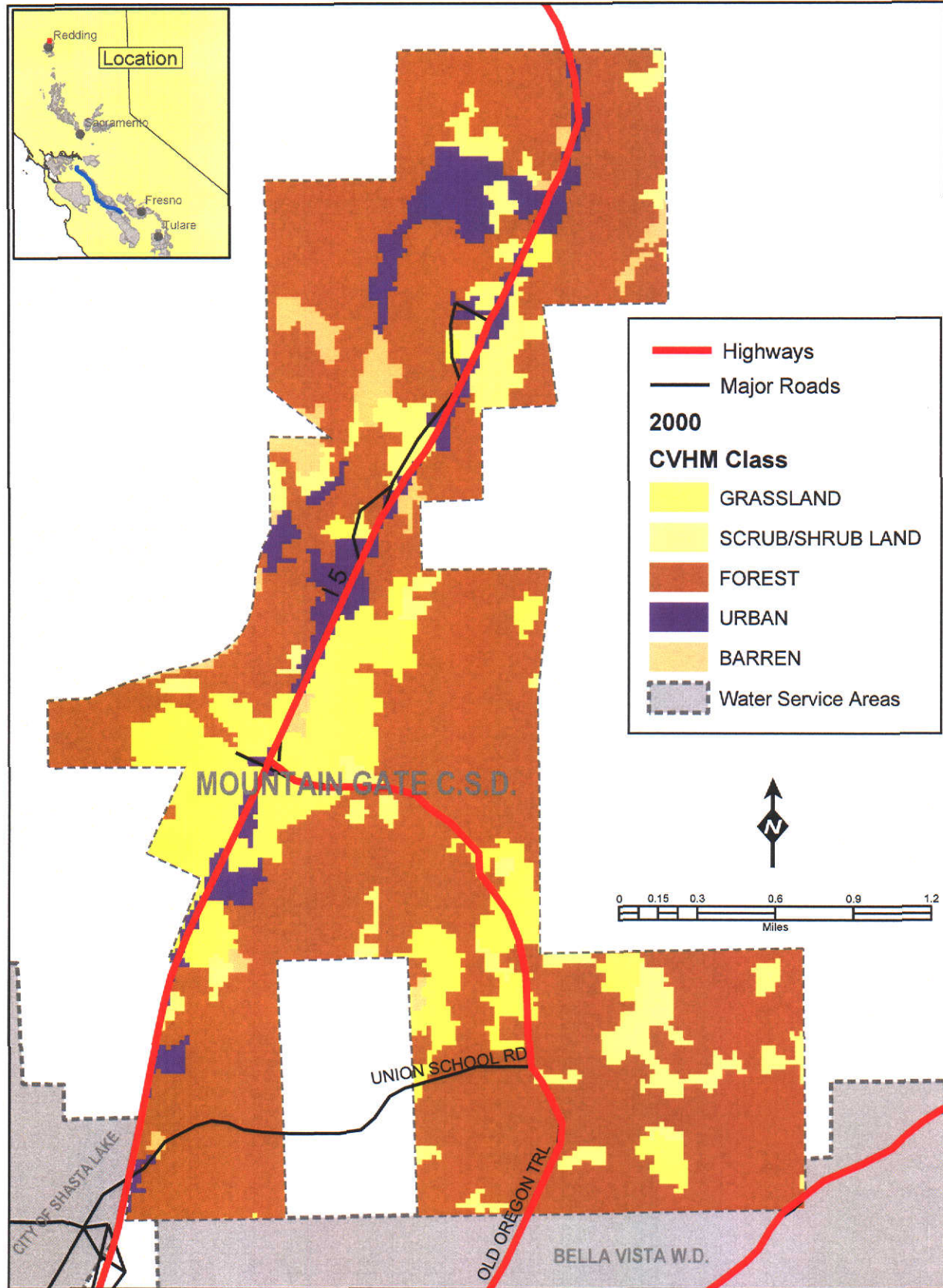
USBR, Division of Environmental Affairs
P:/cvhm/arcmap

202834

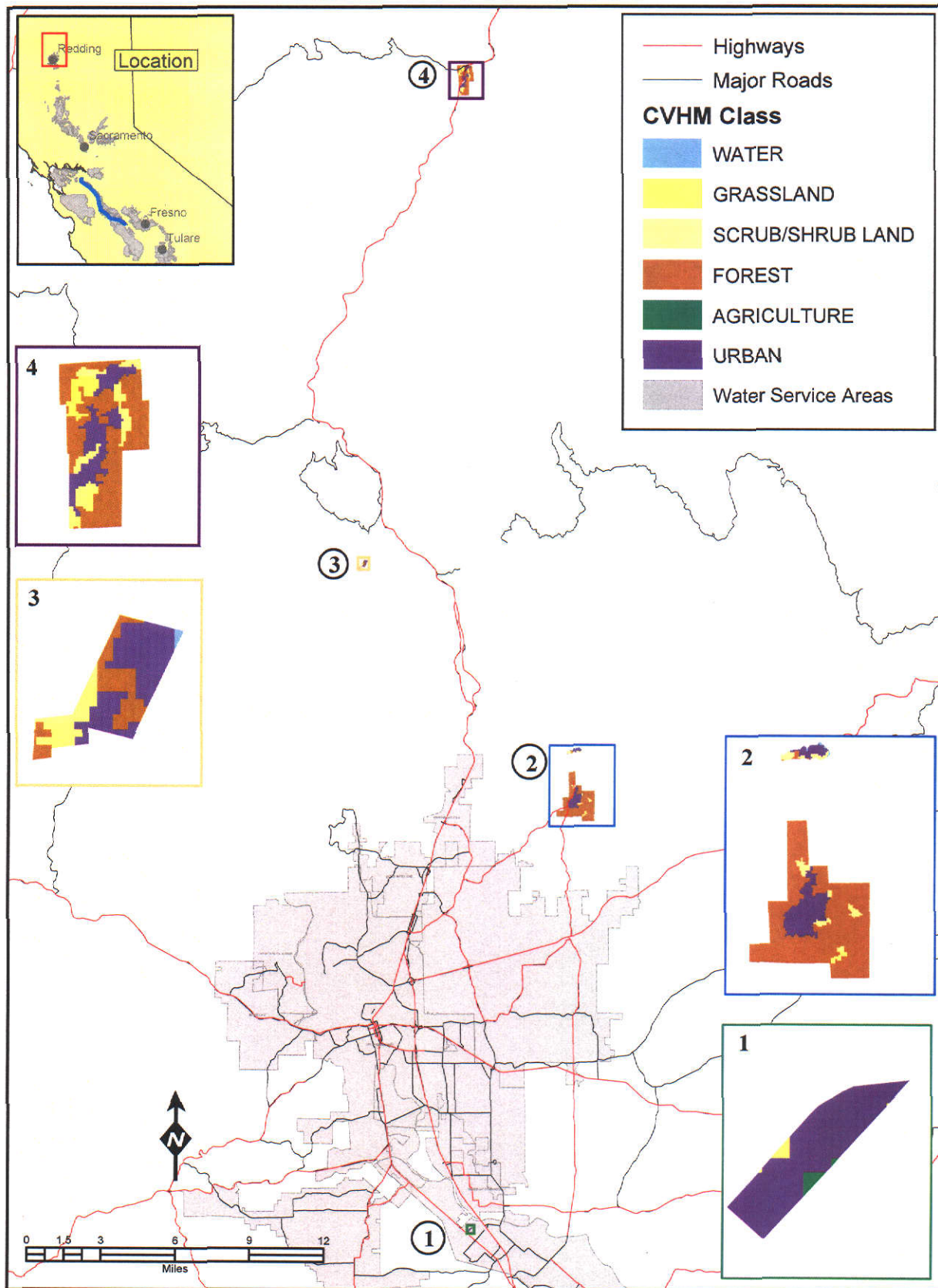
10/07/03

Note: This data is subject to
change as refinements
are made to processes.

Mountain Gate C.S.D. Land Cover - 2000



Shasta County Water Agency Land Cover - 2000



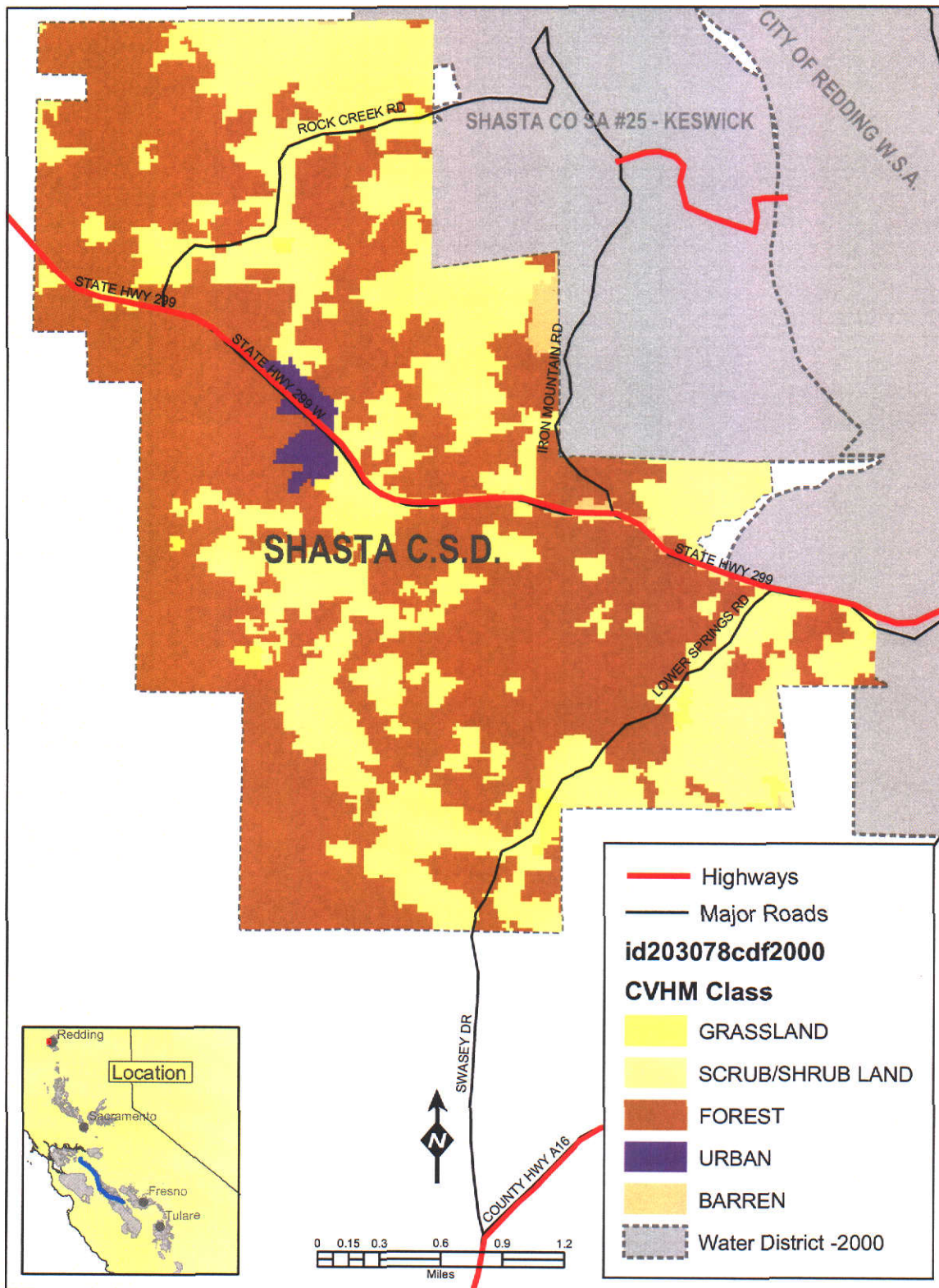
USBR, Division of Environmental Affairs
P:\cvhm/arcmap

203127

9/25/2003

Note: This data is subject to
change as refinements
are made to processes.

Shasta C.S.D. Land Cover - 2000



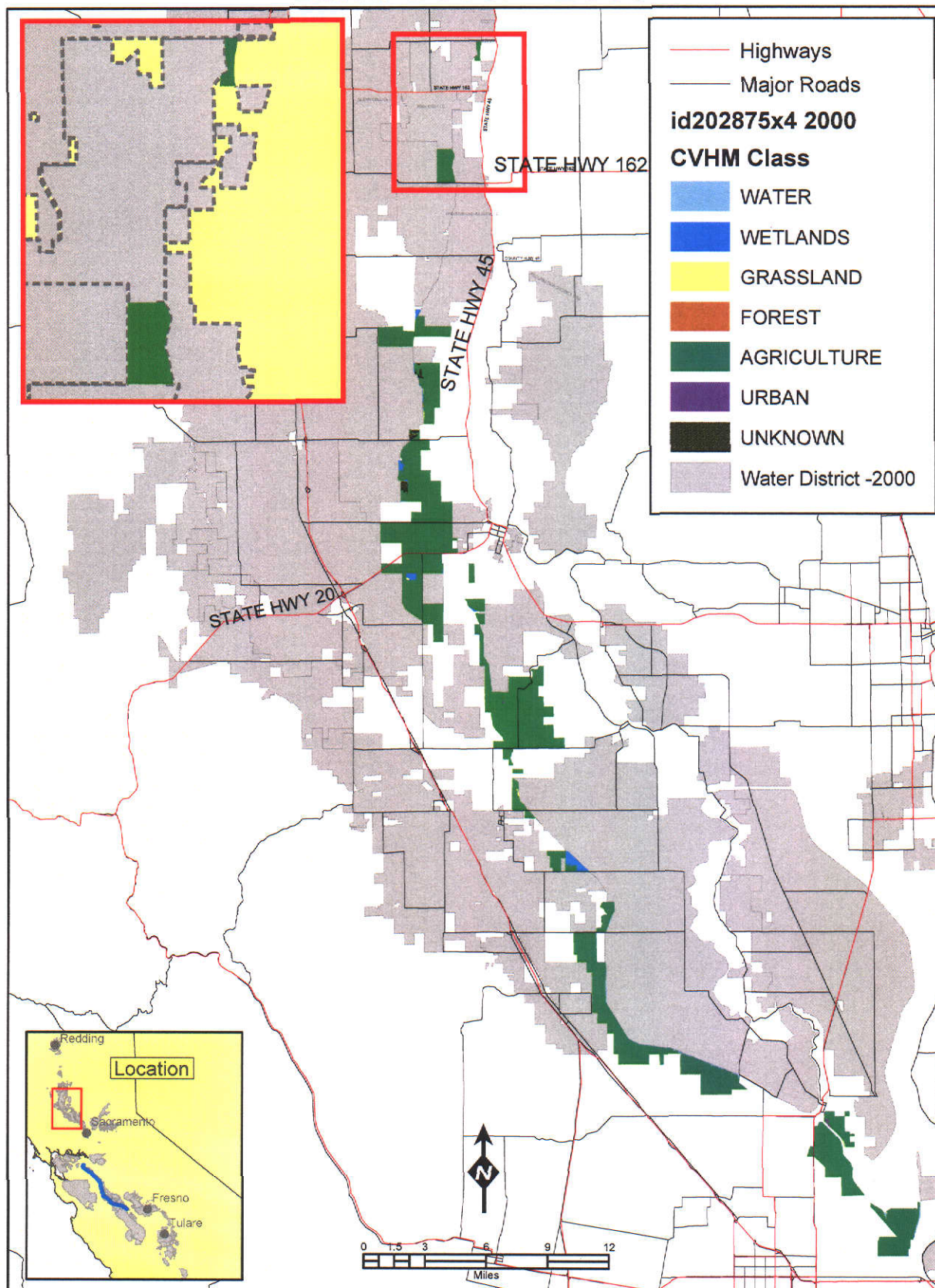
USBR, Division of Environmental Affairs
P:\cvhm\arcmap

Note: This data is subject to
change as refinements
are made to processes.

203078

10/20/2003

Colusa Drain MWC Land Cover - 2000



USBR, Division of Environmental Affairs
P:\cvhm\arcmap

202875

10/28/2003

Note: This data is subject to
change as refinements
are made to processes.

APPENDIX E

SUMMARIES OF

EXISTING HABITAT AND HABITAT CHANGE SINCE 1993

FOR EACH 2004 INTERIM RENEWAL CONTRACTOR

AMERICAN RIVER DIVISION (Interim Contracts)

Summary of 1993 - 2000 Conversions of Natural Land by Water Service Area (Acres)

IDCON#	WSA NAME	WSA ACRES	Natural Landcover 1993	Natural Landcover 2000	Natural - Other (1993-2000)	Other - Natural (1993 - 2000)	Percent of Natural Loss or Gain	Natural Landcover Change per WSA	Natural - Ag.	Natural - Urban	Natural - Unknown
201780	El Dorado I.D.	137716	121517	118925	2616	24	-2.13%	-1.88%	33	2527	56
201760	San Juan W.D.	29500	5782	5240	542	0	-9.37%	-1.84%	0	542	0
201770	El Dorado I.D. Sly Park	136128	119775	117179	2620	24	-2.17%	-1.91%	33	2531	56
Total		303344	247074	241344	5778	48	-2.32%	-1.89%	66	5600	112

10/31/03

El Dorado I.D. IDCON-201780

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	48
Agriculture to Unknown	0
Agriculture to Natural	24
Natural to Agriculture	34
Natural to Urban	2528
Natural to Unknown	57
Urban to Natural	0
No Change	135028
Total Acreage	137719

El Dorado Irrigation District (IDCON-201780)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
AG-D	25	0	0	0	0	0	0	0	0	0	25
AG-I	0	3735	48	14	0	0	10	0	0	0	3807
URB	0	0	12367	0	0	0	0	0	0	0	12367
BAR	0	21	12	247	0	0	0	0	0	0	280
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	1240	0	0	0	0	1240
GRS	0	0	1458	270	0	0	21403	0	0	0	23131
SHB	0	0	66	0	0	0	2	6494	0	4	6566
WDL	0	12	991	0	0	0	12	0	89233	52	90300
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	25	3768	14942	531	0	1240	21427	6494	89233	56	137716

Habitat Type in 1993

Habitat Totals in 1993 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Habitat Totals Existing in 2000 (acres)

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

San Juan W.D. - IDCON201760

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	30
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	542
Natural to Unknown	0
Urban to Natural	0
No Change	28930
Total Acreage	29502

San Juan Water District (IDCON-201760)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	679	30	0	0	0	0	0	0	709
	URB	0	0	23009	0	0	0	0	0	0	23009
	BAR	0	0	0	59	0	0	0	0	0	59
	WET	0	0	0	0	13	0	0	0	0	13
	WAT	0	0	0	0	0	67	0	0	0	67
	GRS	0	0	338	17	0	0	1596	0	3	1954
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	204	5	0	0	0	3480	0	3689
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	679	23581	81	13	67	1596	0	3483	0	29500

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

Note 3: Italics indicate Habitat acres with no change.

Eldorado ID - Sly Park Unit IDCON - 201770

USBR/FWS Central Valley Habitat Monitoring Program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	48
Agriculture to Unknown	0
Agriculture to Natural	24
Natural to Agriculture	34
Natural to Urban	2531
Natural to Unknown	57
Urban to Natural	0
No Change	133438
Total Acreage	136132

El Dorado Irrigation District (Sly Park Unit) (IDCON-201770)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
AG-D	25	0	0	0	0	0	0	0	0	0	25
AG-I	0	3776	48	14	0	0	10	0	0	0	3848
URB	0	0	12480	0	0	0	0	0	0	0	12480
BAR	0	21	12	235	0	0	0	0	0	0	268
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	1190	0	0	0	0	1190
GRS	0	0	1458	269	0	0	21813	0	0	0	23540
SHB	0	0	66	0	0	0	2	5918	0	4	5990
WDL	0	12	995	0	0	0	12	0	87716	52	88787
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	25	3809	15059	518	0	1190	21837	5918	87716	56	136128

Habitat Type in 1993

Habitat Totals in 1993 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Habitat Totals Existing in 2000 (acres)

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

Note 3: Italics indicate Habitat acres with no change.

DELTA DIVISION (Interim Contracts) Summary of 1993 - 2000 Conversions of Natural Land by Water Service Area (Acres)

IDCON#	WSA NAME	WSA ACRES	Natural Landcover 1993	Natural Landcover 2000	Natural - Other (1993-2000)	Other - Natural (1993 - 2000)	Percent of Natural Loss or Gain	Natural Landcover Change per WSA	Natural - Ag.	Natural - Urban	Natural - Unknown
201840	Banta-Carbona	17697	41	49	4	12	19.51%	0.05%	0	4	0
201850	Broadview	9702	0	0	0	0	0.00%	0.00%	0	0	0
201860	Centinella	879	78	78	0	0	0.00%	0.00%	0	0	0
201890	Del Puerto	54672	9679	9512	433	266	-1.73%	-0.31%	420	13	0
201900	Eagle Field	1438	9	9	0	0	0.00%	0.00%	0	0	0
201920	Fresno Slough	1316	26	41	0	15	57.69%	1.14%	0	0	0
201950	James	26434	127	129	5	7	1.57%	0.01%	4	1	0
201970	Laguna	461	10	10	0	0	0.00%	0.00%	0	0	0
201980	Mercy Springs	3589	119	119	0	0	0.00%	0.00%	0	0	0
202010	Oro Loma	1096	2	2	0	0	0.00%	0.00%	0	0	0
202040	Patterson	13785	74	76	10	12	2.70%	0.01%	0	10	0
202050	Plain View	7143	988	874	96	2	-9.71%	-1.32%	0	96	0
202070	Rec. Dist. 1606	360	60	43	17	0	-28.33%	-4.72%	13	0	4
202095	SJ Vet. Cemetery	324	321	321	0	0	0.00%	0.00%	0	0	0
202120	The West Side	6979	0	0	0	0	0.00%	0.00%	0	0	0
202130	Coehlo Fam. Trust	3500	1102	1120	31	13	1.63%	0.51%	2	0	29
202135	City of Tracy	9093	311	216	107	12	-30.55%	-1.04%	0	107	0
202845	Santa Clara Valley	835605	590513	590003	546	36	-0.99%	-0.06%	0	546	0
202140	Tranquillity	10596	17	16	1	0	-5.88%	-0.01%	1	0	0
201940	Tranquillity P.U.D.	129	0	0	0	0	0.00%	0.00%	0	0	0
203220	Westlands	605553	13441	14642	1174	2375	8.94%	0.20%	692	15	467
202180	West Stanislaus	22503	24	32	0	8	33.33%	0.04%	0	0	0
202192	Widren	881	99	99	0	0	0.00%	0.00%	0	0	0
Total		1633735	617021	617391	2424	2758	0.06%	0.02%	1132	792	500

10/31/2003

Banta-Carbona I.D. - IDCON201840

USBR/FWS Central Valley Habitat Monitoring Program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	107
Agriculture to Unknown	0
Agriculture to Natural	12
Natural to Agriculture	0
Natural to Urban	4
Natural to Unknown	0
Urban to Natural	0
No Change	17574
Total Acreage	17697

Banta-Carbona Irrigation District (IDCON-201840)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	16863	107	0	0	12	0	0	0	16982
	URB	0	0	674	0	0	0	0	0	0	674
	BAR	0	0	4	0	0	0	0	0	0	4
	WET	0	0	0	0	0	0	0	0	0	0
	WAT	0	0	0	0	0	3	0	0	0	3
	GRS	0	0	0	0	0	0	34	0	0	34
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	16863	785	0	0	15	34	0	0	0	17697

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et.al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

Broadview W.D. - IDCON201850

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	2
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	9701
Total Acreage	9703

Broadview Water District (IDCON-201850)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	0	0	0	0	0	0	0	0	0	0	0
AG-D	0	9683	0	0	0	0	0	0	0	2	9685
AG-I	0	0	17	0	0	0	0	0	0	0	17
URB	0	0	0	0	0	0	0	0	0	0	0
BAR	0	0	0	0	0	0	0	0	0	0	0
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	0	0	0	0	0	0
GRS	0	0	0	0	0	0	0	0	0	0	0
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	9683	17	0	0	0	0	0	0	2	9702

Habitat Type in 1993

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

Centinella W.D. - IDCON201860

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	1
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	878
Total Acreage	879

Centinella Water District (IDCON-201860)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	801	0	0	0	0	0	0	0	801
	URB	0	0	0	0	0	0	0	0	0	0
	BAR	0	0	0	0	0	0	0	0	0	0
	WET	0	0	0	0	0	0	0	0	0	0
	WAT	0	0	0	0	4	0	0	0	0	4
	GRS	0	0	0	0	0	74	0	0	0	74
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	801	0	0	0	4	74	0	0	0	879

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

Del Puerto W.D. - IDCON201890

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	206
Agriculture to Unknown	10
Agriculture to Natural	229
Natural to Agriculture	420
Natural to Urban	13
Natural to Unknown	0
Urban to Natural	0
No Change	53793
Total Acreage	54671

Del Puerto Water District (IDCON-201890)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	44082	206	0	0	229	0	0	10	44527
	URB	0	0	466	0	0	0	0	0	0	466
	BAR	0	18	13	33	0	29	0	0	0	93
	WET	0	0	0	0	23	0	0	0	0	23
	WAT	0	0	0	0	723	6	0	0	0	729
	GRS	28	375	0	1	0	8338	0	23	0	8765
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	17	0	17
	UNK	0	0	0	0	0	0	0	0	52	52
Total	28	44475	685	34	23	723	8602	0	40	62	54672

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

Note 3: Italics indicate Habitat acres with no change.

Eagle Field W.D. - IDCON201900

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	1438
Total Acreage	1438

Eagle Field Water District (IDCON-201900)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	1429	0	0	0	0	0	0	0	1429
	URB	0	0	0	0	0	0	0	0	0	0
	BAR	0	0	0	0	0	0	0	0	0	0
	WET	0	0	0	0	0	0	0	0	0	0
	WAT	0	0	0	0	9	0	0	0	0	9
	GRS	0	0	0	0	0	0	0	0	0	0
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	1429	0	0	0	9	0	0	0	0	1438

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

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Fresno Slough W.D. - IDCON201920

USBR/FWS Central Valley Habitat Monitoring Program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	21
Agriculture to Unknown	179
Agriculture to Natural	15
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	1101
Total Acreage	1316

Fresno Slough Water District (IDCON-201920)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	0	0	0	0	0	0	0	0	0	0	0
AG-D	0	1050	21	0	0	14	1	0	0	179	1265
AG-I	0	0	25	0	0	0	0	0	0	0	25
URB	0	0	0	0	0	0	0	0	0	0	0
BAR	0	0	0	0	0	0	0	0	0	0	0
WET	0	0	0	0	24	0	0	0	0	0	24
WAT	0	0	0	0	0	2	0	0	0	0	2
GRS	0	0	0	0	0	0	0	0	0	0	0
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	1050	46	0	24	16	1	0	0	179	1316

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et.al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
AG-I - Agriculture (Irrigated) URB - Urban areas
BAR - Barren WAT - Water
GRS - Grassland WDL - Woodland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

James I.D. - IDCON201950

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	205
Agriculture to Unknown	153
Agriculture to Natural	6
Natural to Agriculture	4
Natural to Urban	1
Natural to Unknown	0
Urban to Natural	0
No Change	26066
Total Acreage	26435

James Irrigation District (IDCON-201950)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	25736	205	0	0	6	0	0	153	26100
	URB	0	0	207	0	0	0	0	0	0	207
	BAR	0	0	0	0	0	0	1	0	0	1
	WET	0	2	0	0	26	0	0	0	0	28
	WAT	0	0	0	0	0	51	0	0	0	51
	GRS	0	1	1	0	0	0	45	0	0	47
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	25739	413	0	26	57	46	0	0	153	26434

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et.al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

Laguna W.D. - IDCON201970

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	462
Total Acreage	462

Laguna Water District (IDCON-201970)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	<i>Habitat Type Existing in 2000</i>										
	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
<i>Habitat Type in 1993</i>	0	0	0	0	0	0	0	0	0	0	0
AG-D	0	451	0	0	0	0	0	0	0	0	451
AG-I	0	0	0	0	0	0	0	0	0	0	0
URB	0	0	0	0	0	0	0	0	0	0	0
BAR	0	0	0	0	0	0	0	0	0	0	0
WET	0	0	0	0	3	0	0	0	0	0	3
WAT	0	0	0	0	0	0	0	0	0	0	0
GRS	0	0	0	0	0	0	4	0	0	0	4
SHB	0	0	0	0	0	0	0	3	0	0	3
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	451	0	0	3	0	4	3	0	0	461

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

Mercy Springs W.D. - IDCON201980

USBR/FWS Central Valley Habitat Monitoring Program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	3589
Total Acreage	3589

Mercy Springs Water District (IDCON-201980)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
<i>Habitat Type in 1993</i>	0	0	0	0	0	0	0	0	0	0	0
AG-I	0	3467	0	0	0	0	0	0	0	0	3467
URB	0	0	2	0	0	0	0	0	0	0	2
BAR	0	0	0	40	0	0	0	0	0	0	40
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	75	0	0	0	0	75
GRS	0	0	0	0	0	0	4	0	0	0	4
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	1	1
Total	0	3467	2	40	0	75	4	0	0	1	3589

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
AG-I - Agriculture (Irrigated) URB - Urban areas
BAR - Barren WAT - Water
GRS - Grassland WDL - Woodland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

Oro Loma W.D. - IDCON202010

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	1096
Total Acreage	1096

Oro Loma Water District (IDCON-202010)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	1090	0	0	0	0	0	0	0	1090
	URB	0	0	4	0	0	0	0	0	0	4
	BAR	0	0	0	0	0	0	0	0	0	0
	WET	0	0	0	0	0	0	0	0	0	0
	WAT	0	0	0	0	1	0	0	0	0	1
	GRS	0	0	0	0	0	1	0	0	0	1
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total	0	1090	4	0	0	1	1	0	0	0	1096

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et.al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

Pajaro Valley WMA (IDCON-203160)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	0	0	0	0	0	0	0	0	0	0	0
AG-D	0	40422	0	0	0	0	0	0	0	0	40422
AG-I	0	0	7022	0	0	0	0	0	0	0	7022
URB	0	0	0	938	0	0	0	0	0	0	938
BAR	0	0	0	0	937	0	0	0	0	0	937
WET	0	0	0	0	0	464	0	0	0	0	464
WAT	0	0	0	0	0	0	7356	0	0	0	7356
GRS	0	0	0	0	0	0	0	5702	0	0	5702
SHB	0	0	0	0	0	0	0	0	11307	0	11307
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	40422	7022	938	937	464	7356	5702	11307	0	74148

Habitat Totals in 1993 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Habitat Totals Existing in 2000 (acres)

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
AG-I - Agriculture (Irrigated) URB - Urban areas
BAR - Barren WAT - Water
GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/2/2004

Westlands W.D. - IDCON-203220

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	263
Agriculture to Unknown	19232
Agriculture to Natural	2375
Natural to Agriculture	692
Natural to Urban	16
Natural to Unknown	468
Urban to Natural	0
No Change	582509
Total Acreage	605555

Westlands Water District (IDCON-203220)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	608	0	47	0	0	0	0	0	0	0	655
AG-I	0	562394	216	0	29	0	2044	302	0	19232	584217
URB	0	0	7240	0	0	0	0	0	0	0	7240
BAR	0	0	8	25	0	0	275	0	0	0	308
WET	0	0	0	0	441	0	0	0	0	60	501
WAT	0	0	0	0	0	1077	0	0	0	0	1077
GRS	0	692	7	0	0	0	5910	0	11	407	7027
SHB	0	0	0	0	0	0	78	2942	0	0	3020
WDL	0	0	0	0	0	0	0	0	1508	0	1508
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	608	563086	7518	25	470	1077	8307	3244	1519	19699	605553

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

Santa Clara Valley - IDCON-202845

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	812
Agriculture to Unknown	0
Agriculture to Natural	30
Natural to Agriculture	0
Natural to Urban	546
Natural to Unknown	0
Urban to Natural	6
No Change	834211
Total Acreage	835605

Santa Clara Valley Water District (IDCON-202845)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	0	0	0	0	0	0	0	0	0	0	0
AG-D	0	60815	812	0	0	0	30	0	0	0	61657
AG-I	0	0	183429	0	0	0	6	0	0	0	183435
URB	0	0	0	1601	0	0	0	0	0	0	1601
BAR	0	0	0	0	3118	0	0	0	0	0	3118
WET	0	0	0	0	0	16665	0	0	0	0	16665
WAT	0	0	535	0	0	0	199674	0	0	0	200209
GRS	0	0	0	1	0	0	8	108189	0	0	108198
SHB	0	0	11	0	0	0	0	0	260711	0	260722
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	60815	184787	1602	3118	16665	199718	108189	260711	0	835605

Habitat Totals in 1993 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Habitat Totals Existing in 2000 (acres)

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
AG-I - Agriculture (Irrigated) URB - Urban areas
BAR - Barren WAT - Water
GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/2/2004

Patterson W.D. - IDCON202040

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	8
Agriculture to Unknown	0
Agriculture to Natural	13
Natural to Agriculture	0
Natural to Urban	10
Natural to Unknown	0
Urban to Natural	0
No Change	13754
Total Acreage	13785

Landcover/Landuse Change (1993-2000, acres)
Patterson W.D. IDCON-202040

2000 CVHM LANDCOVER/LANDUSE

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
AG-D	0	0	0	0	0	0	0	0	0	0	0
AG-I	0	13564	8	0	0	0	10	0	2	0	13584
URB	0	0	127	0	0	0	0	0	0	0	127
BAR	0	0	0	2	0	0	0	0	0	0	2
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	4	0	0	0	0	4
GRS	0	0	10	0	0	0	48	0	0	0	58
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	10	0	10
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	13564	145	2	0	4	58	0	12	0	13785

1993 CVHM LANDCOVER/LANDUSE

1993

2000

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland
 SHB - Shrubland WET - Wetland

3/14/2003

Note: This data is subject to change as refinements are made to processes.

Plain View W.D. - IDCON202050

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	135
Agriculture to Unknown	0
Agriculture to Natural	2
Natural to Agriculture	0
Natural to Urban	96
Natural to Unknown	0
Urban to Natural	0
No Change	6911
Total Acreage	7144

Tuesday, March 11, 2003

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Note This data is subject to change as refinements are made to processes

Plainview Water District (IDCON-202050)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
<i>Habitat Type in 1993</i>	0	0	0	0	0	0	0	0	0	0	0
AG-I	0	5596	135	0	0	0	2	0	0	0	5733
URB	0	0	442	0	0	0	0	0	0	0	442
BAR	0	0	26	74	0	0	0	0	0	0	100
WET	0	0	0	0	0	0	0	0	0	0	0
WAT	0	0	0	0	0	18	0	0	0	0	18
GRS	0	0	70	0	0	8	772	0	0	0	850
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	5596	673	74	0	26	774	0	0	0	7143

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
AG-I - Agriculture (Irrigated) URB - Urban areas
BAR - Barren WAT - Water
GRS - Grassland WDL - Woodland
SHB - Shrubland WET - Wetland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

Reclamation District 1606 - IDCON202070

USBR/FWS Central Valley Habitat Monitoring program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	30
Agriculture to Natural	0
Natural to Agriculture	13
Natural to Urban	0
Natural to Unknown	4
Urban to Natural	0
No Change	313
Total Acreage	360

Reclamation District 1606 (IDCON-202070)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

Habitat Type in 1993											
	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
AG-D	0	0	0	0	0	0	0	0	0	0	0
AG-I	0	270	0	0	0	0	0	0	0	30	300
URB	0	0	0	0	0	0	0	0	0	0	0
BAR	0	0	0	0	0	0	0	0	0	0	0
WET	0	0	0	0	39	0	0	0	0	4	43
WAT	0	0	0	0	0	3	0	0	0	0	3
GRS	0	13	0	0	0	0	1	0	0	0	14
SHB	0	0	0	0	0	0	0	0	0	0	0
WDL	0	0	0	0	0	0	0	0	0	0	0
UNK	0	0	0	0	0	0	0	0	0	0	0
Total	0	283	0	0	39	3	1	0	0	34	360

Habitat Totals in 1993 (acres)

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et.al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland

Note 3: Italics indicate Habitat acres with no change.

3/1/2004

San Joaquin Valley National Cemetery

IDCON 202095

USBR/FWS Central Valley Habitat Monitoring Program

Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	0
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	325
Total Acreage	325

Friday, March 07, 2003

Page 1 of 1

Note: This data is subject to change as refinements are made to processes.

Vet. Affairs San Joaquin National Cemetery (IDCON-202095)
Central Valley Habitat Monitoring (CVHM), Habitat Change From 1993 To 2000 (acres)

Habitat Type Existing in 2000

	AG-D	AG-I	URB	BAR	WET	WAT	GRS	SHB	WDL	UNK	Total
Habitat Type in 1993	AG-D	0	0	0	0	0	0	0	0	0	0
	AG-I	0	0	0	0	0	0	0	0	0	0
	URB	0	0	3	0	0	0	0	0	0	3
	BAR	0	0	0	0	0	0	0	0	0	0
	WET	0	0	0	0	0	0	0	0	0	0
	WAT	0	0	0	0	0	0	0	0	0	0
	GRS	0	0	0	0	0	321	0	0	0	321
	SHB	0	0	0	0	0	0	0	0	0	0
	WDL	0	0	0	0	0	0	0	0	0	0
	UNK	0	0	0	0	0	0	0	0	0	0
Total		0	0	3	0	0	0	321	0	0	324

Habitat Totals Existing in 2000 (acres)

Note 1: This data is subject to change as refinements are made to processes.

Note 2: The habitat types in this matrix are based on groupings of the WHR classification (Meyer et al., 1988).

AG-D - Agriculture (Dryland) UNK - Unknown
 AG-I - Agriculture (Irrigated) URB - Urban areas
 BAR - Barren WAT - Water
 GRS - Grassland WDL - Woodland
 SHB - Shrubland WET - Wetland

3/1/2004

Note 3: Italics indicate Habitat acres with no change.

Habitat Totals in 1993 (acres)

The West Side I.D. - IDCON202120

USBR/FWS Central Valley Habitat Monitoring Program Land Cover Change Report 1993 - 2000

DESCRIPTION	TOTAL ACRES
Agriculture to Urban	147
Agriculture to Unknown	0
Agriculture to Natural	0
Natural to Agriculture	0
Natural to Urban	0
Natural to Unknown	0
Urban to Natural	0
No Change	6832
Total Acreage	6979