



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

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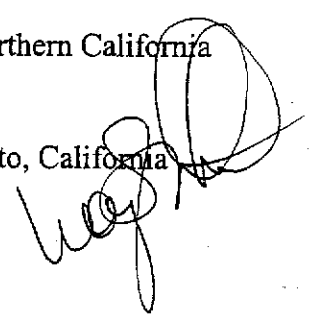
9 March 2005

### Memorandum

**To:** Michael J. Ryan, Area Manager, U.S. Bureau of Reclamation, Northern California Area Office, Shasta Lake, California (96019-8400)

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

**Subject:** Conclusion of Informal Consultation on the Renewal of the Natomas Central Mutual Water Company Sacramento River Settlement Contract



This document responds to your April 14, 2004 request for consultation on the renewal of the Natomas Central Mutual Water Company (NCMWC) in Sutter and Sacramento Counties, in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.).

This document summarizes the results of our informal consultation on the effects of these Settlement Contract renewal actions on the listed species presented in Table 1 which applies to all 141 Settlement Contractors.. This consultation addresses the renewal of the contracts and continued delivery of water for a period of 40 years. This consultation covers the diversion of surface water from the Sacramento River and change in purpose and use of Central Valley Project water (Project water) from agricultural use only to agricultural, municipal and industrial purposes. The Service remains in consultation with Reclamation on the renewal of the Colusa Drain Mutual Water Company contract and the settlement contracts for the City of Redding and Anderson Cottonwood Irrigation District.

After review of information available to us and discussions with Reclamation's Northern California Area Office and Mid Pacific Regional Office staff, it is our determination that the renewal of the NCMWC Settlement Contract is not likely to adversely affect federally listed or proposed species listed in Table 1 below, or their designated or proposed critical habitat.

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Table 1. Species and Critical Habitat considered in this consultation, including common name, scientific name, Federal status, and whether the species has designated critical habitat.			
Common Name	Scientific Name	Federal Status	Critical Habitat
<b>Invertebrates</b>			
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E	Yes
Valley elderberry longhorn beetle	<i>Desomocercus californicus dimorphus</i>	T	Yes
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	E	Yes
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E	Yes
<b>Fish</b>			
Delta smelt	<i>Hypomesus transpacificus</i>	T	Yes
<b>Amphibians and Reptiles</b>			
California red-legged frog	<i>Rana aurora draytonii</i>	T	Yes (Proposed 4/13/04)
California tiger salamander	<i>Ambystoma californiense</i>	T	Yes (Proposed 8/10/04)
Giant garter snake	<i>Thamnophis gigas</i>	T	No
<b>Birds</b>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	No
Western snowy plover	<i>Caradrius alexandrinus nivosus</i>	T	No
<b>Plants</b>			
Colusa grass	<i>Neostapfia colusana</i>	T	Yes
Butte County meadowfoam	<i>Limnanthes floccosa ssp. californica</i>	E	Yes
Green's tuctoria	<i>Tuctoria greenei</i>	E	Yes
Hairy Orcutt grass	<i>Orcuttia pilosa</i>	T	Yes
Hoover's spurge	<i>Chamaesyce hooveri</i>	T	Yes
Palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	E	No
Slender Orcutt grass	<i>Orcuttia tenuis</i>	T	Yes
E = listed as Endangered under the Endangered Species Act T = listed as Threatened under the Endangered Species Act PT = proposed to be listed as Threatened under the Endangered Species Act			

## BACKGROUND INFORMATION

**Sacramento River Settlement Contracts.** The CVP was first authorized as a federal project in 1935, and includes facilities on the Sacramento River. Prior to construction of the CVP, individuals and entities along the Sacramento River were diverting water for irrigation and municipal and industrial (M&I) use. Construction of CVP dams on the Sacramento and Trinity Rivers have substantially modified the flows of the Sacramento River.

The Settlement Contracts have a unique history and nature. The Sacramento River Settlement Contractors (Settlement Contractors) hold water rights to Sacramento River water, many of which are senior to the Central Valley Project (CVP) and, cumulatively, claim senior water rights that entitle them to use a significant portion of the water available for appropriation in the Sacramento River. If the Settlement Contractors were to fully use their senior water rights, Reclamation's current ability to operate the CVP would be compromised. It was in recognition of this fact that members of Congress directed Reclamation to negotiate with the Settlement Contractors and enter into the existing settlement contracts.

The Settlement Contractors include approximately 145 irrigation districts, reclamation districts, mutual water companies, partnerships, and individuals located in the Sacramento River Basin between the cities of Redding and Sacramento in Northern California. In total, the 145 Settlement Contractors have rights to divert approximately 2.2 million acre-feet/year from the Sacramento River (except during critical years as defined under the Settlement Contracts).

The Settlement Contractors do not depend on CVP water to supply their water needs. If Reclamation did not enter into renewal contracts with the Settlement Contractors, they would revert to diverting water from the Sacramento River under their "claim of right" (this differs from the CVP water service contractors that also divert from the Sacramento River; water service contractors have no legal right to divert from the Sacramento River absent their contract). If a Settlement Contractor were to divert water under their "claim of right" (rather than under a contract), Reclamation estimates that the acre-feet/year of water diverted under that claim of right would be about the same (or even greater) than their renewal contract's Total Contract amount (Don Bultema pers. comm. 1/31/05). The frequency and timing of any water diversions taken under a Contractor's "claim of right" would likely be the same as under the proposed renewal contracts because the Contractor's crops and cropping patterns would not change or be affected by renewing their Settlement Contract (Don Bultema pers. comm. 1/31/05).

The Settlement Contractor's water diversion facilities and water conveyance facilities are owned and maintained entirely by the Settlement Contractors, and many were initially constructed by the Settlement Contractors prior to the creation of the CVP. The Settlement Contractor's water conveyance facilities, canals, and ditches continue to have independent utility from the CVP, CVP operation and maintenance, and from the renewal of the Sacramento River Settlement Contracts (Don Bultema pers. comm. 1/31/05).

When originally executed, the term of these Settlement Contracts was not to exceed 40 years, and these contracts were scheduled to expire on March 31, 2004. However, on December 1, 2003, Congress passed Public Law 108-37. Section 218 of that Act states:

“The Secretary of the Interior shall extend the term of the Sacramento River Settlement Contracts, long- and short-form, entered into by the United States with various districts and individuals, under section 14 of the Reclamation Project Act of 1939 (53 Stat. 1197), for a period of 2 additional years after the date on which each of the contracts, respectively, would expire but for this section, or until renewal contracts are executed, whichever occurs earlier.”

Pursuant to this Congressional mandate, Reclamation has issued written notices to the Settlement Contractors confirming that all terms and conditions of their existing Settlement Contracts will remain in full force and effect during the two year extension period.

**Consultation on Related Actions.** The Sacramento Fish and Wildlife Office (SFWO) are currently engaged in, or have recently completed consultation with Reclamation on related actions. These other consultations include:

1) *CVP Long-term Water Service Contract renewals.* In addition to the 138 Sacramento River Settlement Contracts analyzed in this consultation, Reclamation intends to renew approximately 109 CVP Water Service contracts throughout the Central Valley (27 of which have already been executed in the Friant Division and Hidden and Buchanan Units of the CVP). The CVP Water Service contracts include an annual maximum quantity of approximately 5.6 million af/year of CVP water and provide water service to approximately 3.2 million irrigable acres of land and an urban population in excess of 4.3 million people. Each long-term water contract renewal, while authorizing a maximum contract amount, recognizes that the delivery of the entire contract amount is subject to the availability of water and other CVP obligations.

For efficiency, Reclamation has grouped the CVP water service contract renewal environmental documents by similar regional issues. Separate Section 7 consultations have been or will be initiated for water service contract renewals for the following CVP divisions: Shasta-Trinity, Sacramento River Division (Corning Canal, Tehama-Colusa Canal, and Black Butte Units), Feather Water District, American River Division, Contra Costa Canal, San Felipe Division, Delta-Mendota Canal, San Luis Unit, City of Fresno, West San Joaquin Division, San Felipe Division, New Melones and Cross Valley Canal Unit. The Service's Section 7 consultations on the 27 Friant Division contractors, the Hidden contract, and the Buchanan contract renewals were completed in 2001.

All of the renewing CVP contracts are required by the *Biological Opinion on Implementation of the CVPIA (Central Valley Project Improvement Act) and Continued Operation and Maintenance of the CVP (CVPIA PBO)* to incorporate provisions needed to comply with applicable law, including provisions of the CVPIA. Renewal contracts will incorporate applicable provisions of the CVPIA, including payment into the CVP Restoration Fund.

2) *CVP Operations Criteria and Plan (OCAP).* The OCAP describes the coordinated operation of the Central Valley Project (CVP) and State Water Project (SWP) by Reclamation and the California Department of Water Resources. On July 30, 2004, the Service issued biological opinion 1-1-04-F-0140, which addressed the effects of operating the CVP/SWP and delivering CVP water for renewing water contracts and other actions on the threatened delta smelt (*Hypomesus transpacificus*). On February 15, 2005, the Service issued biological opinion 1-1-

05-F-0055 in response to Reclamation's November 3, 2004 request for reinitiation of formal consultation on the OCAP to analyze the effects of the OCAP on delta smelt critical habitat in light of current case law on the Service's definition of "adverse modification".

The OCAP consultation analyzed the effects of numerous new actions on the delta smelt and its designated critical habitat, including storage of CVP and SWP water in reservoirs, water releases from reservoirs, river operations, operation of the Federal/State diversion facilities, and the CVP/SWP export-pumping operations in and through the Delta. The OCAP consultation addressed the operation of the CVP/SWP in the Sacramento Valley, and included all commitments of the SWP and CVP, such as meeting requirements of the CVPIA PBO (USFWS 2000), the obligations contained in the Central Valley Water Quality Control Board water right permits, obligations of CVP water service contracts, Sacramento River Settlement contracts, San Joaquin exchange contracts, and other requirements. Therefore, the OCAP BO addressed all the aquatic effects of operating the CVP/SWP.

In contrast, the Service's consultations on the long-term water service contract renewals and Settlement contract renewals are addressing the diversion of Sacramento River water at prescribed diversion points and times for the use of that water on a specified land area (the contractors' service area). All renewal contracts, while identifying a full contract amount, recognize that the delivery of full contract amount is subject to availability of water and other obligations of the CVP (such as CVPIA and biological ESA consultation requirements). In other words, the contracts create a demand (among other demands) for CVP water and the OCAP consultation addresses how the CVP/SWP projects are operated to meet those demands. There clearly is a linkage between contract renewals and the operation of the CVP/SWP. These linkages must, and are being, addressed in separate but parallel consultations such that all possible effects on listed species are being identified and consulted on (F. Michny pers. comm. 11/11/04).

3) *Operation and Maintenance of CVP Water Conveyance Facilities in the Jurisdiction of the Northern California Area Office.* The 2000 CVPIA programmatic biological opinion (CVPIA PBO) anticipated that it may be desirable to cover some operations and maintenance activities under long term contract renewal biological opinions (CVPIA PBO page 2-46 to 2-49). The Settlement Contract BA (Reclamation 2003a) did not address potential effects of maintenance and operation actions at CVP facilities on listed species since no CVP facilities are directly associated with the Settlement Contract service areas.

Pursuant to the CVPIA PBO and the Biological Opinion for Interim Renewal Contracts (USFWS 1995, 1998, 2000, 2002), Reclamation has developed an *Operations and Maintenance Plan for the Protection of Listed Species of the Northern California Area Office* (O&M Plan) to describe and address the potential effects of general and routine maintenance activities conducted by or for Reclamation on their CVP facilities throughout northern California.

Because Reclamation aggregated information at different geographic scales and levels of specificity for long term contracts and facility operation and maintenance, the Service determined it was necessary to conduct separate, but concurrent, consultation on operation and maintenance to meet Reclamation's target dates for long term contract renewals.

The Service has completed consultation on the Northern California Area Office O&M Plan, which includes the *Operations and Maintenance Guidelines, Integrated Pest Management Plans, and Reclamation's Listed Species Manual*. That consultation analyzed the effects of operation and maintenance of the CVP facilities associated with contract renewals, other than those effects analyzed in the OCAP biological opinion. The Service issued that biological opinion on February 14, 2005 (Service file number 1-1-05-F-0057).

4) *Natomas Fish Screen Project*. NCMWC is completing the feasibility, preliminary design, and environmental evaluation work associated with the proposed consolidation of five Sacramento River diversions into two screened diversion facilities. If approved, the proposed project will remove pumping from an area (Natomas Cross Canal Channel), consolidate diversions, create new and upgrade existing infrastructure.

### Consultation-History

- *November 21, 2000* - Service completes the Biological consultation on the Implementation of the Central Valley Project Improvement Act and the Continued Operation and Maintenance of the Central Valley Project (CVPIA PBO). CVPIA PBO pages 2-1, 2-8, 2-29 to 2-31, and 2-54 to 2-56 specifically address Settlement Contract and Water Service Contract long-term contract renewals.
- *May 9, 2003* - Reclamation (NCAO) requests species lists for 60 U.S.G.S. 7.5 minute quadrangle maps corresponding to 145 Settlement Contractors' water service areas.
- *May 16, 2003* - The Service provides Reclamation with a list species for the 60 U.S. Geological Survey 7.5 minute quadrangle maps.
- *April 20, 2004* - Service receives an April 13, 2004 memo from Reclamation requesting the initiation of formal Section 7 consultation for the long-term contract renewal (LTCR) of Northern California Area Office Contractors on behalf of both Reclamation and the applicants. Applicants include the Sacramento River Water-Rights Settlement Contractors. Enclosed with this memo was the *Sacramento River Settlement Contractors Biological Assessment - Long-term Contract Renewal*, dated August 2003 (BA) (USBR 2003a). This BA addressed 145 Sacramento River Settlement Contractors and the Colusa Drain Mutual Water Company.
- *July 6, 2004* - Meeting between Allison Arnold (Service) and Robert Eckart (Reclamation MP-150). The Service discusses BA deficiencies and requests detailed information on the size and specific location of each of the 145 Settlement Contractor's water service areas and the Colusa Basin Drain Mutual Water Company.
- *July 9, 2004* - Reclamation releases text of 140 negotiated long-term Settlement Contracts for a 60-day public review, and posts negotiated contracts on the Reclamation Mid-Pacific webpage.

- *July 21, 2004* – Service receives Reclamation's preliminary GIS spatial data for each Settlement Contractor's water service-area boundary.
- *October 5, 2004* – Service receives a copy of the *Sacramento River Settlement Contractors Draft Environmental Impact Statement* (Draft EIS) dated September, 2004. (USBR 2004a)
- *October 14, 2004* – Reclamation (MP-410) provides the Service with current copies all available Sacramento River Settlement Contractor Water-Need Assessments. Twenty Water-Needs Assessments were provided.
- *October, 27, 2004* – Reclamation (NCAO) supplements the BA with updated information on Settlement Contract names, the new long-term contract numbers, and the final contract amounts.
- *October 25, 2004* – Reclamation (MP-150) supplements the BA with additional information on land-use/habitat changes between 1993 and 2000 for the 17 Settlement Contractors using the Standard Contract Form (i.e. the 17 Irrigation Districts, Water Companies, and Municipalities listed in Appendix A of the BA).
- *November 1, 2004* – Reclamation (NCAO) provides the Service with a 3' x 4' copy of a composite ortho-photo image showing the settlement contractor service areas.
- *November 5, 2004* – Reclamation (MP-GIS) provides the Service with updated GIS spatial data for each Settlement Contractor's water service-area boundary to correspond with the Exhibit B maps in each new long-term contract (Metadata file name is wd\_sac\_riv\_contract\_renewal.shp.xml created 11/02/04 8:30 AM by U.S. Bureau of Reclamation Mid Pacific GIS MP-450).
- *November 19, 2004* – Phone conference between Reclamation's NCAO (Don Bultema, Buford Holt, Russell Smith) and the Service (Jan Knight, Nina Bicknese) on issues related to the renewal contract for the Colusa Drain Mutual Water Company (CDMWC). An outcome of the phone conference was a list of BA deficiencies on the CDMWC contract renewal action (description, project location, baseline conditions, action area, and effects analysis). NCAO will submit supplemental BA information to the Service regarding the CDMWC. The Service determined that the CDMWC contract renewal will require an individual consultation.
- *November 20, 2004* – Reclamation (NCAO) provides the Service with a copy of the Final Sacramento River Basinwide Water Management Plan (Basinwide Management Plan) prepared by the Sacramento River Settlement Contractors, Reclamation, and the California Department Water Resources on October, 2004 (SRSC 2004) to use as additional information on baseline environmental conditions in the service areas of the largest Settlement Contractors.
- *November 29, 2004* – Reclamation (MP-GIS) provides Service with final Settlement Contractors long-term contract Exhibit B maps and copies of the final negotiated contracts.

- *December 6, 2004* – Reclamation (NCAO) provides the Service with memorandum amending the consultation to add an additional Settlement Contractor to the long-term contract renewal consultation. This contractor is Meyer Crest Ltd., and was formally called Diamond Landholdings.
- *December 16, 2004* – Reclamation (NCAO) provides the Service with a memorandum providing additional information on the water conservation requirements of the proposed Sacramento River Settlement Contracts and the environmental effect of those water conservation requirements on listed species.
- *January 14, 2004* – Meeting between Robert Eckart (Reclamation MP-150) and Nina Bicknese (Service) to discuss consultation issues for Natomas Central Mutual Water Company (NCMWC) Settlement Contract renewal and the City of Redding's Settlement Contract renewal consultations. Service notifies Reclamation that NCMWC and the City of Redding contracts will each require an individual consultation.
- *January 31, 2005*. Reclamation (NCAO) provides the Service with the Sacramento River Settlement Contractor's Final Environmental Impact Statement dated December 2004 (USBR 2004b).
- *February 7, 2005*. The Service receives memorandum from Reclamation (NCAO) transmitting a copy of the Sacramento River Settlement Contractors Environmental Impact Statement on compact disk (CD).
- *February 11, 2005*. The Service and Reclamation (MP-150 and NCAO) discussed issues related to the vernal pools and vernal pool-species critical-habitat shared between Anderson-Cottonwood Irrigation District (ACID) and the City of Redding's settlement contract service areas. The Service verbally requests to analyze the ACID contract with the City of Redding settlement contract. On February 14, 2005 Reclamation (MP-100) verbally agreed.
- *February 18, 2005*. The Service concludes consultation on Reclamation's renewal of 138 Sacramento River Settlement Contracts (1-1-05-I-0669).
- *February 28, 2005*. Reclamation (NCAO) provides the Service with revised contract names for five of the 138 Sacramento River Settlement Contracts.
- *March 2, 4, and 7 2004*. Reclamation (MP-GIS) provides the Service with updated GIS spatial data for the Natomas Central Mutual Water Company water service-area boundary, and a corrected Exhibit B map for the NCMWC long-term contract.

### **Description of the Proposed Action**

The U.S. Bureau of Reclamation (Reclamation) proposes to renew long-term settlement contracts with Natomas Central Mutual Water Company (NCMWC) for the diversion of surface



water from the Sacramento River, and to change the purpose of use of Central Valley Project water from agricultural use only to agricultural, municipal and industrial purposes. The NCMWC Settlement Contract can be categorized as Standard Form Settlement Contracts used for water districts and water companies.

**Contract Term.** The Settlement Contracts were originally executed in 1964, with a term not to exceed 40 years. Those contracts specified the following: "That under terms and conditions mutually agreeable to the parties hereto, renewals may be made for successive periods not to exceed forty (40) years each." Consistent with the existing contract language and the CVPIA PEIS, Reclamation is now proposing to renew the NCMWC contracts for an additional 40 years.

**Contract Amount.** Table 2 shows the proposed contract amounts for the Settlement Contracts included in this consultation. Each Settlement Contract quantifies the total amount of water that could be diverted annually (the Total Contract Amount) as Base Supply and Project Water. Base Supply is the amount of surface water that a Settlement Contractor can divert from the Sacramento River during the period of April 1 through October 31 pursuant to the Contractor's asserted water right, and without payment to Reclamation. Project Water is the amount of surface water the Contractor can divert (or schedule to divert) from the Sacramento River each month during the period of April 1 through October 31, and the Contractor pays Reclamation for the delivery of this water. Pursuant to Contract Article 3, subsection (g), nothing in the proposed renewal contract shall prevent a Settlement Contractor from diverting Sacramento River water during the months of November through March for beneficial use inside the contract service area, or elsewhere to the extent authorized under the laws of the State of California.

The Total Contract amount in the NCMWC proposed renewal-contract is identical to the Total Contract amount in the expiring NCMWC contract.

Contractor	Proposed Contract Amount (acre-feet/year)		
	Base Supply	Project Water	Total Contract Amount
Natomas Central Mutual Water Company	98,200	22,000	120,200

**Water Needs Assessments.** Reclamation's threshold for conducting water needs assessment for contractors is annual irrigated acreage of over 2,000 acres, or annual M&I water use of more than 2,000 acre-feet of Project Water. Beneficial and efficient future water demands were identified for each Contractor and then compared to each Settlement Contractor's Base Supply and Project Water. The Settlement Contractors are not required to use other surface and groundwater sources, if available, in lieu of diverting Base Supply and Project Water; therefore Reclamation's water needs assessments used the full contract quantities in year 2018 as the contractors only water supplies, and did not include non-contract water supplies (such as groundwater, State Water Project supplies, local surface water supplies, recycled water, inter-district return flows and water transfers).

The most current Settlement Contractor's water needs assessment provided to the Service by Reclamation are summarized in Table 3. As indicated in the water-needs assessment, existing Settlement Contractor's agricultural water demand and M&I water demand is based on water-use data from approximately 1995. Reclamation then predicted future Settlement Contractor's agricultural and M&I water demand through the year 2018. However, Settlement Contracts will be renewed for a 40-year term, or through year 2045. Reclamation is assuming that full build-out from M&I water use will have occurred in each Settlement Contract Service Area by 2018 (F. Michny memo to the Service 7-19-04). Reclamation is also assuming that the agricultural cropping patterns used to determine 2018 agricultural water-demand will be similar through the end of the NCMWC contract term (i.e. 2019 to 2045) (T. Slavin pers. comm. 1/27/05a). The water needs assessment shows that at year 2018, NCMWC agricultural water demand is expected to decrease from the current 186,863 af/year down to 91,800 af/year. Likewise, M&I water demand will increase from zero to 27,000 af/year at year 2018.

The NCMWC total Ag and M&I demand is expected to decrease from the present 186,863 af/year to 118,800 af/year by year 2018. The 2018 total water demand of 118,800 is less than the proposed contract Total Contract amount of 120,200 af/year. If the demand is within 10% for contracts in excess of 15,000 af, then the Settlement Contractor is deemed to have met the criteria for full future need of the water supplies under the Settlement Contract.

CONTRACTOR	Maximum Productive Acres	Existing Agricultural Demand~1995	Future Agricultural Demand ~2018	Existing M&I Demand ~1995	Future M&I Demand ~2018
NCMWC	32,876	186,863 af/year	91,800 af/year	0	27,000 af/year

**Delivery of Water.** The proposed contract renewal provides for continued diversions and delivery of water to the same lands. The proposed NCMWC contract will deliver water to approximately 34,607 irrigable acres inside a 39,883 acre water service area.

The Base Supply and the Project Water supply for NCMWC is allocated on a monthly basis as specified under Exhibit A of the proposed contract. Base Supply is scheduled during the months of April through October for all Settlement Contracts, with the exception of the City of Redding, whose Base Supply water is scheduled year round for M&I use. Exhibit A for the proposed NCMWC contract is summarized in Table 4. The renewal contract requires NCMWC to first use its available monthly supply of Base Supply before using its available Project water for that month.

Under the Settlement Contracts a contractor cannot move Base Supply from non-critical months into critical months, but can move Base Supply within critical months or from critical months into non-critical months. However, after the Base Supply for critical months is exhausted, contractors can divert Project Water up to their full contract amount. Rescheduling of Base Supply within critical months or into non-critical months is permitted upon payment of a fee if the water is moved in the months of June to October. Critical months are defined in all Settlement Contracts as July, August, and September, with the exception of Glenn-Colusa

Irrigation District, ACID and the City of Redding. Critical months for these Settlement Contracts, because of their claims to senior water rights, are July and August only.

**Table 4. NCMWC Schedule of monthly diversions of water under proposed contract**

Contract Month	Base Supply (acre-feet)	Project Water (acre-feet)	Contract Total (acre-feet)
April	14,000	0	14,000
May	27,700	0	27,700
June	23,000	0	23,000
July	11,500	7,200	18,700
August	3,900	14,800	18,700
September	16,100	0	16,100
October	2,000	0	2,000
Total	98,200	22,000	120,200

**Contract Renewal Consultation Parameters.**

Reclamation has requested the Service to consult on the assumption that Reclamation will deliver the full Total Contract Amount to each Settlement Contract for each year of the proposed 40-year contracts. Reclamation recognizes that it may not be able to deliver the full Settlement Contract amount in approximately once every 4.5 years during the 40-year Settlement Contract term (F. Michny pers comm. 7-19-04, R. Stevenson pers. comm. 2-7-05). Reclamation believes that the water use projected in the water needs assessments is the reasonably foreseeable level and type of use, and this use will be manifested by year 2018. Therefore, Reclamation is assuming that the Settlement Contractors with an M&I purpose of use (NCMWC, Anderson-Cottonwood Irrigation District, City of Redding, Diamond Holdings, Lake California Property Owners Association, and Riverview Golf and Country Club) will have full M&I development at year 2018 (or 2022 for some water needs assessments) (F. Michny memo to the Service 7-19-04).

If supported by their water needs assessment, Reclamation also recognizes that any Settlement Contractor has the ability to receive additional CVP water beyond their total contract amount, through the use of temporary water transfers. Reclamation has stated that any future action which would permanently or temporarily increase a contractor's total contract amount is not covered by the contract renewal consultations (e.g. permanent water assignment actions, or an unlikely wet-year scenario where water transfers or similar actions could allow a Settlement Contractor to receive more than their contract total), would be separate Federal actions subject to their own ESA compliance, and are not included in this section 7 consultation (F. Michny memo to the Service 7-19-04).

**Land Use.** Reclamation's proposed action does not include any discretionary actions related to land-use. Reclamation does not control farming or land-use decisions. The implementation of long-term contract renewals would not directly affect land uses or result in any land use changes within the Settlement Contractor's water service area. The proposed long-term contracts would not require the construction of new facilities that would alter current land uses. With the exception of City of Redding, none of the Settlement Contractors have land use planning

jurisdiction; however all Settlement Contractors (including NCMWC) have jurisdiction over and responsibilities for the water diversions.

**Authorized Uses of Water.** All 141 Settlement Contracts being renewed by Reclamation in 2005 will provide for the continued diversion and delivery of water for the same purpose of use as the expiring contracts, with one exception: in response to the proposed Metro Air Park land development, the Natomas Central Mutual Water Company (NCMWC) has successfully negotiated with Reclamation to have authority to use a portion of its Project Water for Municipal and Industrial (M&I) use (USBR 2003). Therefore, Reclamation has requested that this Consultation also analyze Reclamation's separate discretionary decision to approve this change in the NCMWC use of Project Water. .

The proposed contract will provide up to 22,000 af/year of Project Water. In July 1990, NCMWC petitioned and received State Water Resources Control Board (SWRCB) approval to add M&I as a purpose of use under their existing water rights permits. The 1990 SWRCB Order contained a restriction that NCMWC's water rights for M&I use was "not to exceed 10,000 af between October 1 to April 1" (the winter months). As shown in Table 4 above, the proposed NCMWC settlement contract allows delivery of Project Water in July and August only. Therefore, the 22,000 af of Project water provided by the proposed contract which could be used for M&I purposes could be delivered only in the months of July and August. NCMWC would be limited to a total of 10,000 af of Base Supply or other sources (not Project Water) in the period between October 1 to April 1, and the quantity of M&I water used by NCMWC annually is otherwise only limited by the total contract amount.

The 1990 SWRCB Order states that water for municipal, industrial, and domestic uses can be served only to NCMWC service area lands zoned for such use. The Order defines this zone as lands located within Sections 24, 25, and 36 (T10N, R3E), and Sections 19, 20, 29, 30, 31, and 32 (T10N, R4E). The proposed contract Exhibit B map delineates this same M&I water service area. The size of the NCMWC M&I service area is 2,735 acres, and is located on the east, north and south borders of the Sacramento International Airport as depicted in Exhibit B. Contract Article 7(a) states that Project Water furnished to the Contractor pursuant to the proposed contract may be used for agricultural or municipal and industrial purposes; provided, however, that the Contractor shall not deliver or furnish Project Water for M&I purposes outside the area delineated on Exhibit B as approved for such purposes. M&I water deliveries to this portion of the NCMWC service area would be made through existing facilities, with no new construction required.

This contract change would result in the availability of a municipal water supply for development of the Metro Air Park as a result of the change in purpose of use to include M&I as well as agricultural use (USBR 2004b). The Metro Air Park Property Owners Association is implementing a Habitat Conservation Plan (HCP) to meet the requirements of the Act and comply with their Section 10(a)(1)(B) permit (Permit TE036473-0). This HCP covers fourteen listed and unlisted plant and animal species, including the giant garter snake. Activities covered under the HCP's incidental take permit include development of the Metro Air Park Industrial Park (which would use M&I water), continued rice farming on the project site, and management of lands within the 1,892-acre Metro Air Park Special Planning Area (MAP SPA) located in Sections 20, 29, 32 (T10N, R4E) (USFWS 2001). The MAP SPA covers only a portion of the area designated for use of M&I water in the SWRCB permit.

As shown on the NCMWC Exhibit B contract map, the size of the M&I delivery zone is 2,735 acres. Of these 2,735 acres, 1,892 acres are lands covered by the Metro Air Park HCP. Therefore, approximately 843 acres of land eligible for receiving M&I water under the proposed contract are outside the Metro Air Park HCP, and do not have incidental take or ESA coverage for any development or land-use changes that may occur on them. Both the NCMWC Biological Assessment (USBR 2003) and the Final EIS incorrectly state that all lands eligible for receiving M&I water under the proposed NCMWC contract are covered by the Metro Air Park Project HCP; however, approximately 843 acres in the NCMWC M&I service area are not covered by that HCP.

Under the expiring NCMWC contract as well as the proposed renewal contract, NCMWC may use its full 98,200 af/year of Base Supply (its non-Project water) for M&I purpose of use in the months of April to October with out obtaining consent of the Contracting Officer. However, under Article 7 of the proposed contract, any water with an M&I purpose of use, including Base Supply, shall be delivered only to in the designated M&I zone shown on Exhibit B.

The Service also understands that water diverted by NCMWC during the winter months (November 1 to March 31) are not part of the Settlement Contract, and that nothing in the Settlement Contract prevents NCMWC from diverting water for M&I or agricultural use between November 1 and March 31 to the extent NCMWC is authorized by the laws of the State of California. However, these State of California laws include the 1990 SWRCB requirement that water for M&I uses shall not exceed 10,000 acre feet from October 1 through April 1, and is to be served only to the NCMWC lands designated for M&I use as shown on maps attached to the SWRCB permit. Therefore, delivery of M&I water during the winter months is presently restricted by State of California law to the M&I service area as shown on the contract Exhibit B map.

As stated in Article 7(a) of the proposed NCMWC contract, Reclamation and NCMWC anticipate that, during the 40 year term of this Settlement Contract, a gradual change in purpose of use of water will occur within the NCMWC contract service area from predominately agricultural purposes under existing conditions to a mixture of municipal and industrial (M&I), wildlife habitat and agricultural purposes. Article 7 subsection (a) states that Reclamation and NCMWC agree to work cooperatively to "accommodate and facilitate" this change in use from predominately agricultural to a mixture of M&I and agricultural uses. Article 7(a) of the proposed renewal contract contemplates that Reclamation and NCMWC will work together to ensure a seamless transition as lands within the NCMWC service area are converted from agricultural to urban uses (F. Michny 8-25-03).

Under Contract Article 7(a), any future delivery of M&I water outside of the delineated M&I zone would require Reclamation Contracting-Officer approval. Prior to Contracting Officer approval, NCMWC would need to successfully petition the SWRCB to approve additional lands for receiving M&I water, NCMWC would receive an amended state permit, Reclamation would comply with NEPA, ESA, and other applicable Federal laws, and Reclamation would be required to amend the NCMWC settlement contract to include the change in the state permit (R. Stevenson et. al pers. comm. 03-02-05).

Of the six Sacramento River diversion points named in Exhibit A of the proposed NCMWC contract, M&I water may diverted only at Point of Diversion No. 3 located in Section 23 (T10N, R3E). Before April 1 of each year NCMWC will submit a written schedule to Reclamation

indicating the amount of the Contract Total they plan to diverted for M&I use during each month under the Settlement Contract (April to October). NCMWC is to inform the Contracting Officer on or before the 10<sup>th</sup> calendar day of each month of the quantity of water actually diverted for M&I purposes during the preceding month.

**Shortage Provisions.** The Central Valley Project (CVP) is required to make deliveries up to the total contract amount, if requested, except in periods of water shortage due to hydrological constraints. During periods of reduced supply, water deliveries are decreased according to terms in Contract Article 5. Shortage Provisions in the renewal contracts are the same as in the expiring contracts; reductions in deliveries of 25 percent in Base Supply and Project Water are required during Shasta critical years. Critical years are defined by the contract as any year in which either of the following eventualities exists:

- (1) The forecasted full natural inflow to Shasta Lake for the current Water Year, is equal to or less than three million two hundred thousand (3,200,000) AF; or
- (2) The total accumulated actual deficiencies below four million (4,000,000) AF in the immediately prior Water Year or series of successive prior Water Years each of which had inflows of less than four million (4,000,000) AF, together with the forecasted deficiency for the current Water Year, exceed eight hundred thousand (800,000) AF.

Based on the period of record (1921-2001), delivery reductions would likely occur every 4.5 years of the proposed 40-year contract term. During a 4-year drought sequence, such as that which occurred during the period of 1930-1934, total reductions to all Settlement Contracts would be approximately 2,127,000 af/year, as would occur under the expiring contract conditions. Dry-year reductions under the proposed long-term contracts would remain the same as under the expiring contracts.

Reclamation is in the process of formulating a new *M&I Water Shortage Policy For Central Valley Project*, but this policy will not apply to the Sacramento River Settlement Contracts because it is not possible to reduce deliveries to water-rights holders (R. Eckart 1/25/05). Rather, when CVP reservoir volumes are extremely low, deliveries to and diversion by the Sacramento River Settlement Contractors will be reduced to 75 percent of the Contract Total in accordance with contract agreements and federal law.

**Water Transfers.** The proposed long-term renewal contracts would continue to allow CVP transfers with the Contracting Officer's consent. Reclamation would continue to prepare separate environmental documentation for approving transfer actions.

To facilitate optimum use of Project Water, 34 Settlement Contractors (including NCMWC) currently participate in the Sacramento River Water Contractors Association (Association). Reclamation has agreed to allow exchange and transfer of Project Water among Association members provided the total amount of Project Water ordered by all Association members does not exceed the collective Project Water orders of all Association members for that irrigation season. If the total amount of Project Water available to Association members during a particular irrigation season exceeds the anticipated uses of the membership, the Association can sell water to other users in the Sacramento River Basin with written approval from Reclamation. Each year, Association members have the option to identify a quantity of their respective Project

Water that they wish to make available to the Project Water Pool rather than for diversion. This water is then available for diversion by other Association members.

The proposed long-term contracts are "establishing new protocols to allow rapid technical and environmental review of future proposed transfers (for example, by providing programmatic environmental review and shortened authorization for certain one-year irrigation to irrigation transfers)" (Reclamation 2003a). The renewal contract's subsection (e) of Article 3 require Reclamation to render a decision on short-term actions (will occur within 1 year or less) within 30 days of receipt of a complete written proposal from a Settlement Contractor. For long-term actions (will occur in a period longer than 1 year), Reclamation will be required to render a decision within 90 days of receipt of a complete written proposal from a Contractor. For a Contractor's proposal to be deemed complete by Reclamation, it must include a final NEPA document and completed ESA compliance from the Service and NOAA Fisheries (R. Stevenson pers. comm. 11/29/04).

**Water Rates and Charges.** The proposed renewal contracts contain new pricing provisions for Project Water. The contract renewals would now impose a fee to reschedule Base Supply for delivery from one month to another during the months of June to October. This increased fee would provide an incentive to contractors to accurately predict monthly water needs and then to manage the water effectively. It would not be expected to influence land use decisions or crop selection. Rescheduling Project Water delivery would not trigger the rescheduling fee.

**Water Conservation.** The expiring Settlement Contracts do not contain language concerning water measurement or conservation. The proposed renewal contracts will require the implementation of a water conservation efficiency plan (Plan) prior to the diversion of Project Water (see subsection (a) of Article 29). The proposed contracts require the Settlement Contractors to prepare a Plan that has been determined by the Contracting Officer to meet the Regional Criteria for Evaluating Water Management Plans for the Sacramento River Contractors or the current Standard Criteria for Evaluating Water Management Plans developed in accordance with the Reclamation Reform Act of 1982 and the Central Valley Project Improvement Act of 1992. The Settlement Contractors will be required to report the status of its water-conservation implementation plan annually and submit a revised Plan at five year intervals. Both water conservation criteria contain similar water conservation objectives and time schedules for meeting those objectives. Although the two criteria have different methods of implementing conservation, they have similar objectives. Therefore it is reasonable to estimate the effects to be similar.

The Settlement Contractors have not yet submitted any Plans to Reclamation, or yet determined which water conservation measures they intend to implement. Therefore, the specific water conservation measures that may be implemented by each Settlement Contractor are not known at this time. However, Reclamation expects the amount of Project Water diverted from the Sacramento River would likely be lower under the proposed renewal contracts than under the expiring contracts (T. Slavin pers. comm. 1/27/05b). However, because many water conservation measures that could be implemented by Settlement Contractors on the Sacramento River have only limited economic practicality, and many Settlement Contractors have indicated to Reclamation that they cannot implement additional water conservation without substantial outside funding (T. Slavin pers. comm. 1/27/05b), Reclamation believes that any decreases in water diverted under the renewal contracts would primarily be driven by the higher Project

Water rate in the renewal contracts, and to a much lesser degree from the contract requirement to develop and implement a water conservation plan (T. Slavin pers. comm. 1/27/05b). Likewise, Reclamation expects return-flow to be somewhat lower under the renewal contracts for the same reason. The Project Water rate changes, rather than the Plans, are expected to be the greatest incentive to encourage contractors to use water more efficiently (T. Slavin pers. comm. 1/27/05b).

Because Reclamation has no information on the specific water conservation measures that may be implemented by each Settlement Contractor, they are unable to estimate what programmatic or site-specific effects (if any) the new water conservation requirements would have on 1) the amount of Project Water diverted from the Sacramento River, 2) the effect (if any) of the conservation requirements on Contractors return-flows, or 3) the effect of the Contractors' conservation measures on Federally listed species, 4) the effect of the conservation measures on increased groundwater pumping or the possible indirect effects of additional groundwater pumping on wetland habitats in the Action Area. Therefore, Reclamation's future approval of a Contractor's water conservation plan (i.e. Reclamation's determination that the Plan meets Federal Law) is a discretionary action not included in this Section 7 consultation on the contract renewal actions. Reclamation approval of water conservation and efficiency plans will require separate ESA compliance and may require consultation with the Service.

**Contract requirement for ESA compliance.** Reclamation must comply with requirements (that are within its legal authority) of any resultant biological opinion to ensure that its action is not likely to jeopardize the continued existence of listed species, result in the destruction of modification of designated critical habitat, or result in unauthorized take. Pursuant to the CVPIA programmatic biological opinion (CVPIA PBO) and to subsection (b) of Article 7 in the renewal contracts, Settlement Contractors shall comply with applicable requirements of biological opinions or ESA consultations prepared for the renewal of the Settlement Contracts.

The Settlement Contractor will comply with the limitations or applicable requirements in this document prepared as a result of this consultation regarding the Contract renewal action that are within the Settlement Contractor's legal authority to implement, and the Settlement Contractor will comply with the limitations or requirements imposed by other environmental documentation that applies to the Settlement Contractor and that are also within its legal authority to implement regarding specific activities (R. Eckart pers comm. 1/24/2005).

Additional species may be listed and possibly delisted, and additional critical habitat designated, over the course of the 40 year term of these proposed long-term renewal contracts. As additional listings occur, Reclamation and the FWS will follow ESA requirements and conduct consultations as required (F. Michny pers. comm.).

**Discretion Reclamation Has Under Contract Authorities and Reclamation Law to Control Use of Settlement Contract Water.** Reclamation's renewal of water delivery service contracts is being undertaken pursuant to the following authorities: the Reclamation Act of June 17, 1902 (32 Stat. 388), and acts amended and 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, including but not limited to , Section 9 and 14 thereto; July



2, 1956 (70 Stat. 483); or June 21, 1963 (77 Stat. 68); October 12, 1982 (96 Stat. 1262); October 27, 1986 (100 Stat. 3050), as amended; and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706).

The statutes cited above provide Reclamation with authority to enter into agreements with the Sacramento River Settlement Contractors to settle disputes over the respective rights of the parties to divert and use water from the regulated flow of the Sacramento River. These statutes also authorize Reclamation to determine the amount of CVP water to be made available to the Settlement Contractors subject to certain conditions. These include, but are not limited to the terms and conditions included within the applicable state water right permits/licenses; the amounts of water each contractor can put to reasonable and beneficial use; for irrigation water, the number of acres of irrigable and eligible lands within the contractor's boundaries that are also within the authorized CVP service area and the places of use designated in the applicable CVP water right permits/licenses (i.e. the Contractor's Service Area as described in Exhibit B of each Settlement Contract).

**Giant Garter Snake Conservation Measures.** In compliance with CVPIA PBO Section VI(C) (page 2-56 of CVPIA PBO), Reclamation will work with the NCMWC and the Service to develop giant garter snake conservation measures that will include best-management operation and maintenance practices for lands with existing giant garter snake habitat. These conservation measures/practices will be implemented on a voluntary basis by the individual water-users and/or individual Settlement Contractors, and are intended to address actions by others that are not within Reclamation's discretion or legal authority to control. By March 2006, Reclamation will communicate and coordinate with the NCMWC in developing these conservation measures/practices. Reclamation will then work with the Service and the NCMWC to educate their members and water-users about the avoidance of farming operation/maintenance impacts to giant garter snakes.

**Action Area for Sacramento River Settlement Contracts.** Action Area is defined in 50 CFR 402.02 as the immediate area involved in the action and the entire area where effects to listed species extend as a direct or indirect effect of the proposed action. For reasons that will be explained and discussed in the "effects of the proposed action" section of this consultation, the Service has determined that the action area for the Federal discretionary action of negotiating and renewing all long-term Sacramento River Settlement Contracts includes: 1) the Settlement Contractors' water service areas defined in Exhibit B of each proposed contract, 2) the existing point(s) of water diversion from the Sacramento River described in Exhibit A of each proposed contract, 3) canals and waterways connecting the point(s) of diversion to the water service area. The Action Area for this contract-renewal consultation also incorporates by reference the entire action area defined in the Service's 2005 OCAP consultation.

### **Related Actions Not Part of the Proposed Action Project Description**

The actions listed below are not part of the federal action considered in this Section 7 consultation. These actions will require separate determinations regarding potential effects on threatened and endangered species and critical habitat pursuant to section 7 and/or section 10 of the ESA. These other actions are:

- Any future assignments of CVP water.
- Water exchanges or water transfers.
- The inclusion, exclusion, annexation, or detachment of land to the Contractor service area. Any change in place of use. Any supplemental agreement between Reclamation and a Settlement Contractor. Any consolidation of contracting entities.
- Changes in purpose of use, including changes from agricultural to M&I, or from M&I to agricultural.
- The Settlement Contractor Water Conservation Efficiency Plans that are required under subdivision (c) of Article 29 of the renewal contracts.
- Installation, repair, replacement, or relocation of equipment by the United States at the diversion or carriage facilities at each point of diversion identified in Exhibit A and B of each long-term renewal contract. Any new surface water delivery systems installed within the lands delineated on Exhibit B of the Contract.
- The implementation of the Sacramento River Basinwide Water Management Plan (SRSC *et al.* 2004), including the cumulative effects of the overall plan. The implementation of individual projects under the Sacramento River Basinwide Water Management Plan by any Settlement Contractor.
- Expansion of Sacramento International Airport or expansion of facilities on airport, County, or other lands.
- Development or land use changes inside the portion of the NCMWC service-area eligible for receiving M&I Project water (as delineated on Exhibit B) which are not covered by the Natomas Basin HCP or the Metro Air Park HCP.
- This project description does not include the future subsequent Sacramento River Settlement Contract renewals discussed in Contract Article 2. Future Settlement Contract renewals are not automatic. All future Settlement Contract renewals would be separate actions and will be subject to ESA Section 7 compliance at the time of those renewals.
- This consultation does not exempt private parties from the prohibitions of section 9 of the ESA for incidental take that may result from the use or application of CVP water.

### **Environmental Baseline**

The environmental baseline is an analysis of past and ongoing human and natural factors leading to the current status of the species, habitats (including critical habitat), and ecosystems within the action area. The baseline includes State, tribal, local, and private actions already affecting the species or that will occur at the same time as this consultation. Unrelated Federal actions affecting the species or their critical habitat that have completed consultation are also included as part of the baseline. Actions associated with the contract renewals area not considered in the baseline.

The expiring NCMWC contract, which evidences in excess of 40 years of diversions for agricultural use only, of contract quantity of 120,200 af/year, and the underlying water rights of NCMWC were considered in developing the species baseline for this consultation

### **CVPIA PBO commitments**

This long-term contract renewal consultation tiers from the November 2000 Programmatic *Biological Opinion on Implementation of the CVPIA and Continued Operation and Maintenance of the CVP* (CVPIA PBO) to address incremental and cumulative effects of the proposed renewal action. This tiering automatically carries forward all conservation measures and other components of the Project Description of the CVPIA PBO into the environmental baseline for this consultation on the long term renewal of Sacramento River Settlement Contracts. Reclamation's program to implement the CVPIA included the renewal of all existing CVP contracts as a core program (CVPIA PBO page 2-29 to 2-36). Two additional core program actions that affect renewal contract provisions are the implementation of water measurement under CVPIA Section 3405(b) and the implementation of water conservation standards, also under CVPIA Section 3405(b).

The CVPIA Project Description listed eight significant areas of commitment that provided the basis of the PBO no jeopardy finding (Page 2-50 to 2-71). These eight areas of commitment are listed below:

- Commitments Associated with Implementation of the CVPIA.
  - Anadromous Fisheries Restoration Activities (§3406(b)(1)).
  - Habitat Restoration Program (§3406(b)(1) other).
- **Commitments Associated with Long term Renewal of CVP Water Contracts.**
- Commitments for Activities Associated with CVP Water and/or Facilities.
- Commitments Associated with CVP Conveyance and Storage.
- Commitments Associated with Operations and Management Planning.
- Commitments Associated with Conservation Programs.
  - Wildlife Habitat Augmentation Program (Wetland Development Program).
  - CVP Conservation Program.
  - Comprehensive Mapping Program.
- Commitments Associated with Drainage.
- Commitments Associated General Consultation Process.
- Commitments and Strategy to Ensure Compliance with the Endangered Species Act.

Commitment 8 on Page 2-70 of the CVPIA PBO requires Reclamation to "provide necessary information to the Service's SFWO Endangered Species Division" on CVP actions "where a determination of *no effect* has been made, sufficiently in advance, to enable the Service's review". This commitment applies to all future Northern California Area Office's CVP or CVPIA actions, including those specifically listed above under "Related Actions Not Part of the Proposed Action Project Description".

Under "Commitments Associated with Long-term Contract Renewal of CVP Contracts (page 2-54 to 2-56), the CVPIA PBO lists these fourteen contract-renewal commitments which may

appropriately be considered part of the action of these contract renewals (Frank Michny pers comm. 2-7-05).

1. Long-term contracts will be renewed, and Reclamation will complete tiered site specific consultations with the Service. **No CVP water will be delivered or applied outside current contract service areas until either formal or informal consultation, as appropriate, is complete.** Once formal site specific consultation has occurred that is in compliance with this opinion, it is assumed that changes in land-use practices and impacts to listed and proposed specie, in the districts have been addressed.
2. During the contract renewal process, a **needs-analysis** to determine beneficial use of CVP water will be completed, and all contract renewals will be subject to Section 7 consultation procedures and the NEPA process. A **site specific biological assessment**, to determine potential impacts of using CVP water on Federal and State listed and proposed species, will be completed for individual water districts or for groups of districts in close proximity to one another. The Service's SFWO Endangered Species Division will provide recommendations to Reclamation on the appropriate level of ESA consultation and **conservation measures** needed.
3. Reclamation also will continue to consult with the Service on a drainage-basin basis or ecosystem-level strategy for addressing new and amended water contracts outside and/or inside the American River watershed, including execution of diversion agreements associated with American River Water Forum.
4. **Reclamation and the Service will write a joint letter to the water districts, any member agencies, Planning Departments of cities or counties within the districts using CVP water, and other responsible parties regarding requirements under the ESA.** The letter will include: (1) a discussion of Reclamation's need to ensure that CVP water is not used in a manner which could jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat, and (2) an explanation of the prohibitions described under Section 9 of the ESA in regard to take. The letter will discuss the appropriate protection measures as described here and in subsequent contract renewal consultation **and will be completed within 60 days of execution of long-term contracts.**
5. **Conservation strategies will be in place for the districts or areas receiving CVP water.** The types of strategies that could be accepted are: **Habitat Conservation Planning as described in section 10(a) of the ESA; programmatic land management actions that include protection of listed and proposed species; requirements resulting from site specific Section 7 consultation; or an expansion of the existing CVP Conservation Program** that adequately compensates for the direct and indirect effects of water delivery to an area.
6. Reclamation **will**, subsequent to a determination of may affect to listed species and/or adverse modification to designated critical habitat in consultation with the Service's SFWO Endangered Species Division, **consult on all Federal actions that result in**

**changes in purpose of use for CVP water contracts, including changes from Agriculture to Agriculture/Municipal and Industrial purposes.**

7. The Service and Reclamation will work together to convey information to the water districts, and individual water users (as appropriate), on listed species needs. **Reclamation will establish an outreach and education program, in collaboration with the Service, to help water users integrate implementation of the CVPIA and requirements of the contract renewal process as it relates to the ESA.**
8. **Interior will work closely with the water users, providing them maps of listed species habitats within their service-areas and guiding them through the consultation process to address site specific effects. Reclamation may encourage CVP contractors to complete HCPs encompassing the affected areas.**
9. Reclamation and/or the Service will develop provisions for compensation for the loss of endangered species habitat resulting from the direct or indirect effects of a Reclamation action not covered under prior biological opinions that occur within the CVP service areas from the date of this opinion until completion of either: **(a) contract area specific Section 7 consultation, (b) any other required site specific Section 7 consultation on the effects of the conversion in question, or (c) the completion of an HCP that encompasses the area in question.**
10. **Reclamation and CVP contractors will comply with all applicable opinions related to the CVP (CVPIA PBO pages 1-11 to 1-12). Flow standards that form the environmental baseline of the 1995 OCAP biological opinion will be met, and Reclamation will take no discretionary actions (e.g. new contracts, contract amendments, facility construction) that would incrementally increase diversions and alter hydrologic and environmental conditions in the Delta until any required consultation is reinitiated and completed [USFWS 2000; CVPIA PBO Appendix L (letter to the Service and NMFS from Reclamation dated October 29, 1999)].**
11. **Contractors are required to conform with any applicable provisions of any biological opinions addressing contract renewal so as to prohibit the use of CVP water that results in unauthorized take or conversion of wildland habitat determined to have the potential to be occupied by listed species, or violation of any terms of the contracts pertaining to the conservation of listed species. All contracts (or related biological opinions) will also stipulate Reclamation will not undertake any discretionary action allowing the delivery of CVP water to native habitat for listed species depicted on the maps attached to the 18-month notices unless clearance pursuant to the ESA has been obtained from the Service.**
12. Reclamation, relative to all new and renewed contracts will informally consult with the Service's SFWO Endangered Species Division to determine the need for formal consultation prior to contract execution.

13. Reclamation will make certain that applicable measures to ensure ESA compliance for the renewal of CVP water service contracts **are provided within the text of new and/or amended long-term water contracts and related actions.**

14. Reclamation will **provide information related to proposed new water assignments of Project water to the Service's SFWO Endangered Species Division prior to execution of the assignment.**

The CVPIA PBO (pages 2-56 and 2-57) also states that Interior (Reclamation and the Service) will work with the **Sacramento River Settlement Contractors** to develop **conservation measures**, as appropriate for listed species. Interior will communicate and coordinate with the NCMWC in determining how to address any effects to listed species, as necessary, through Section 7 or Section 10 of the Act.

Since the issue of the CVPIA PBO in 2000, Reclamation has been working with the Service to address each CVPIA PBO commitment associated with long-term contract renewal of CVP water service contracts and/or refine them so that they are clearly understood and meet the original intent of avoiding and/or addressing impacts to listed species related to the renewal of long-term water contracts (Frank Michny pers. comm. 11/26/2004). Reclamation has stated that all CVPIA PBO commitments associated with long-term contract renewal of CVP water contracts will or have been addressed to ensure that the renewal of the long-term Settlement Contracts fully comports with the requirements of the CVPIA PBO and Endangered Species Act as it pertains to federal actions (Frank Michny pers. comm. 11/26/2004).

Reclamation is committed to implement all conservation measures described in the CVPIA PBO consultation (Frank Michny pers. comm. 11/26/2004). The following is a list of the more significant measures:

The Central Valley Conservation Program - A program funded by Reclamation and jointly implemented by Reclamation and the Service that funds activities and land conservation strategies that address species that have been impacted by the CVP.

CVPIA (b)(1) Other Program - A CVPIA program jointly administered by the Service and Reclamation specifically designed to address needs of listed species that have been impacted by the CVP.

Wildlife Habitat Augmentation Program - This was part of a program identified in the CVPIA PBO as a Wetlands Development Program. That program was terminated but those portions of the Wetland Development program that were related to commitments related to listed species were retained, reorganized and renamed. This program funds activities that have a general benefit to listed species, particularly those related to wetlands.

Comprehensive Mapping Program - This continuing Reclamation program develops spatial data on lands/habitat types and presence of species on lands that are related to CVP actions, specifically the service areas of the CVP contracts. This provides important

information of the extent of habitats, trends in land use and known occurrences of listed species.

### **HCP Commitments**

Several Sacramento River Settlement Contractors have previously worked with the Service to develop Habitat Conservation Plans (HCPs) conservation measures and conservation recommendations:

1. The Maxwell Irrigation District, a Sacramento River Settlement Contractor in Colusa County, applied for an incidental take permit from the United States Fish and Wildlife Service and made available the proposed Canal Relocation HCP in 1998. The focus of the plan is to minimize and mitigate impacts to the giant garter snake associated with Maxwell Irrigation District's construction of a new 2,500-foot long conveyance canal adjacent to an existing District canal and the Colusa Basin Drain. Protections for the giant garter snake through the HCP include avoidance, monitoring, removal of individuals from the construction area as necessary, and habitat protection.
2. The Yolo County HCP is designed to mitigate the "take" of threatened and endangered species as a result of planned urban development in the county. In addition, a small amount of development associated with agricultural operations (e.g., construction of tomato processing plants and similar facilities) of up to 1,000 acres on agricultural land in unspecified locations in the unincorporated area is also covered by the HCP. The HCP includes various avoidance and habitat enhancement measures to address impacts to these species. The HCP also seeks to maintain existing agricultural yields, productivity or aggregate dollar value, or Yolo County farm production. Mitigating the loss of agricultural land from general plan urban development is addressed through the CEQA environmental review process undertaken by each jurisdiction in approving its general plan and subsequent development projects.
3. The Natomas Basin HCP covers activities associated with urban development in northwestern Sacramento County and southern Sutter County, within the jurisdictions of the City of Sacramento and Sutter County. These urban development activities are limited to lands within the jurisdiction of the City of Sacramento and Sutter County. The Natomas Basin HCP does not cover the entire NCMWC water service area ( see Figure 2 map in City of Sacramento et. al 2003). The HCP specifies measures to avoid, minimize, and mitigate impacts to certain state and federally listed and unlisted species likely to result from future urban development in the Natomas Basin. The HCP establishes a comprehensive program for the preservation and protection of habitat for species covered by the HCP. Federally listed species covered by the Natomas Basin HCP include the giant garter snake, valley elderberry longhorn beetle, California tiger salamander, and several vernal pool plants and crustaceans. The Natomas Basin HCP includes the proposed development of Metro Air Park in the total acreage of urban development covered by the HCP in the evaluation of impacts and development of the HCP's conservation program.
4. The Metro Air Park Habitat Conservation Plan avoids, minimizes, and mitigates impacts of the development of an industrial park in unincorporated northern Sacramento County. Impacts to listed species will be mitigated through payment by the Metro Air Park

Property Owners Association to an independent conservation entity, the Natomas Basin Conservancy, to purchase and manage habitat for the Plan's covered species. The federally listed giant garter snake and state-listed Swainson's hawk are focal species of that HCP.

### **2005 OCAP Biological Opinion**

The Sacramento River Settlement Contractors are in the Sacramento River Division of the CVP (Reclamation 2003a). As discussed in the OCAP Biological Opinion (USFWS 2004a), the Sacramento River Division includes facilities for the diversion and conveyance of water to CVP contractors on the west side of the Sacramento River. The OCAP consultation included the operation of the Sacramento Canals Unit, which consists of the Red Bluff Diversion Dam, the Corning Pumping Plant, the Corning and Tehama-Colusa Canals. The Sacramento River water management actions included in the OCAP BO are:

- Implementation of CVPLA Section 3406 (b)(2)
- Implementation of D-1641
- Continuing implementation of the Trinity ROD as currently ordered by the District Court
- Installation and actual performance characteristics of the TCD

Although the changes in OCAP resulting from implementation of the Trinity River Fishery Restoration Program will result in decreased flow down the Sacramento River, this change in flows is anticipated to result in minimal effects to delta smelt and delta smelt habitat. Flows to the Sacramento River will be reduced and the timing of water movement into and through the Sacramento watershed would change as a result of these changes in CVP operations. Therefore, the Service determined it is not necessary to provide specific reasonable and prudent measures to reduce OCAP effects to delta smelt from the proposed changes in CVP operations resulting from implementation of the Trinity River Fishery Restoration Program. On July 30, 2004, the Service issued a Biological Opinion on the effects of CVP/SWP operations on Delta smelt (*Hypomesus transpacificus*) and its critical habitat, and also concurred with Reclamation's and the California Department of Water Resources' (DWR) determination that OCAP operating criteria would not affect the riparian brush rabbit (*Sylvilagus bachmani riparius*), the riparian woodrat (*Neotoma fuscipes riparia*), the salt marsh harvest mouse (*Reithrodontomys raviventris*), the California clapper rail (*Rallus longirostris*), the giant garter snake (*Thamnophis gigas*), the California red-legged frog (*Rana aurora draytonii*), the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), the soft bird's-beak (*Corylanthus mollis ssp mollis*), and the Suisun thistle (*Cirsium hydrophilum var. hydrophilum*). Reclamation requested this consultation to be reinitiated to further analyze the effects of joint operation of the CVP and SWP on critical habitat of the delta smelt. The Service issued a revised biological opinion on February 15, 2005 (Service file number 1-1-05-F-0055) with additional analysis affirming our previous conclusion that the actions addressed in that biological opinion would not adversely modify delta smelt critical habitat.

### **Environmental Baseline in the Settlement Contract Action Area**

The environmental baseline is an analysis of past and ongoing human and natural factors leading to the current status of the species, habitats (including critical habitat), and ecosystems within the action area. The baseline includes State, tribal, local and private actions already affecting the



species or that will occur at the same time as this consultation. Unrelated Federal actions affecting the species or their critical habitat that completed consultation are also included as part of the baseline. Actions associated with this project are not considered in the baseline.

Natomas Central Mutual Water Company. NCMWC is located on the east side of the Sacramento River between the towns of Knight's Landing and the City of Sacramento. The service area includes portions of Sutter and Sacramento Counties and is within the western portion of the American Basin. NCMWC's service area encompasses approximately 40,000 acres, which includes approximately 35,000 irrigated acres. NCMWC serves approximately 238 landowners, including the Sacramento International Airport, habitat mitigation lands, and agriculture. Rice is the predominant crop grown in the service area, accounting for approximately 60 percent of NCMWC's irrigated acreage. Other crops include tomatoes and sugar beets, and rotation crops such as wheat and safflower, which are rotated with rice and tomatoes. The expanding Sacramento Metropolitan Area applies increasing urbanization pressure on agricultural properties in the service area along the urban fringe. Water needs are met through the contract surface water supply, although groundwater is used by a few individual growers to supplement the surface supply, particularly in dry years as per agreements with NCMWC.

Table 4 shows 1995 normalized estimates and projections for the year 2020 of irrigated acres for the primary crops grown within NCMWC's service area. The variation around these estimates (+/- percentage) accounts for typical and anticipated variations in crop acreage due to year type.

**Table 4. NCMWC Total Irrigated Acres – 1995 and 2020 Estimates**

Crop	1995 <sup>a, b</sup>	2020 <sup>c</sup>
Rice	18,000	13,700
Sugar Beets	3,700	1,800
Corn	1,000	700
Tomatoes	600	500
All Other Crops	600	4,600
<b>Total Irrigated Acres</b>	<b>23,900<sup>b</sup></b>	<b>21,300</b>

<sup>a</sup>Figures are estimates derived from field data that have been normalized (data have been modified to simulate a condition where hydrology and climate are assumed to be normal, i.e., drought or wet condition assumed not to occur).

<sup>b</sup>creages are based on NCMWC's actual deliveries. Potential acreage within Reclamation contract service area is approximately 35,000 acres.

<sup>c</sup>Figures are future projections that incorporate current and historical trends, as well as anticipated local and regional development and economic trends in the year 2020.

Future NCMWC irrigation-season cropping patterns and associated water requirements are anticipated to remain relatively the same as current conditions (USBR 2004b).

The Settlement Contractors water service areas include approximately eleven of California Wildlife Habitat Resources (WHR) habitat types (Table 8) (Mayer and Laudenslayer 1988). Analysis of digital information on current and future land uses and distribution of listed species,

after ground-truthing, indicates little natural habitat remains in the action area (U.S. Bureau of USBR 2004). Most Settlement Contractors service-area lands had no change in land-use between 1993 and 2000, with the exception of the 20 largest Settlement Contractors (Table 2).

Satellite imagery map-data provided to the Service by Reclamation's Central Valley Habitat Monitoring Program showed that most larger Settlement Contractors service areas (GCID, RD 108, SMWC, ACID, PCGID, Conaway Conservancy Group, River Garden Farms Company, Natomas Central Mutual Water Company (NCMWC, City of Redding) had conversion of agricultural land to urban uses between 1993 and 2000. With the exception of the NCMWC contract service-area, most land-use conversions involved less than 200 acres. In NCMWC, 1,187 acres were converted to urban uses.

Table 8. Acres of WHR Habitat Type Within the Natomas Central Mutual Water Company

Contractor	WHR Habitat Type								
	BOP/BOW	VRI	VOW	FEW	O&V	BAR	AGS	CRP/IRF	URB
Natomas Central MWC				53				39,765	144

Notes:  
 AGS = Annual Grassland  
 BAR = Barren  
 BOP/BOW = BlueOak-Foothill Pine/BlueOak Woodland  
 CRP/IRF = Cropland/Irrigated Row and Field Crops  
 FEW = Freshwater Emergent Wetland  
 O&V = Orchard and Vineyard  
 URB = Urban  
 VOW = Valley Oak Woodland  
 VRI = Valley-Foothill Riparian

Land use in the far south Settlement Contractor service areas are almost entirely agricultural, dominated by cropland with a few small areas of orchard and vineyard. Some freshwater emergent wetland habitat remains in NCMWC.

**Environmental Baseline of the Species in the Action Area**

The Settlement Contract considered in this consultation has listed species inside their service area. No designated critical habitat occurs in the NCMWC water service areas.

Giant Garter Snake. Irrigated rice and the vast network of irrigation ditches and canals in the Settlement Contractor's service-areas provide some of the last remaining habitat for the giant garter snake (*Thamnopsis gigas*) in the Sacramento Valley. Table 5 presents the acres of irrigated rice in the service areas of the eleven Settlement Contractors participating in the Sacramento River Basinwide Management Plan (SRSC *et al.* 2004). The Settlement Contractors participating in the Basinwide Management Plan account for approximately 85 percent of the total contract amount of all Settlement Contracts.

Every Settlement Contract service-area is located in the giant garter snake Northern Sacramento Valley Recovery Unit (USFWS 1999), except for the 19 southern-most Settlement Contracts (including Conaway Conservancy Group and NCMWC), which are in the giant garter snake Mid-valley Recovery Unit. With the exception of the City of Redding, Anderson-Cottonwood Irrigation District, and 11 small northern Settlement Contracts, all Settlement Contract water

service areas are included in one or more giant garter snake Population-Units, including the Butte Basin Unit, Colusa Basin Unit, Sutter Basin Unit, Yolo Basin Unit, and the American River Basin Unit (USFWS 1999). Giant garter snakes inhabit wetlands, sloughs, marshes, ponds, small lakes, low gradient streams, agricultural wetlands, rice fields, and other water ways such as irrigation and drainage canals, and the adjacent uplands. Essential habitat components consist of: (1) wetlands with adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; (2) emergent, herbaceous wetland vegetation for escape cover and foraging habitat during the active season; (3) upland habitat with grassy banks and openings in waterside vegetation for basking; and (4) higher elevation uplands for escape cover (vegetation, burrows), and under ground refugia (crevices and small mammal burrows). Giant garter snakes have been documented moving up to 5 miles over a period of a few days (Wylie *et al.* 1997).

Generally, the timing of irrigation, agricultural practices and maintenance activities associated with irrigation in the northern Sacramento Valley coincides with the biological needs of the giant garter snake. While agricultural canals, ditches and rice fields do provide important habitat, ongoing operation and maintenance of agricultural waterways can also adversely affect the habitat of giant garter snake by eliminating or preventing establishment of snake habitat, eliminating food resources for the snake, and fragmenting existing habitat and preventing dispersal of snakes, and may directly injure individual snakes. According to information in CNDDB and in the Natomas Basin Conservancy's annual reports, there are numerous observations of giant garter snakes habitat throughout the NCMWC service area.

The Settlement Contractors, including NCMWC, constructed their own water conveyance facilities and do not depend on CVP water to supply their water needs. If Reclamation did not enter into renewal contracts with the Settlement Contractors, they could revert to diverting water from the Sacramento River under their claimed water rights. The Settlement Contractors water diversion facilities and water conveyance facilities are owned and maintained entirely by the Settlement Contractors, and many were constructed by the Contractors prior to the creation of the CVP to convey water pursuant to their claimed water right. Therefore, the water conveyance facilities, canals, and ditches continue to have independent utility from the CVP, CVP operation and maintenance, and from the renewal of the Sacramento River Settlement Contracts. Effects on giant garter snake from Settlement Contractor's rice farming operations or their operation and maintenance of water conveyance facilities are neither a result of, nor interrelated or interdependent to, the proposed federal action of the Settlement Contract Renewals.

In compliance with CVPIA PBO Section VI(C) (page 2-56 of CVPIA PBO), Reclamation will work with the NCMWC and the Service to develop giant garter snake conservation measures that will include best-management operation and maintenance practices for agricultural lands with existing giant garter snake habitat. These conservation measures/practices will be implemented on a voluntary basis by the individual water-users and/or individual Settlement Contractors, and are intended to address actions by others that are not within Reclamation's discretion or legal authority to control. Reclamation will work with the Service and the NCMWC to educate water-users on the avoidance of farming operation/maintenance effects to giant garter snakes in accordance with the Conservation Measures for Giant Garter Snake described above in the Description of the Proposed Action.

Settlement Contract	Acres Planted
Anderson Cottonwood ID	0
Glenn-Colusa ID	99.3
Provident ID	14.6
Princeton Cordora Glenn ID	7.7
Maxwell ID	4.9
Reclamation District 108	21.5
Reclamation District 1004	12.8
Sutter Mutual WC	17.4
Meridian Farms WC	3.5
Pelger Mutual WC	0.6
Total	200.3

<sup>1</sup> Source: Department of Water Resources Bulletin 160-98, as cited in the final Sacramento River Basin-Wide Water Management Plan, October 2004.

#### Vernal pool plant and invertebrate species

Vernal pool plants and invertebrates are restricted to vernal pools, swales, and ephemeral freshwater habitats. Ten vernal pool listed-species have the potential to occur in the Settlement Contract Action Area (Table 1). Eight of these eleven species have occurrence records inside one or more the Settlement Contract service-areas: the Conservancy fairy shrimp (*Branchinecta conservatio*), the vernal pool fairy shrimp (*Branchinecta lynchi*), the vernal pool tadpole shrimp (*Lepidurus packardi*), Colusa grass (*Neostapfia colusana*), hairy Orcutt grass (*Orcuttia pilosa*), Hoover's spurge (*Chamaesyce hooveri*), palmate-bracted bird's-beak (*Cordylanthus palmatus*) and slender Orcutt grass (*Orcuttia tenuis*). Butte County meadowfoam (*Limnanthes foccosa* ssp. *californica*) and Green's tuctoria (*Tuctoria greenei*) do not have known occurrence records inside or within two miles of any Settlement Contract service area boundary, and do not have designated critical habitat inside or within two miles of any service area.

Seven Settlement Contracts have vernal pool species records inside their water service area. From north to south, these are: Anderson-Cottonwood Irrigation District (ACID), Princeton-Cordora-Glenn ID, Provident Irrigation District, Glenn-Colusa Irrigation District (GCID), Davis Ranches, Reclamation District 108, and Conaway Conservancy Group and NCMWC. No Critical habitat is present in the NCMWC service area.

#### Valley elderberry longhorn beetle

The valley elderberry longhorn beetle (beetle) is dependent on its host plant, elderberry (*Sambucus* species) which is a common component of the remaining riparian plant communities in the Central Valley. The beetle's current distribution is patchy throughout the Northern Sacramento Valley from Redding to Sacramento due to extensive loss of riparian vegetation in the Central Valley. Typically, the only evidence of a shrub's use by the beetle is an exit hole created by the larva just prior to the pupal stage. Seven Settlement Contracts have one to two

VELB records inside their service-area. These are ACID, Arnold Andreotti et al., Margery L. and Jack E. McLaughlin, Meridian Farms Water Company, Pacific Realty Associates, RD 1004, Roberts Ditch Irrigation Company. The ACID service area has recent records of the beetle at the southern tip of Reading Island Recreation Area in a savanna-like grassland and at Anderson River Park in the City of Anderson. Valley elderberry longhorn beetle records in the Pacific Realty Associates service area are located on the Golden State Island oxbows, Reclamation District 1004, and in a riparian terrace at Moons Bend. These are relatively protected areas and without known threats. The beetle has not been documented to occur within the Basin. However, several occurrences have been recorded in close proximity to the Basin along the Sacramento River. For example, the beetle has been observed on the Yolo County side of the Sacramento River directly west of Fisherman's Lake. Potential beetle habitat (i.e., elderberry shrubs with stems greater than one inch diameter at ground level) is located along the outside perimeter of the Basin, and small patches of potential habitat are known to exist in many locations within the Basin. For this reason, the beetle is a covered species in both the Metro Air Park and Natomas Basin HCP.

#### California tiger salamander

A California tiger salamander was collected in 1963 from a drainage ditch within 2 miles of the Glenn-Colusa Irrigation District; however the Service classifies this occurrence as extirpated. No other Settlement Contract, including NCMWC, GCID, and City of Redding have occurrences of California tiger salamander or its proposed critical habitat inside or within two miles of the Contract service area.

#### California red-legged frog.

Once common in the California Central Valley and costal habitat, the California red-legged frog is now known only from isolated localities in the Sierra Nevada, northern coast, and northern Transverse Ranges. The species is still common in the San Francisco Bay area and along the central coast, with some extant populations in Tehama, Butte, and Yuba Counties. There are no red-legged frog occurrence records inside any Settlement Contract service area, however, all Settlement Contract service areas are inside the North Coast Range Foothills & Western Sacramento River Valley California Red-legged frog Recovery Unit (with a few of the Settlement Contract service areas occurring in the Sierra Nevada Foothills and Central Valley California red-legged frog Recovery Unit) (USFWS 2002).

In addition, several areas have been identified as red-legged frog Core Areas where recovery actions will be focused. Core areas represent a system of areas where, when protected and managed for California red-legged frogs, will allow for long-term viability of existing populations and reestablishment of the population within the historic range. Core areas located in red-legged frog historic range represent areas where restoration of habitat is most feasible, where pilot reestablishment efforts are most likely to be successful, and where natural recolonization is expected. Preservation and enhancement of habitat in each core area is important to maintain and to expand the distribution of the species. One of the 35 designated California red-legged frog Core Areas is the Cottonwood Creek Core Area (Core Area #8) in Tehama and Shasta counties. Parts of the Anderson-Cottonwood Irrigation District are inside the red-legged frog Core Area #8. Core Area #8 includes Cottonwood Creek, Lower Cottonwood Creek, Elder Creek, Red Bank Creek, South Fork, and Wells Creek (USFWS 2002).

Critical Habitat for red-legged frog was re-proposed on April 14, 2004 for 4.1 million acres in 28 California counties, including Tehama and Butte Counties. No proposed critical habitat for the California red-legged frog is located within the NCMWC.

#### Bald eagle

Bald eagles do not nest in the Action Area but can be occasional winter visitors. They can occur along the Sacramento River where they forage for fish and also may seek waterfowl at the state and federal refuges on private lands flooded in winter to attract waterfowl. ACID has two records for bald eagle. We are unaware of current bald eagle records within the NCMWC service area.

#### Western snowy plover

Western snowy plover is a small shorebird that breeds primarily on coastal beaches on the Pacific coast. Habitats used by nesting and on-nesting birds include sandy coastal beaches, salt pans, coastal dredged spoil sites, dry salt ponds, salt pond levees, and gravel bars. There is a 1963 record of nesting snowy plovers and chicks at the City of Davis sewage treatment ponds, approximately .25 to .5 miles from the Conaway Conservancy Group water service area boundary. The renewal of the NCMWC, ACID, and City of Redding Settlement Contracts will have no effect on western snowy plover.

#### Delta smelt

Delta smelt are euryhaline species (tolerant of a wide range of salinity) and are endemic to the upper Sacramento-San Joaquin estuary. Delta Smelt have been collected as far north as Verona on the Sacramento River. Delta smelt could occur near the Sacramento River diversion points for the most southern Settlement Contractors, including the Conaway Conservancy Group contract, Natomas Central Mutual Water Company, and Riverby Limited. On February 15, 2005, the Service issued biological opinion 1-1-05-F-0055, which addressed the effects of delivering CVP water for renewed long-term water contracts and other actions on delta smelt and its critical habitat; the OCAP consultation analysis is incorporated by reference into this Settlement Contract renewal consultation. The OCAP consultation analyzed the effects of numerous new actions on the delta smelt and its designated critical habitat, including storage of CVP and SWP water in reservoirs, water releases from reservoirs, river operations, operation of the Federal/State diversion facilities, and the CVP/SWP export-pumping operations in the Delta.

## CONCLUSION

After review of information available to us and discussions with Reclamation's Northern California Area Office and Mid-Pacific Regional Office staff in 2004 and 2005, it is our determination that renewal of these three Sacramento River Settlement Contracts is not likely to adversely affect federally listed species or designated or proposed critical habitat.

The Sacramento River Settlement Contracts (Settlement Contracts) have a unique history and nature. The Settlement Contractors hold water rights to Sacramento River water, many of which are senior to the Central Valley Project (CVP) and, cumulatively, the Settlement Contractors claim senior water rights that entitle them to use a significant portion of the water available for appropriation in the Sacramento River. The ability of Reclamation to operate the CVP depends in part on the negotiated agreements reached with the Settlement Contractors over diversion of the Sacramento River water represented in the Settlement Contracts.

The Settlement Contractors are not dependent on CVP water to supply their water needs. If Reclamation did not enter into renewal contracts with the Settlement Contractors, the Settlement Contractors would revert to diverting water from the Sacramento River under their "claim of right". Reclamation believes that the frequency and timing of water diversions taken by a Settlement Contractor under their "claim of right" would be approximately the same as under the proposed renewal contracts, because crops and cropping patterns do not change and are not affected by the renewal of their Settlement Contract (D. Bultema 1-31-05a). Consequently, the operation and maintenance needs of the ditches, canals and conveyance facilities inside a Settlement Contractor's water service area would have the same timing, degree, and frequency if the water is diverted from the Sacramento River under the proposed renewal contracts or under the Contractor's "claim of right".

The Settlement Contractors have constructed their own conveyance facilities and could divert their own water for use in accordance with their claimed water rights. The Settlement Contractor's water diversion facilities and water conveyance facilities are owned and maintained entirely by the Settlement Contractors, and many were initially constructed by the Contractors prior to the creation of the CVP. The Contractor's water conveyance facilities, canals, and ditches continue to have independent utility from the CVP, CVP operation and maintenance, and from the renewal of the Sacramento River Settlement Contracts. The Settlement Contractors have their own facilities and they could, in essence, farm and provide M&I water without renewing their Settlement Contract if they exercised their claimed water rights.

Therefore, the Service concludes that the operation and maintenance of Settlement Contractor's water conveyance facilities and farming operations related to Settlement Contract water are actions that have independent utility, and are neither a result of, nor interrelated or interdependent to, the proposed federal action of renewing the contract. Any take of federally listed species incidental to carrying out these activities is therefore not addressed in this consultation, and would require separate authorization through compliance with either section 7 or section 10 of the ESA.

With regard to the change in purpose of use from agriculture only to agriculture and M&I, NCMWC is somewhat unique among the settlement contractors in that it is virtually the only formerly agriculture only contractor that projects a significant increase in future need for an M&I water supply, a portion of which can be provided by Project Water. The City of Redding also projects increased need for M&I water, but it always has been an M&I only contract; the remaining M&I projections of other Settlement Contractors, as shown in the Water Needs Assessments, are generally small and do not indicate substantial new urban growth, but rather a continuation of existing agricultural land use.

On the other hand, giant garter snakes have been observed throughout much of the NCMWC service area. Past rice farming in the area has provided habitat for giant garter snakes and is generally compatible with the biological needs of that species. The NCMWC Water Needs Assessment shows M&I demand going from 0 in 1995 to 27,000 af by 2018. Development that would be facilitated by provision of M&I Project Water in a renewed contract is likely to result in the conversion and loss of important habitat for giant garter snakes within the NCMWC M&I service area, not all of which is currently covered by an HCP or a section 7 consultation that provides conservation for the snake. As a result, we have looked more closely at both the activities we believe are reasonably foreseeable within the NCMWC M&I service area, and at the relationship between Project Water and Base Supply in supporting that growth within the NCMWC service area.

As described above, the renewed contract would allow Project Water to be delivered only in the months of July and August. Project Water by itself therefore cannot fully support buildout of the current M&I service area, or expansion of the existing M&I service area, which in any case would first require revision of existing SWRCB permits, because M&I demands occur 12 months of the year. The supplemental role provided by Project Water would be further limited by existing SWRCB permits which limit M&I diversions to a total quantity not to exceed 10,000 af between October 1 to April 1. As a result, we would consider only a portion of the adverse effects of all projected development within NCMWC M&I service area (per the Water Needs Assessment) to be interrelated or interdependent to Project Water diverted for M&I purposes. Further, we have no estimate of ultimate M&I demand associated with development within the NCMWC M&I service area that can be permitted under the Metro Air Park HCP, nor M&I demand that would be associated with reasonably foreseeable development in the portion of the NCMWC M&I service area not covered by an HCP or a section 7 consultation that provides conservation for the giant garter snake. However, considering the restricted time for which Project Water could be delivered for M&I under the renewed contract, and the current seasonal restriction in the amount of M&I water that NCMWC can divert in winter months under their SWRCB permits (10,000 af total for the 6 months from October 1 through April 1, or in the neighborhood of 1,666 af per month), the overall role of Project Water in supporting future growth would be fairly small.

The lands within the NCMWC M&I service area not covered by an HCP or a section 7 consultation surround Sacramento International Airport (Airport) and comprise approximately 843 acres. As a result of our work with the Airport on other projects, we are aware that attempts to expand the Airport in the future are likely. However, any future expansion proposed by the Airport would require the review and approval of the Federal Aviation Administration and



therefore would be subject to future review under the ESA. We conclude therefore that future expansion of Sacramento International Airport is a future federal action subject to independent review under the ESA that need not be evaluated in this consultation because it is a result of, or as an action interrelated or interdependent to, provision of an M&I water supply in the renewed Settlement Contract for NCMWC.

On the basis of the forgoing discussion and other information in our files, we conclude that renewal of the Settlement Contract for Natomas Central Mutual Water Company is not likely to adversely affect the federally listed endangered vernal pool fairy shrimp (*Branchinecta lynchi*) or its critical habitat, vernal pool tadpole shrimp (*Lepidurus packardi*) or its critical habitat, the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) or its critical habitat, delta smelt (*Hypomesus transpacificus*) or its critical habitat, (California tiger salamander (*Ambostoma californiense*) or its critical habitat, giant garter snake (*Thamnophis gigas*), or the bald eagle (*Haliaeetus leucocephalus*).

This concludes informal consultation on renewal of the Natomas Central Mutual Water Company Contract and change in purpose of use of Project Water from agriculture only to agriculture and M&I. No further action is needed unless: (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; (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; or (3) a new species is listed or critical habitat designated that may be affected by the action, and (4) discretionary Federal agency involvement or control over the action is maintained (or is authorized by law). Reclamation should continue to monitor Settlement Contractor actions and review this determination as needed based on the reinitiation criteria.

### CLOSING

The Sacramento Fish and Wildlife Office would like to thank you and your staff for their assistance in providing information on the project description, helping us better understand Reclamation's Sacramento River Settlement contracting process, and your commitment to work with us to conserve Federally listed species. Please contact Jan Knight (916) 414-6600 with questions about these 138 Sacramento River Settlement Contract long-term renewals.

Attachment

cc:

Frank Michny, USBR Regional Office, MP-150  
Richard Stevenson, USBR Regional Office, MP-400  
Nina Bicknese, USBR Regional Office, MP-150  
Donald Bultema, USBR Northern California Area Office  
Buford Holt, USBR Northern California Area Office

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#### PERSONAL COMMUNICATIONS

Bultema, Don. (USBR Northern California Area Office Water Contract Officer). 1/27/2005. Phone conference with Don Bultema, Nina Bicknese, and Richard Stevenson to conduct line-by-line editing of the project description in a draft Service document titled *Sacramento River Settlement Contractors Longter, Cpmtract Renewal Endangered Species Act Consultation* (pages 10-12).

\_\_\_\_\_. 1/31/2005a. Notes from telephone conference between Don Bultema, Jan Knight (USFWS) and Nina Bicknese. Summary of the phone conference was prepared by Nina Bicknese, then reviewed by the participants. Don Bultema verified accuracy and content of the final summary text in an e-mail to Nina Bicknese dated 2/16/05.

\_\_\_\_\_. 1/31/2005b. Electronic mail message (e-mail) from Don Bultema to Nina Bicknese with Subject Line stating: Re: Resend: SRSC draft BO problem. Message states that the expected reduction in over all Settlement Contract quantities (91,840) should not be considered as "additional water" in the Sacramento River system.

Eckart, Robert. (USBR Regional Environmental Compliance Branch Chief). 1/24/05. Hand written changes to draft project description.

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Fuller, Ken. (USFWS Biologist). 2/16/05. Discussion with Nina Bicknese about condition of the remaining natural habitat in the area of the Davis Ranches service-area that overlaps with the GIS-mapped boundary of vernal-pool tadpole shrimp Critical-Habitat-Unit #6.

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\_\_\_\_\_. 7/19/04. Memorandum to the Service, Subject: Central Valley Project (CVP) long-term water service contract renewals – Consultation Parameters.

\_\_\_\_\_. 11/11/04. Hand written changes on 11/11/04 and 11/9/04 to a 9/14/04 paragraph written by Frank Michny. Paragraph was prepared at request of Jan Knight asking Reclamation to explain their understanding of the relationship of the scope of the long-term contract renewal consultations to the 2004 OCAP consultation and extent of the inclusion of the long-term contract renewal actions in the OCAP consultation project description.

\_\_\_\_\_. 11/26/2004. Electronic message to Nina Bicknese, Subject line: Conservation Commitments tiered from Mother BO.

\_\_\_\_\_. 2/7/05. Hand written comments on the Settlement Contract draft consultation project description.

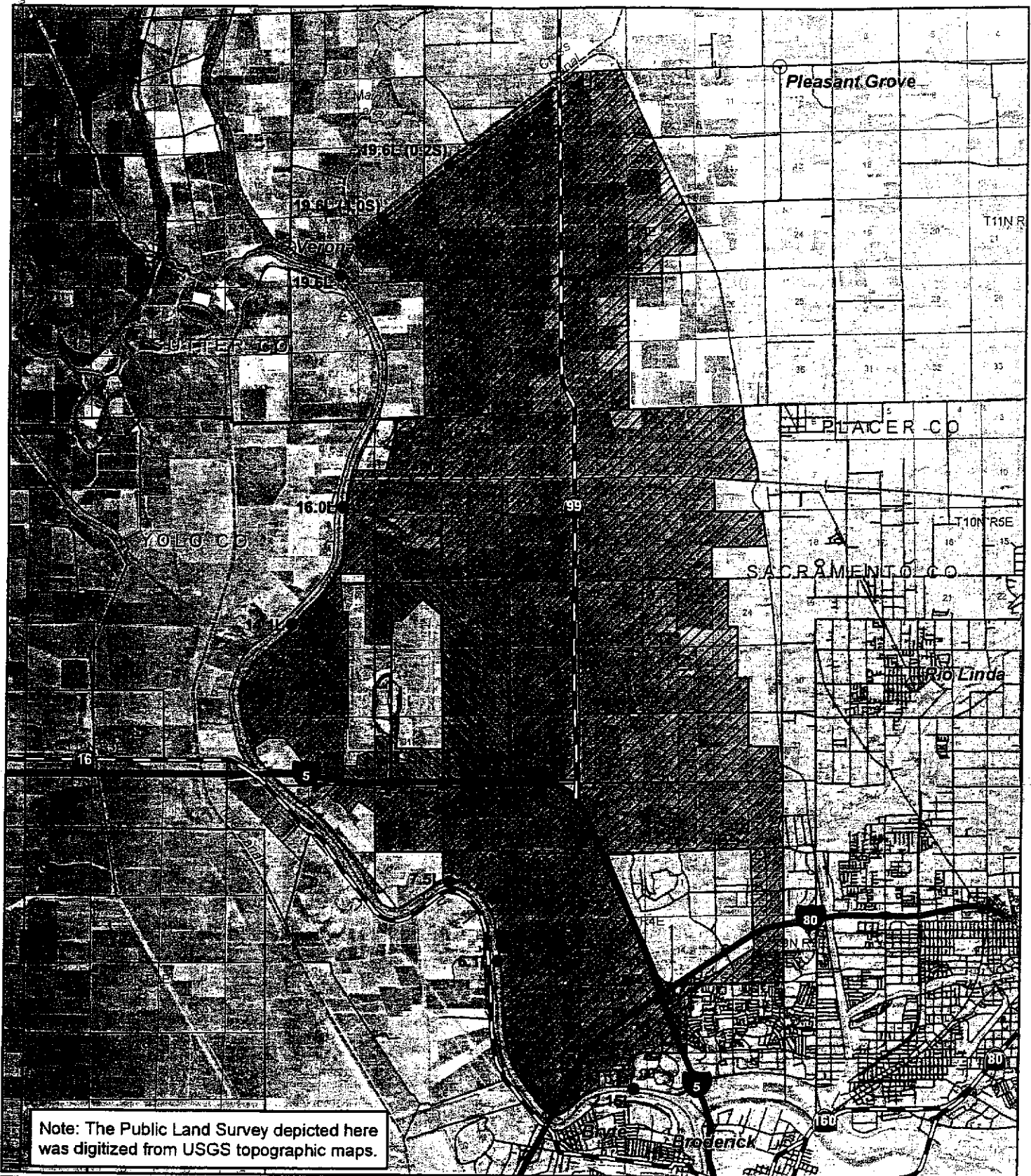
Slavin, Tracy. (USBR Resources Division Branch Chief, and lead of the Regional Water Conservation Team). 1/27/05a. Electronic message to Richard Stevenson with subject line: SRSC Water Needs. E-mail message is a revision of the water needs section of the draft project description.

\_\_\_\_\_. 1/27/05a. Electronic message to Nina Bicknese with subject line: SRSC Water Conservation Element. E-mail message is a revision of the contract water conservation requirement in the draft project description.

Stevenson, Richard. (USBR Regional Water Rights and Water Contracting Branch Chief) 11/29/04. Electronic mail to Don Bultema, Gale Hefler, and Nina Bicknese. Subject line: Article 3(e) of the ACID contract.

\_\_\_\_\_. 2-7-05. Written corrections to draft project description, and verbal discussion with Nina Bicknese.





\_\_\_\_\_. 3-2-05. Information provided to the Service during a review of 1964 NCMWC settlement contract and discussion between Richard Stevenson, Nina Bicknese, Jan Knight, Jo Ann Struebing, Patricia Steward, and Robert Eckart, and Gale Heffler-Scott.

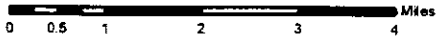


Note: The Public Land Survey depicted here was digitized from USGS topographic maps.

# Natomas Central Mutual Water Co.

Contract No. 14-06-200-885A-R-1  
Exhibit B

-  Contractor's Service Area - Ag Only
-  Contractor's Service Area - Ag and/or M&I
-  District Boundary
-  Point of Diversion



Department of the Interior  
Bureau of Reclamation  
Mid-Pacific Region  
Sacramento, California

RECORD OF DECISION

SACRAMENTO RIVER SETTLEMENT CONTRACTORS  
NATOMAS MUTUAL WATER COMPANY  
LONG-TERM CONTRACT RENEWAL

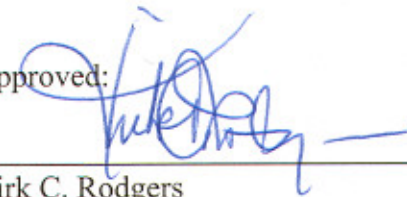
March 2005

Concur:

  
\_\_\_\_\_  
Frank J. Michny  
Regional Environmental Officer

Date: *March 9, 2005*

Approved:

  
\_\_\_\_\_  
Kirk C. Rodgers  
Regional Director

Date: *3/9/2005*

## RECORD OF DECISION

### SACRAMENTO RIVER SETTLEMENT CONTRACTORS NATOMAS MUTUAL WATER COMPANY LONG-TERM CONTRACT RENEWAL

#### I. INTRODUCTION

This Record of Decision (ROD) of the Department of the Interior, Bureau of Reclamation, Mid-Pacific Region, documents the decision for renewal of a Sacramento River Settlement Contract, the subject of the Final Environmental Impact Statement (FEIS) entitled *Sacramento River Settlement Contractors Environmental Impact Statement*, dated December 2004.

While other SRSC contracts have been executed, this action was delayed pending completion of Endangered Species Act consultation specific to Natomas Mutual Water Company. A copy of the completed Fish and Wildlife Service consultation is appended to this ROD.

#### II. DECISION

The Natomas Mutual Water Company Sacramento River Settlement Contract will be renewed for 40 years according to the negotiated agreement identified as the preferred alternative in the FEIS.

The negotiated contract with the Natomas Mutual Water Company will be renewed to ensure this contractor the use of both the regulated and unregulated flow of the Sacramento River and its tributaries, provide for the efficient and economical operation of the Central Valley Project (CVP), and provide for reimbursement of the United States for expenditures made for the CVP. This action will also ensure continued beneficial use of water developed and managed by the CVP with reasonable balance among competing demands and incorporate administrative conditions into the renewed contract to ensure continued compliance with current Federal Reclamation law and other applicable statutes.

The negotiated renewal contract will maintain the status quo for the Natomas Mutual Water Company contract with the exception of:

- a fee for rescheduling of base supply into the months of July, August, September, or October from any month of the diversion season;
- reducing from 100 to 75 percent the amount of allocated CVP water (Project Water) which must be paid for whether used or not, plus payment for the amount used in excess of 75 percent;
- rate adjustments for Project Water used for purposes other than agriculture;
- adding a Restoration Charge for each acre-foot of Project Water actually diverted; and
- implementation of a water conservation plan prior to diversion of Project Water.

Current shortage provisions (a 25 percent reduction in supply in critical years) will be maintained. Water quantities under contract will be unchanged for this contract.

The preferred alternative is also the environmentally preferred alternative because the predicted environmental impacts of the preferred alternative are very similar to the predicted impacts of the other alternatives, use of groundwater is neither compelled nor foreclosed, and the alternative is acceptable to both parties, giving greater certainty of operations affecting the very complex water storage and distribution in interior California.

### III. BACKGROUND

The Sacramento River Settlement Contractors (SRSC) include various irrigation districts, reclamation districts, mutual water companies, partnerships, and individuals located in the Sacramento River Basin of Northern California. Most of the SRSC have senior, vested water rights under California law to divert surface water from the Sacramento River. Without these contracts, it would have been difficult, if not impossible, for the United States to develop the balance of the CVP, which includes facilities on the Trinity, American, San Joaquin, Stanislaus River, and elsewhere in the Central Valley. Most of the SRSC have claims to appropriative rights senior to the CVP or relatively small amounts of riparian rights. In total, these rights account for nearly 84 percent of the contract amount.

The original contracts, the first of which was signed in 1964, were based on jointly conducted studies and negotiations and included mutually agreeable quantities of water based on the SRSC independently held water rights (base supply) derived from the natural flow of the river, and the water stored by the CVP (Project Water). The contracts called for payments of the stored water, but the base supply water, being based on the natural flow rather than the CVP, continued to be diverted without charge. The base supply quantities reflect an average yield of the SRSC water rights and are supplemented during the months of low natural flow with Project Water giving the SRSC certainty of flow and freeing the United States from the potential of lengthy and expensive adjudication of the CVP and other water rights in the Sacramento River watershed. These contracts were scheduled to expire March 31, 2004, but were extended for 2 years pursuant to Public Law 108-37.

On October 30, 1992, the Central Valley Project Improvement Act (CVPIA) was signed into law. The CVPIA modified the authorized purposes of the CVP and required a wide range of improvements and changes in the operation of the CVP. It also altered various provisions of the repayment and water service contracts, and in doing so provided guidance with respect to the settlement contracts, although it clearly distinguished between settlement contracts and other types of CVP contracts. Those changes are reflected in the negotiated contracts.

### IV. ALTERNATIVES CONSIDERED

Potential alternatives were identified during three scoping sessions, a public comment period, and discussions with representatives of the larger SRSC and the Natural Resources Defense Council.



Three action alternatives were initially identified based on the initial contract proposals of Reclamation and the SRSC and the negotiated contract. These were supplemented by two others based on established measures of flow, to enlarge the potential range of physical changes analyzed. These five action alternatives, all of which meet the purpose and need of the agency action, were compared to the Preferred Alternative of the Programmatic Environmental Impact Statement for the Implementation of the CVPIA (PEIS), the no action alternative for this analysis.

#### Reclamation's Initial Contract Proposal

The initial proposal called for the status quo with exception of:

- 10 to 25 percent delivery reductions in critical years based on Shasta inflow deficiencies;
- a fee for rescheduling base supply water into the months of July, August, September, or October from any month of the diversion season;
- rate adjustments for project water used for purposes other than agriculture;
- adding a Restoration Charge for each acre-foot of project water actually diverted; and
- implementation of a water conservation plan prior to diversion of Project Water.

The current water quantities under contract would remain unchanged and payment would be required for 100 percent of the Project Water whether used or not.

#### The SRSC Initial Counter Proposal

The SRSC initial counter proposal called for the status quo, including current water quantities, with exception of:

- 10 to 25 percent delivery reductions in critical years based on Shasta inflow deficiencies, but with compensation for water reductions;
- no rescheduling fees;
- payment only for Project Water actually diverted;
- no rate adjustments for Project Water used for purposes other than agriculture;
- adding a Restoration Charge for each acre-foot of Project Water actually diverted; and
- payment only for Project Water actually delivered; and
- implementation of a water conservation plan prior to diversion of Project Water.

#### Shortage Provisions Based on Shasta Inflow Deficiencies

This proposal called for the status quo with exception of:

- sliding scale reductions based on Shasta inflows with the cutback remaining at the lowest level until full contract quantity is reset upon attainment of 4 million acre-feet of storage in Shasta Lake;
- a fee for rescheduling of base supply into the months of July, August, September, or October from any month of the diversion season;

- reducing from 100 to 75 percent the amount of allocated Project Water which must be paid for whether used or not, plus payment for the amount used in excess of 75 percent;
- rate adjustments for Project Water used for purposes other than agriculture;
- adding a Restoration Charge for each acre-foot of Project Water actually diverted;
- implementation of a water conservation plan prior to diversion of project; and
- reductions in supply for three contractors.

#### Shortage Provisions Based on 40-30-30 Sacramento River Index

This proposal called for the status quo with exception of:

- sliding scale reductions based on the Sacramento River Index without a reset requirement at 4 million acre-feet of storage in Shasta Lake;
- a fee for rescheduling of base supply into the months of July, August, September, or October from any month of the diversion season;
- reducing from 100 to 75 percent the amount of allocated Project Water which must be paid for whether used or not, plus payment for the amount used in excess of 75 percent;
- rate adjustments for Project Water used for purposes other than agriculture;
- adding a Restoration Charge for each acre-foot of Project Water actually diverted;
- implementation of a water conservation plan prior to diversion of project; and
- reductions in supply for three contractors.

#### No Action

The no action alternative was defined as the preferred alternative of the CVPIA. This essentially would have resulted in maintaining the existing conditions.

#### V. BASIS OF DECISION

The decision was based on feasible alternatives to meet objectives of Reclamation within associated requirements, and the evaluation of impacts as provided within the FEIS.

#### Factors Considered by Reclamation in Making the Decision

##### *Effects on the Physical Environment*

- Changes in surface water supplies
- Impacts on groundwater levels and quality
- Impacts on water quality
- Land subsidence
- Infrastructures
- Air quality
- Geology and soils

### *Effects on the Biological Environment*

- Threatened and endangered species
- Special status species
- Essential Fish Habitat
- Aquatic, wetland, and upland habitats
- Vernal pools
- Agricultural habitat

### *Effects on the Sociocultural Environment*

- Cultural and historic resources
- Indian Trust Assets
- Environmental justice
- Land use and agricultural production
- M&I land use and water costs
- Power supply and demands
- Regional economics
- Recreation
- Demographics

### Overall Consideration of Environmental Impacts

Based on the analysis presented in the FEIS, the negotiated contract renewals either has no impact or less-than-significant adverse impacts on biological, physical, and cultural resources and will provide for stability of operation of the CVP to the benefit of the public and the natural environment.

## VI. IMPLEMENTING THE DECISION AND ENVIRONMENTAL COMMITMENTS

Reclamation and the SRSC have negotiated and will implement all practicable means to avoid or minimize environmental harm, enhance water conservation, and ensure continuity of operations. Implementation of water conservation measures and measures to protect listed species will be the responsibility of the respective contractors.

## VII. COMMENTS RECEIVED ON THE FEIS

After issuing the FEIS in December 2004, Reclamation received two comment letters.

Representatives of the Hoopa Valley Tribe called for further language concerning the maintenance of flows in the Trinity River. Specifically, the Tribe's representatives called for a contract provision expressly subordinating delivery obligations of Project Water to fishery restoration on the Trinity River, greater discussion of the provisions of the Central Valley Project-Operating Criteria and Procedures mitigation measures, and urged revision of the FEIS to give greater emphasis to this concern for protection of the Tribe's Trust Assets. Reclamation and

the Tribe agree that the Tribe's Trust Assets must be protected. However, Reclamation does not consider the measures proposed by the Tribe to be necessary to achieve that goal, and this position is strengthened by the recent conclusion of litigation concerning the ROD concerning flows in the Trinity River. Given the decision of the litigants not to appeal the 9th Circuit Court of Appeals ruling, the ROD stands, and water will be maintained in storage in Trinity Reservoir for releases to the Trinity River in accordance with the ROD. Therefore, there will be no impact on the Tribe's Trust Assets from renewal of the SRSC.

The U.S. Environmental Protection Agency stated that some of their comments on the Draft EIS had been addressed, but expressed the opinion that site-specific information concerning impacts to water quality was still lacking. Specific concerns in this regard were noted with respect to the Colusa Basin Drain and reaches of the Sacramento River and concerns that existing conditions will lead to continued degradation. Reclamation disagrees with the concern that renewal of these contracts will adversely affect water quality. On the contrary, Reclamation believes renewal of these contracts retards degradation during the low flow/high demand months. Most of this water can be legally diverted and used in the absence of these contracts, and the principal effects of the contracts is to give the government an element of influence over the timing and place of use of the unstored water and to ensure that stored water is available to the SRSC during the low flow months to support farming and incidentally reduce the concentrations of dissolved substances in the water during the periods of low natural flow and high use. Moreover, absent these contracts, there would be no basis for Reclamation to require water conservation, a generally desirable step which, ironically, worsens the problems in the Colusa Basin Drain (Drain) unless actions are taken to deliberately release water to the Drain that could be conserved by SRSC. Releases to the Drain are made solely at the discretion of individual SRSCs and are not under the control of Reclamation, although the provision of contract water under these contracts facilitates agreements between water rights holders along the drain to maintain an acceptable minimal water quality in the Drain.

The EPA also expressed concerns over differences the water demand projects used by Reclamation and those being developed by the Department of Water Resources in their current update of Bulletin 160, and the lack of analysis for the period between 2025, when full use of contract supplies is anticipated, and 2044, the last full year of the renewed contracts. Reclamation sees no need to speculate on impacts beyond the full use of the water under contract. Once that total is reached the effects of the contracts remain unchanged although the larger context of water use will surely be changing, in the face of continued population growth and technological change, in ways that will be addressed as specific changes are proposed.