

# Chapter 1 Summary of Legal and Statutory Authorities, Water Rights, and Other Obligations Relevant to the Action

## Introduction

The Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR) propose to operate the Central Valley Project (CVP) and State Water Project (SWP) to divert, store, and convey CVP and SWP (Project) water consistent with applicable law and contractual obligations. These operations are summarized in this biological assessment (BA) and described in more detail in Chapter 2.

The CVP and the SWP are two major inter-basin water storage and delivery systems that divert and re-divert water from the southern portion of the Sacramento-San Joaquin Delta (Delta). Both CVP and SWP include major reservoirs upstream of the Delta, and transport water via natural watercourses and canal systems to areas south and west of the Delta. The CVP also includes facilities and operations on the Stanislaus and San Joaquin Rivers. The major facilities on these rivers are New Melones and Friant Dams<sup>1</sup>, respectively.

The projects are permitted by the California State Water Resources Control Board (SWRCB) to store water during wet periods, divert water that is surplus to the Delta, and re-divert Project water that has been stored in upstream reservoirs. Both projects operate pursuant to water right permits and licenses issued by the SWRCB to appropriate water by diverting to storage or by directly diverting to use and re-diverting releases from storage later in the year. As conditions of their water right permits and licenses, the SWRCB requires the CVP and SWP to meet specific water quality, quantity, and operational criteria within the Delta. Reclamation and DWR closely coordinate the CVP and SWP operations, respectively, to meet these conditions.

The project description for this BA includes the ongoing operations of the CVP and SWP and potential future actions that are foreseeable to occur within the period covered by the project description. Inclusion of future activities in the project description does not constitute agency approval of those actions. Any future actions will be required to comply with all applicable laws, including those regarding agency decision making, before those actions are approved or implemented. The Biological Opinions (BOs) issued as a result of this Section 7 consultation will be considered in the decision making process on future actions as the BOs will analyze the effects of those potential actions on listed species.

The proposed action in this consultation includes activities undertaken by DWR in operating the SWP that potentially affect State listed species under the California Endangered Species Act (CESA). CESA allows California Department of Fish and Game (DFG), upon request of DWR,

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<sup>1</sup> While part of the CVP, the Friant Division operations are not included in the action for the purposes of Section 7 consultation.

to determine if Federal incidental take statements and biological opinions obtained through Federal consultation are consistent with State law. As such, DWR intends to submit the Biological Opinions to DFG for a consistency determination review pursuant to the California Endangered Species Act (CESA).

## Relationship to CVP Operations Criteria and Plan

Reclamation periodically updates the CVP Operations Criteria and Plan (CVP-OCAP). The most recent CVP-OCAP, covering the years 1991-2003, was completed in 2004. The 2004 CVP-OCAP describes the laws, regulations and other criteria applicable to operations of the CVP that were in effect during the 1991-2003 period. In addition, the 2004 CVP-OCAP was used to guide development of the project description included in Chapter 2 of this BA. However, the project description included in Chapter 2 of this BA is different from the 2004 CVP-OCAP in that the project description in this BA looks at the present and future long-term operations of the CVP and SWP. While this process is often referred to as the OCAP consultation, that name is a misnomer. The consultation focuses on the effects of the continued long-term coordinated operation of the CVP and SWP. The laws, regulations, policies, guidelines and other criteria for operations described in the CVP-OCAP which are currently in effect are incorporated into the Project Description of this BA and accurately reflected in the modeling described in Chapter 9.

## Legal and Statutory Authorities

Legal and statutory authorities and obligations, water rights, and other obligations guide the Project agencies' proposed action. This section of the BA elaborates on those authorities, responsibilities, and obligations.

### CVP

The CVP is the largest Federal Reclamation project and was originally authorized by the Rivers and Harbors Act of 1935. The CVP was reauthorized by the Rivers and Harbors Act of 1937 for the purposes of "improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for construction under the provisions of the Federal Reclamation Laws of such distribution systems as the Secretary of the Interior (Secretary) deems necessary in connection with lands for which said stored waters are to be delivered, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings and in order to permit the full utilization of the works constructed." This Act provided that the dams and reservoirs of the CVP "shall be used, first, for river regulation, improvement of navigation and flood control; second, for irrigation and domestic uses; and, third, for power."

The CVP was reauthorized in 1992 through the Central Valley Project Improvement Act (CVPIA). The CVPIA modified the 1937 Act and added mitigation, protection, and restoration of fish and wildlife as a project purpose. Further, the CVPIA specified that the dams and reservoirs of the CVP should now be used "first, for river regulation, improvement of navigation,

and flood control; second, for irrigation and domestic uses and fish and wildlife mitigation, protection and restoration purposes; and, third, for power and fish and wildlife enhancement.”

CVPIA includes authorization for actions to benefit fish and wildlife intended to implement the purposes of that Title. Specifically, Section 3406(b)(1) is implemented through the Anadromous Fish Restoration Program (AFRP). The AFRP objectives, as they relate to operations, are explained below. CVPIA Section 3406(b)(1) further provides for modification of the CVP operations to meet the fishery restoration goals of the CVPIA, so long as the operations are not in conflict with the fulfillment of the Secretary’s contractual obligations to provide CVP water for other authorized purposes. The U.S. Department of the Interior’s (Interior) decision on Implementation of Section 3406(b)(2) of the CVPIA, dated May 9, 2003, provides for the dedication and management of 800,000 acre-feet (af) of CVP yield annually by implementing upstream and Delta actions. Interior manages and accounts for (b)(2) water pursuant to its May 9, 2003 decision and the Ninth Circuit’s decision in Bay Inst. of San Francisco v. United States, 66 Fed.Appx. 734 (9<sup>th</sup> Cir. 2003), as amended, 87 Fed. Appx. 837 (2004). Additionally, Interior is authorized to acquire water to supplement (b)(2) water, pursuant to Section 3406(b)(3).

There are several other statutes that have authorized the construction, operation, and maintenance of various divisions of the CVP. In these authorizations, Congress has consistently included language directing the Secretary to operate the CVP as a single, integrated project.

## SWP

DWR was established in 1956 as the successor to the Department of Public Works for authority over water resources and dams within California. DWR also succeeded to the Department of Finance’s powers with respect to State application for the appropriation of water (Stats. 1956, First Ex. Sess., Ch. 52; see also Wat. Code Sec. 123) and has permits for appropriation from the SWRCB for use by the SWP. DWR’s authority to construct State water facilities or projects is derived from the Central Valley Project Act (CVPA) (Wat. Code Sec. 11100 et seq.), the Burns-Porter Act (California Water Resources Development Bond Act) (Wat. Code Sec. 12930-12944), the State Contract Act (Pub. Contract Code Sec. 10100 et seq.), the Davis-Dolwig Act (Wat. Code Sec. 11900-11925), and special acts of the State Legislature. Although the Federal government built certain facilities described in the CVPA, the Act authorizes DWR to build facilities described in the Act and to issue bonds. See Warne v. Harkness, 60 Cal. 2d 579 (1963). The CVPA describes specific facilities that have been built by DWR, including the Feather River Project and California Aqueduct (Wat. Code Sec. 11260), Silverwood Lake (Wat. Code Sec. 11261), and the North Bay Aqueduct (Wat. Code Sec. 11270). The Act allows DWR to administratively add other units (Wat. Code Sec. 11290) and develop power facilities (Wat. Code Sec. 11295).

The Burns-Porter Act, approved by the California voters in November 1960 (Wat. Code Sec. 12930-12944), authorized issuance of bonds for construction of the SWP. The principal facilities of the SWP are Oroville Reservoir and related facilities, and San Luis Dam and related facilities, Delta facilities, the California Aqueduct, and the North and South Bay Aqueducts. The Burns-Porter Act incorporates the provisions of the CVPA.

DWR is required to plan for recreational and fish and wildlife uses of water in connection with State-constructed water projects and can acquire land for such uses (Wat. Code Sec. 233, 345, 346, 12582). The Davis-Dolwig Act (Wat. Code Sec. 11900-11925) establishes the policy that preservation of fish and wildlife is part of State costs to be paid by water supply contractors, and recreation and enhancement of fish and wildlife are to be provided by appropriations from the General Fund.

## ESA

Federal agencies have an obligation to ensure that any discretionary action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify its critical habitat unless that activity is exempt pursuant to the Federal ESA 16 U.S.C. §1536 (a)(2); 50 Code of Federal Regulations (CFR) §402.03. Under Section 7(a)(2), a discretionary agency action jeopardizes the continued existence of a species if it “reasonably would be expected, directly or indirectly, to reduce appreciably the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of the species” 50 CFR §402.02.

Through this consultation, Reclamation will comply with its obligations under the ESA, namely, to: (1) avoid any discretionary action that is likely to jeopardize continued existence of listed species or adversely affect designated critical habitat; (2) take listed species only as permitted by the relevant Service; (3) and use Reclamation’s authorities to conserve listed species.

Reclamation also is proposing actions to benefit the species under its existing authorities and consistent with its 7(a)(1) obligation to conserve and protect listed species. Section 7(a)(1) alone does not give Reclamation additional authority to undertake any particular action, regardless of its potential benefit for endangered species. The SWP operations are coordinated with CVP operations and as such, are consulted on as part of the proposed action described in this BA. The coordinated operations of the CVP and SWP are subject to measures and/or alternatives required under the Federal biological opinions.

## Recent Court Rulings

On December 14, 2007, the United States District Court for the Eastern District of California issued an Interim Remedial Order in *Natural Resources Defense Council, et al. v. Kempthorne*, 1:05-cv-1207 OWW GSA (E.D. Cal. 2007), to provide additional protection of the Federally-listed delta smelt pending completion of a new Biological Opinion for the continued operation of the CVP and SWP. The Interim Remedial Order remains in effect until the U.S. Fish and Wildlife Service (FWS) issues a new Biological Opinion for the continued operation of the CVP and SWP, which must be completed by September 15, 2008. A motion to extend the time for completion was filed on July 29, 2008. FWS has requested additional time to complete the Biological Opinions to December 15, 2008.

On April 16, 2008, the United States District Court for the Eastern District of California issued a Memorandum Decision and Order on the Cross-Motions for Summary Judgment filed in *Pacific Coast Federation of Fishermen Association, et al. v. Gutierrez*, 1:06-cv-245-OWW-GSA (E.D. Cal. 2008). The Court found that the Biological Opinion issued by the National Marine Fisheries Service (NMFS) in 2004 was invalid. An evidentiary hearing followed resulting in a Remedies

Ruling on July 18, 2008. The ruling concluded that the court needed further evidence to consider the Plaintiffs' proposed restrictions on CVP/SWP project operations. A Scheduling Order was filed by the court on July 24, 2008 and a further status conference is set for September 4, 2008 with evidentiary hearings to begin sometime in October 2008.

The California Endangered Species Act (CESA) provides the Department of Fish and Game (DFG) authority to authorize the take of endangered species incidental to an otherwise lawful activity. Pursuant to CESA, activities that impact State listed species must minimize and fully mitigate the impacts of the authorized take and the measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Under Fish and Game Code Section 2080.1, DFG may determine that an incidental take statement and biological opinion issued pursuant to FESA is consistent with CESA and that no other State authorization or approval is required for the activity.

### **State-listed Species**

On February 20, 2008, the California Fish and Game Commission issued an emergency regulation pursuant to Fish and Game Code section 2084 authorizing take of longfin smelt by the SWP and also imposing restrictions on the SWP under certain conditions for the purpose of protecting longfin smelt. Cal. Code Regs. tit. 14, § 749.3. Issuance of the emergency regulation followed the decision of the Commission to designate the longfin smelt as a candidate for listing under the California Endangered Species Act. The emergency regulation requires DWR to modify the operations of the SWP to meet prescribed flow ranges in Old and Middle Rivers that could go beyond the requirements imposed by the Interim Remedial Order described above and that are designed to protect larval and juvenile longfin smelt. The emergency regulation is effective until August 27, 2008 and has been extended into November 2008, with an option for one further extension into February 2009.

## **Federal Power Act**

### **SWP**

DWR operates Oroville's facilities as a multipurpose water supply, flood management, power generation, recreation, fish and wildlife enhancement, and salinity control project. The Federal Power Act (FPA) requires that DWR have a license from the Federal Energy Regulatory Commission (FERC) to operate the Oroville Facilities, FERC No. 2100. For the past 50 years, DWR has operated the Oroville Facilities under a license issued by the Federal Power Commission, precursor to FERC, that expired on January 31, 2007. Prior to expiration, DWR filed an application for a new license with FERC for the continued operation of the facilities, and FERC initiated a formal license proceeding on DWR's application. On March 24, 2006, DWR filed a comprehensive settlement agreement with FERC that is intended to result in the issuance of a new license for up to 50 years. Signatories to the agreement include: DWR, Interior, United States Forest Service, NMFS, Pacific Gas and Electric (PG&E), State Water Contractors, and American Rivers. The settlement agreement is currently pending before FERC. DWR is operating the Oroville Facilities pursuant to an annual license issued by FERC until such time as FERC issues a new license for the facilities.

## Tribal Water Rights and Trust Resources

The Yurok and Hoopa Valley Tribes have fishing rights to take anadromous fish within their reservations. See Memorandum from the Solicitor to the Secretary, Fishing Rights of the Yurok and Hoopa Valley Tribes, M-36979 (October 4, 1993). These rights were secured to the Yurok and Hoopa Valley Tribes through a series of nineteenth century executive orders. Their fishing rights “include the right to harvest quantities of fish on their reservations sufficient to support a moderate standard of living.” *Id.* at 3.

The executive orders that set aside what are now the Yurok and Hoopa Valley Reservations also reserved rights to an in-stream flow of water sufficient to protect the Tribes’ rights to take fish within their reservations. See Colville Confederated Tribes v. Walton, 647 F.2d 42, 48 (9<sup>th</sup> Cir.), cert. Denied, 454 U.S. 1092 (1981). Although the Tribes’ water rights are presently unquantified, there are rights vested in 1891, at the latest, and perhaps as early as 1855. See, e.g., United States v. Adair, 723 F.2d 1394 (9<sup>th</sup> Cir. 1983).

## Water Rights

### CVP

Federal law provides that Reclamation obtain water rights for its projects and administer its projects pursuant to State law relating to the control, appropriation, use, or distribution of water used in irrigation, unless the State law is inconsistent with clear Congressional directives. See 43 United States Code (U.S.C.) §383; California v. United States, 438 U.S. 645, 678 (1978); appeal on remand, 694 F.2d 117 (1982). Reclamation must operate the CVP in a manner that does not impair senior or prior water rights.

Reclamation was issued water rights by SWRCB to appropriate water for the CVP. Many of the rights for the CVP were issued pursuant to SWRCB Decision (D)-990, adopted in February 1961. Several other decisions and SWRCB actions cover the remaining rights for the CVP. These rights contain terms and conditions that must be complied with in the operation of the CVP. Over time, SWRCB has issued further decisions that modify the terms and conditions of CVP water rights. In August 1978, SWRCB adopted the Water Quality Control Plan (WQCP) for the Delta and Suisun Marsh, which established revised water quality objectives for flow and salinity in the Delta and Suisun Marsh. In D-1485, also adopted in August 1978, SWRCB required Reclamation and DWR to operate the CVP and SWP to meet all of the 1978 WQCP objectives, except some of the salinity objectives in the southern Delta. In addition, SWRCB, issued D-1594 in November 1983, and Order WR 84-2 in February 1984, defining Standard Permit Term 91 to protect CVP and SWP stored water from diversion by others. Permit terms and requirements, as they relate to operations, are discussed in the CVP-OCAP. In 1991, SWRCB adopted a WQCP that superseded parts of the 1978 plan, but SWRCB did not revise the water rights of DWR and Reclamation to reflect the objectives in the 1991 plan.

On May 22, 1995, SWRCB adopted a WQCP for the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta) Estuary (1995 Bay-Delta Plan). The 1995 Bay-Delta Plan superseded both the 1978 and 1991 plans. On December 29, 1999, SWRCB adopted (and then revised on

March 15, 2000) D-1641, amending certain terms and conditions of the water rights of the SWP and CVP. D-1641 substituted certain objectives adopted in the 1995 Bay-Delta Plan for water quality and flow objectives required to be met as terms and conditions of the water rights of the DWR and Reclamation. Permit terms and requirements, as they relate to operations, are discussed below. On December 13, 2006, SWRCB adopted an amended WQCP for the Bay-Delta, which became effective June, 2007. The SWRCB resolution adopting the WQCP stated that SWRCB did not believe there were any substantive changes to water quality standards from the 1995 Bay-Delta Plan.

## SWP

Under California law, diversions of appropriated water since 1914 require a permit from the SWRCB. DWR has SWRCB permits and licenses to appropriate water for the SWP. These permits have terms that must be followed by DWR as the permit holder. The SWRCB has issued several decisions and orders that have modified DWR's permits, many of which are the same decisions and orders that affect Reclamation CVP operations. These water right decisions, WR Order 98-09, D1485, and D1641 are described above and discussed below.

## Water Contracts

### CVP

As the divisions of the CVP became operational, Reclamation entered into long-term contracts with water districts, irrigation districts, and others for delivery of CVP water. Approximately 250 contracts provide for varying amounts of water. Most of these contracts were for a term of 40 years. The nature of the contracts vary, as some of the contracts were entered into with entities which claim water rights senior to the CVP, while other contracts are for water service. Some of the contracts, including the Sacramento River Settlement contracts, the San Joaquin Exchange Contracts, and certain refuge contracts, have defined minimum deliveries. The modeling described in Chapter 9 accurately represents CVP operations which incorporates Reclamation's obligations and priorities for delivery under these different types of contracts.

Reclamation renewed numerous contracts in 2005 following issuance of the 2004 NMFS and 2005 FWS BOs regarding the long-term operations of the CVP and SWP. Following reinitiation of this Section 7 consultation, and as appropriate, Reclamation has executed interim water service contracts. Reclamation has an obligation to deliver water to the CVP contractors in accordance with contracts between Reclamation and the contractors. The execution of long-term CVP contracts in the future will be the subject of separate Section 7 consultations and, therefore, is not included as part of the current proposed action.

Pursuant to the Interim Remedial Order issued by Judge Wanger on December 14, 2007, Natural Resources Defense Council, et al. v. Kempthorne, 1:05-cv-1207 OWW GSA (E.D. Cal. 2007), Reclamation is prohibited from executing "any long-term water service contracts with CVP contractors until the [FWS'] New Biological Opinion" for the long-term operations of CVP and SWP is completed. Judge Wanger ordered that FWS complete the new BO by September 15, 2008.

## SWP

In the 1960s, DWR entered into long-term water supply contracts with 32 water districts or agencies to provide water from the SWP. Over the years, a few of these water agencies have been restructured, and today DWR has long-term water supply contracts with 29 agencies and districts. These 29 contractors supply water to urban and agricultural water users in Northern California, the San Francisco Bay Area, the San Joaquin Valley, and Southern California. Of the contracted water supply, approximately three-quarters goes to municipal and industrial (M&I) users, and one-quarter goes to agricultural users. Through these contracts, the SWP provides water to approximately 23 million people in California, about 60% of the state's population. The contracts are in effect for the longest of the following periods: the project repayment period that extends to the year 2035; 75 years from the date of the contract; or the period ending with the latest maturity date of any bond issued to finance project construction costs.

## Monterey Amendment

In 1994, DWR and most SWP contractors entered into an agreement known as the Monterey Amendment (a title based on the location of negotiations for the agreement). The agreement resolved long-term water allocation disputes and established a new water management strategy for the SWP. Key principles of the agreement include: (1) changes in allocation methods, including elimination of the agriculture-first-cut in times of shortage so that shortages are allocated proportionally to all SWP contractors based on Table A amounts; (2) water supply management measures including Castaic Lake and Perris reservoir management and out-of-service-area storage programs. The provisions of the SWP water supply contracts, including the Monterey Amendment, provide a means for facilitating the transfer and storage of water and for allocating water available to the SWP based on demand, water conditions, and regulatory constraints. As described in the Draft EIR for the Monterey Amendment (page 2-11), Article 6 of each contract includes a Table A amount which is used as a basis for determining the share of costs paid for by each contractor and for determining how to allocate the total SWP water supply among contractors in years when there is not enough water to meet all the contractors requests. Article 21 water is water that is excess to all other SWP needs and is available for allocation after all these needs have been met. It is still subject to all applicable regulatory constraints.

As used in the SWP water supply contracts, Article 21 water is water that is available after other priorities are fulfilled, such as filling of SWP reservoirs and Table A requested deliveries. Prior to the Monterey Amendment, there were several classifications of water surplus to these priorities. The Monterey Amendment deleted some of these classifications and consolidated others. Therefore it only changed the name of this class of water and how it is allocated among the SWP contractors; it did not create a new class of water.

Availability of Article 21 water in the Delta usually occurs during the January to April period and is dependent on hydrology and allowable pumping from the Delta. For example, Article 21 water was limited by hydrology from 1988 to 1995 due to the 1987-1992 drought and a dry year in 1994. However, due to a more favorable hydrology from 1996 through 2005 and due to increased water demands overall, Article 21 deliveries averaged 163,000 acre feet. This increase was not caused by the change in name of "surplus water" but to hydrologic conditions and overall water demand. A portion of this increased demand is due to the fact that the Monterey



Amendment did “pre-approve” storage of SWP supplies in locations outside of the SWP contractors’ service areas. It is this linkage between additional storage opportunities that is related to the impact of the Monterey Amendment on Delta pumping amounts and timing.

## **Power Contracts**

### **CVP**

In 1978, Contract 8-07-20-P0004 between the Western Area Power Administration (Western) and PG&E was entered into to provide transmission wheeling services from the Reclamation’s New Melones generators to the CVP transmission system at the Tracy Substation. This contract expires in 2028.

A second contract with PG&E (Contract #14-06-200-2207A) provides for transmission wheeling of CVP generation to Reclamation’s share of the San Luis Facilities that include Dos Amigos, Gianelli, and O’Neill Pumping Plants as well as many small canal-side pumping plants. In addition, this contract provides transmission-wheeling services from Reclamation’s share of the Gianelli and O’Neill Pumping Plants (when they are operating as generators) to the Tracy Substation. This contract expires in 2016.

### **SWP**

DWR has authority to include as part of SWP facilities the construction of such plants and works for generation of electric power and distribution and to enter into contracts for the sale, use, and distribution of the power as DWR may determine necessary (Wat. Code Sec. 11295 and 11625). The SWP power plants generate about half of the energy it needs to move water within the State. Because the SWP consumes more power than it generates, it meets its remaining power needs by purchasing energy or making energy exchanges with other utilities.

## **Other Agreements**

The CVP and SWP divert water from the Sacramento River and the Delta. Reservoir releases and Delta exports must be coordinated to ensure that the projects operate within agreed upon procedure and in a manner consistent with terms and conditions imposed in the Projects’ water right permits and licenses. Below are summaries of agreements that impact operations of the CVP and/or the SWP.

### **Coordinated Operations Agreement (COA)**

The Coordinated Operation Agreement (COA) between the United States of America and DWR to operate the CVP and the SWP was signed in November 1986. Congress, through Public Law 99-546 authorized and directed the Secretary to execute and implement the COA. The COA defines the rights and responsibilities of the CVP and SWP with respect to in-basin water needs and provides a mechanism to account for those rights and responsibilities.

Under the COA, Reclamation and DWR agree to operate the CVP and SWP under balanced conditions in a manner that meets Sacramento Valley and Delta needs while maintaining their

respective annual water supplies as identified in the COA. Balanced conditions are defined as periods when the two Projects agree that releases from upstream reservoirs, plus unregulated flow, approximately equal water supply needed to meet Sacramento Valley in-basin uses and Project exports. Coordination between the two projects is facilitated by implementing an accounting procedure based on the sharing principles outlined in the COA. During balanced conditions in the Delta when water must be withdrawn from storage to meet Sacramento Valley and Delta requirements, 75 percent of the responsibility to withdraw from storage is borne by the CVP and 25 percent by the SWP. The COA also provides that during balanced conditions when unstored water is available for export, 55 percent of the sum of stored water and the unstored export water is allocated to the CVP, and 45 percent is allocated to the SWP. Although the principles were intended to cover a broad range of conditions, changes introduced by past BOs, SWRCB D-1641, and CVPIA were not specifically addressed by the COA. However, these variances have been addressed by Reclamation and DWR through mutual informal agreements.

The COA is the federal nexus for ESA Section 7 consultation on operations of the SWP. Because of commitment expressed in the COA and the Congressional mandate to Reclamation to operate the CVP in conjunction with the SWP, the operations of the two projects are linked and are best analyzed together.

## **CALFED**

In the August 28, 2000, CALFED Bay-Delta Program (CALFED) Record of Decision (ROD), Reclamation, DWR and other State and Federal agencies committed to implementing a long-term plan to restore the Bay-Delta. CALFED is a 30-year Program guided by four major resource management objectives in achieving a Delta that has a healthy ecosystem and can supply Californians with the water they need—water supply reliability, ecosystem restoration, water quality, and levee system integrity. These objectives are further addressed through 11 Program elements as a way of sustaining CALFED’s long-held approach of fulfilling its objectives in a concurrent and balanced manner—water management, storage, conveyance, ecosystem restoration, environmental water account, levee system integrity, watershed management, water supply reliability, water use efficiency, water quality, water transfers, and science.

The ROD describes a strategy for implementing an overall plan to fix the Delta and identifies complementary actions the CALFED Agencies will also pursue in coordination with programs developed in the plan and in support of the stated goals. Nothing in the ROD is intended to, nor does, affect the regulatory responsibilities of individual CALFED Agencies (ROD, page 5).

A legal action was filed in September 2000 challenging the ROD where a judgment resulted holding the PEIS/R satisfied the requirements of CEQA. An appeal followed and the trial court ruling was reversed. The Appellate Court decision was appealed to the California Supreme Court that issued a decision on June 5, 2008 holding the CALFED final PEIS/R complied with CEQA. A second case was filed in Federal court; however, that litigation has been stayed pending resolution of the State court case.

Several forums and teams developed under the CALFED collaborative agreements and resulting ROD continue to progress and contribute to the adaptive water management in the Delta. These include the Water Operations Management Team (WOMT), Integrated Water Operations and

Fisheries Forum (IWOFF), Data Assessment Team (DAT), Salmon Decision Tree and the Delta Smelt Working Group (DSWG). Although many of these entities originated from CALFED, they are included in regulatory requirements of the SWRCB and previous BOs.

### **Coordinated Water Operations**

The Implementation Memorandum of Understanding (MOU), also signed on August 28, 2000, memorialized the operations decision-making process that had evolved through the CALFED Operations Coordination Group (Ops Group) process, including an Operations Decision Making Process (Attachment D of the ROD). This process consists of staff-, stakeholder-, and policy-level forums for addressing operational issues. This MOU was amended in September 2003, but the Ops Group process was not affected.

One of these forums, the Water Operations Management Team (WOMT), consists of managers of Reclamation, FWS, NMFS, DFG, DWR, and the U.S. Environmental Protection Agency (EPA). WOMT provides a frequent opportunity for managers to discuss CVP/SWP operations and related fishery issues. WOMT typically meets weekly to discuss current fishery data, staff and group recommendations on fish protections and CVP/SWP operations. In the case of operations or actions affecting Federally listed fish species, WOMT makes recommendations to the appropriate fishery regulatory agency for a final determination on fishery protection actions. The WOMT decisions are posted on-line and any change from formal recommendations is described in the notes.

The Ops Group was established by the 1994 Framework Agreement. The Ops Group (consisting of DWR, DFG, SWRCB, Reclamation, FWS, NMFS, and EPA) coordinates the operations of the projects with fisheries protection and implementation of the CVPIA. Shortly after its formation, the Ops Group provided a forum for stakeholders to provide input into the operations decision process. The Ops Group also established three teams to facilitate the decision-making process, data exchange, and information dissemination. The CVPIA Section 3406(b)(2) Implementation Team (B2IT) assists Interior with implementation of CVPIA Section 3406(b)(2). The DAT is an agency-driven group that includes stakeholder participation to review biological data and provide input to Reclamation and DWR on potential actions that could be implemented to protect fish. The IWOFF is a stakeholder-driven forum to aid information dissemination and facilitate discussion regarding operation of the CVP and SWP, and has been meeting since 1995.

The Ops Group developed and implements the Chinook Salmon Protection Decision Process. The process includes monitoring of environmental conditions and salmon movement, data assessment procedures, specific indicators that spring-run Chinook are entering the Delta from upstream or being entrained at the SWP or CVP export facilities, and operational responses to minimize the effects of SWP and CVP facilities on emigrating spring-run salmon. The Ops Group's decision-making process is also used for protection of other Chinook salmon runs.

The Ops Group also created the DSWG, a team of fish biologists from participating agencies who review current data on delta smelt and longfin smelt, and make recommendations to FWS and DFG for the protection of the delta smelt and longfin smelt respectively.

## Environmental Water Account

The Environmental Water Account (EWA) is a cooperative management program described in the CALFED ROD. The purpose of EWA is to provide protection to the fish of the Bay-Delta estuary through environmentally beneficial changes in SWP/CVP operations at no uncompensated water cost to the Projects' water users.

The use of EWA assets used historically and projected in a limited use has been included in some operations studies to reflect current operational flexibility to reduce incidental take of listed species and to provide for restoration and recovery of such species. Inclusion of the EWA in this description of present and future actions for CVP and SWP operations does not represent a decision on the future implementation of EWA. Federal funding of EWA is authorized through 2010 and DWR anticipates allocation of Yuba Water (See Yuba Accord section below) for EWA purposes and continuation of the use of operational flexibility, calling this a "limited EWA" in this BA. The EWA agencies have completed an EIR/EIS for the potential extension of an EWA to 2011, but have yet to decide on its size and scope.

## Trinity River

In December 2000, Interior signed the Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Environmental Impact Statement (EIS) and EIR. The ROD was the culmination of years of studies on the Trinity River. The ROD adopted the preferred alternative, a suite of actions that included a variable annual flow regime, mechanical channel rehabilitation, sediment management, watershed restoration, and adaptive management.

The EIS/EIR was challenged in Federal District Court. (Westlands Water District, et al. v. United States Dept. of the Interior, 275 F.Supp.2d 1157 (E.D. Cal, 2002)). Initially, the District Court limited increased flows to the Trinity River called for by the ROD until preparation of a supplemental environmental document was completed. On July 13, 2004, the Ninth Circuit reversed that part of the decision, ruling that Reclamation did not need to prepare a supplemental environmental document. (Westlands Water District, et al. v. United States Dept. of the Interior, 376 F.3d 853 (9<sup>th</sup> Cir. 2004)). Consequently, Reclamation has been and continues to implement the flows described in the Trinity ROD and has included the Trinity ROD flows as part of this proposed action on which Reclamation is consulting. In the same decision, the Ninth Circuit affirmed the District Court's ruling invalidating certain terms and conditions imposed in the biological opinions applicable to the ROD (Id.)

## San Joaquin River Agreement

The San Joaquin River Agreement (SJRA) includes a 12-year experimental program providing for increased flows and decreased Delta exports in the lower San Joaquin River during a 31-day pulse flow period during April-May. It also provides for the collection of experimental data during that time to further the understanding of the effects of flows, exports, and the Head of Old River Barrier on salmon survival. This experimental program is commonly referred to as the Vernalis Adaptive Management Program (VAMP). The SJRA also provides water for flows at other times on the Stanislaus, Merced, and lower San Joaquin Rivers. The SJRA establishes a management and technical committee to oversee, plan, and coordinate implementation of

activities required under the SJRA. Reclamation, DWR, FWS, DFG, and NMFS are signatories to the SJRA; other signatories include San Joaquin River water rights (SJRWR) holders, CVP and SWP water contractors, and other stakeholders. The signatory SJRWR holders formed the San Joaquin River Group Authority to coordinate implementation of their responsibilities under the SJRA. Under the SJRA, Reclamation and DWR purchase water for VAMP flows from the SJRWR holders of up to 110,000 af may be provided for VAMP during April-May with an additional 27,500 af that may be provided at other times. In certain “double-step” years, up to an additional 47,000 af may need to be acquired to fully meet VAMP flow objectives. This water would be provided under supplemental agreements separate from the SJRA. The SJRA will expire on December 31, 2009 unless extended pursuant to the conditions of the agreement.

## **The Yuba Accord**

On December 4, 2007, DWR and the Yuba County Water Agency (YCWA) entered into a water purchase agreement to provide water supplies through 2025. The agreement provides for DWR to pay for eight years of transfers for the use in a limited EWA process and for certain dry-year supplies for SWP and CVP contractors. YCWA will provide transfer water by releasing stored water in New Bullards Bar Reservoir for EWA purposes and will implement groundwater substitution in the drier years to produce the water that will go to the water contractors. In March 2008, the SWRCB approved YCWA’s petitions to allow the water to be transferred at the SWP and CVP Delta facilities and to permit YCWA operations under their water right permits pursuant to specified flows for fish on the lower Yuba River. The transferred water will include water released to meet instream flow needs on the lower Yuba River pursuant to the Yuba Accord Fisheries Agreement which provides for instream flows in six different flow schedules based on different water year types. From 2008 through 2015 the release of water is estimated at 60,000 acre-feet and from 2016 to 2025 a minimum of 20,000 acre feet will be released under the Yuba Accord agreements.

## **Water Transfers**

Water transfers relevant to this BA occur when a water user north of the Delta undertakes actions to make water available for transfer, generally for use south of the Delta. Water transfers requiring export from the Sacramento River watershed at the SWP and CVP Delta pumping facilities include transfers for dry-year transfer agreements, limited EWA, the Yuba Accord Water Purchase Agreements, the proposed Sacramento Valley Water Management Program, if implemented, and other agreements that may be developed between water users. The conveyance of water through the Delta for these transfers are done at times when pumping capacity at the Federal and State pumping plants is available to move the water. Reclamation and DWR will work together to facilitate transfers and will convey water for these transfers in accordance with all existing regulations and permit requirements.

## **DWR/DFG Delta Fish Agreement (Four Pumps Agreement)**

The 1986 Delta Fish Agreement offsets direct losses of striped bass, steelhead, and Chinook salmon caused by the diversion of water at the Harvey O. Banks Pumping Plant. Since 1986, approximately \$60 million in combined funding from the Annual Mitigation and \$15 Lump Sum

components have been approved for over 40 fish mitigation projects through December 2007. The Agreement has been amended to extend expenditure of the \$15 million Lump Sum funding component of the original Agreement three times in 1997, 2002 and 2004. A 2008 Amendment will extend the expenditure through December 31, 2012. Article VII of the Agreement provides a process for amendments based on new information. DWR, DFG and Reclamation executed an Interim South Delta Facilities Agreement pursuant to Article VII in 1995. The 1995 Agreement incorporated the Framework Agreement of 1990 and the CALFED Agreements of 1994. In July 2005 DWR and DFG expanded the scope of the Agreement to establish a separate fund of \$2.5 million to address near-term pelagic fish issues related to the Pelagic Organism Decline (POD). Through fiscal year 2007-08, \$1.5 million of annual POD funding was used to support the UC Davis Delta smelt facility's operations.

In May 2007 DWR and DFG entered into a Memorandum of Understanding to begin negotiations to amend the 1986 Delta Fish Agreement to address direct and indirect take of Delta smelt and indirect take of salmon and methods to develop mitigation credits for this take pursuant to CESA. These negotiations now include mitigation considerations for the Longfin smelt. The 2008 Amendment is intended to address impacts of the SWP Delta Pumping Facilities on native species (winter-run Chinook salmon, spring-run Chinook salmon, delta smelt and Longfin smelt). Details of the Agreement and proposed mitigation projects are provided in summary in Chapter 18 "conservation actions" and in detailed in Appendix X of the BA. CDWR and CDFG are finalizing the 2008 Amendment to the Delta Fish Agreement between CDWR and CDFG, and anticipate that the Amendment will be executed prior to the issuance of the OCAP BOs.

## The Proposed Action

The CVP is composed of some 18 reservoirs with a combined storage capacity of more than 11 million af, 11 powerplants, and more than 500 miles of major canals and aqueducts (see Figure 2-1). These various facilities are generally operated as an integrated project, although they are authorized and categorized in divisions. Authorized project purposes include flood control; navigation; provision of water for irrigation and domestic uses; fish and wildlife protection, restoration, and enhancement; and power generation. However, not all facilities are operated to meet each of these purposes. For example, flood control is not an authorized purpose of the CVP's Trinity River Division. As initially authorized, the primary CVP purpose was to provide water for irrigation throughout California's Central Valley. The CVPIA has amended CVP authorizations to include fish and wildlife mitigation, protection, and restoration as purposes equal in priority to irrigation and domestic uses, and fish and wildlife enhancement as a purpose equal in priority to power generation.

The SWP stores and distributes water for agricultural and M&I uses in the northern Central Valley, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. Other project functions include flood control, water quality maintenance, power generation, recreation, and fish and wildlife enhancement.

The proposed action is to continue to operate the CVP and SWP. In addition to current-day operations, several future actions are to be included in this consultation. These actions are as follows: permanent barriers operated in the South Delta, an intertie between the California

Aqueduct and the Delta-Mendota Canal, Freeport Regional Water Project (FRWP), changes in the operation of the Red Bluff Diversion Dam (RBDD), the Sacramento River Water Reliability Project, the Alternative Intake Project for CCWD, the operational elements of the American River Flow Management Standard, and various operational changes that are identified in this project description.

Although the actions listed in the previous paragraph are not being implemented at present, they are part of the future proposed action on which Reclamation is consulting. Therefore, proposed activities only address the operations of the action; that is, the activities do not include construction of any facilities to implement the actions. All site-specific/localized activities of the actions such as construction/screening and any other site-specific effects will be addressed in a separate Section 7 consultation. Table 1-1 summarizes the proposed operational actions of the CVP covered by this consultation and Table 1-2 describes SWP proposed operational actions.

**Table 1-1 Proposed CVP operational actions for consultation.**

Action	Requirement for Action
<b>I. Trinity River Division</b>	SWRCB Permit Order 124
Trinity Lake operations	Safety of Dams Criteria
Lewiston Dam releases and Trinity River flows	SWRCB permits for diversions from Trinity 2000 Trinity ROD Westlands Water District (Westlands) et al., vs. Interior (Trinity litigation)
Whiskeytown Dam releases to Clear Creek	SWRCB permits for diversions from Trinity, Clear Creek (permits specify minimum downstream releases) 1960 Memorandum of Agreement (MOA) with DFG (establishes minimum flows released to Clear Creek) 1963 release schedule Consistent with AFRP objectives (Appendix A to the October 5, 1999, Decision on (b)(2) implementation) and (b)(2) availability Stability Criteria Thresholds of Trinity Storage
Townsend requirement	2000 Agreement with FWS (b)(2)
Spring Creek Debris Dam operations	1980 MOA with DFG, SWRCB
Diversions to Sacramento River	SWRCB WR 90-5 (temperature control objectives), SWRCB WR 91-1
Temperature Objectives	SWRCB WR 90-5, SWRCB WR 91-1
<b>II. Shasta Division</b>	SWRCB WR 90-5
Shasta Dam operations	Regulating Criteria-Flood Control Act 1944 CVPIA-Temperature Control Device (TCD) Operations

Action	Requirement for Action
Keswick Dam releases to Sacramento River Minimum flows of 3,250 cubic feet per second (cfs) October through March	1960 MOA with DFG: established flow objectives, minimum releases in dry, critical years 1981 Agreement with DFG: established normal-year minimum releases September-February SWRCB WR 90-5: established year-round minimum flows AFRP (Appendix A to the October 5, 1999 Decision on (b)(2) implementation) and (b)(2) availability Navigation flow requirement to Wilkins Slough CVPIA: ramping criteria consistent with 3406(b)(2) and 3406(b)(9)
<b>III. Sacramento River Division</b>	SWRCB WR 90-5
Red Bluff Diversion Dam operations <ul style="list-style-type: none"> <li>• Gates raised from September 15 to May 14 with flexibility to temporarily lower gates in excess of pumping capacity</li> <li>• Future installation of additional pump</li> </ul>	1986 Agreement with NOAA Fisheries et al., gates raised in winter months for fish passage
Tehama-Colusa Canal operations	Temporary diversion from Black Butte Reservoir (SWRCB permit)
Sacramento River temperature objectives	SWRCB WR 90-5: temperature objectives added to permits, modified 1960 MOU with DFG regarding minimum flows SWRCB WR 91-1 (temperature objectives)
Sacramento-Trinity Water Quality Monitoring Network	SWRCB WR 90-5, 91-1
Sacramento River Temperature Task Group	SWRCB WR 90-5, 91-1
ACID Diversion Dam ops	Reclamation contract (water service and diversion)
IV. American River Division	
Folsom Dam and Power Plant operations	U.S. Army Corps of Engineers (Corps) Flood Control Manual, Flood Control Diagram (regulating criteria) 1996 Agreement with Sacramento Area Flood Control Agency (SAFCA) (modified flood control criteria) AFRP (Appendix A to the October 5, 1999 Decision on (b)(2) implementation) and (b)(2) availability Draft DFG criteria pursuant to CVPIA 3406(b)(9) (addressing flow fluctuations) CVP local municipal diversions
Nimbus Dam operations and Lower American River flows <ul style="list-style-type: none"> <li>• Includes year-round temperature control</li> </ul>	AFRP and (b)(2) availability: minimum flows October-September, stability objectives Draft DFG criteria pursuant to CVPIA 3406(b)(9) (addressing flow fluctuations)
Folsom South Canal operations	Contractual commitments



Action	Requirement for Action
Freeport Regional Water Project	Contract with East Bay Municipal Utility District (EBMUD) Sacramento County contract and water rights
<b>V. Eastside Division</b>	
New Melones Dam and Reservoir operations and Lower Stanislaus River flows below Goodwin Dam	Corps Flood Control Manual, Flood Control Diagram (New Melones and Tulloch) Oakdale Irrigation District (OID), South San Joaquin Irrigation District (SSJID) contract (Tri-dams Agreement for afterbay storage) New Melones Interim Plan of Operation (NMIPO) (includes AFRP flows with (b)(2) water) 1988 OID, SSJID Agreement and Stipulation (release of annual inflows for diversion) SWRCB D-1422 (release of 98,000 af for fish and wildlife purposes, dissolved oxygen [DO] standards at Ripon) 1987 DFG Agreement (increased flows over SWRCB D-1422) 1995 WQCP (minimum DO concentration) 1999 SJRA flows and water supplies CVP Water Service contracts
Support of San Joaquin River requirements and objectives at Vernalis	SWRCB D-1641 (Vernalis flow requirements February-June, Vernalis water quality objectives, SJRA implementation) CALFED ROD Regulatory Baseline (2:1 flow/export ratio met with (b)(2), EWA)
<b>VI. Delta Division</b>	SWRCB D-1641
Tracy Pumping Plant • Pumping curtailments supported with (b)(2) or EWA assets	Salmon Tree Decision CVPIA CALFED ROD and EWA Operating Principles
Delta Cross Channel (DCC) operation	SWRCB D-1641(DCC closure: February-May, 14 days between May 21-June 15, 45 days between November-January) Salmon Decision Tree
Contra Costa Canal (CCC) operations	CVPIA (Fish Screen Program) 1993 Winter–run Chinook Salmon BO for Los Vaqueros 1993 Delta Smelt BO for Los Vaqueros (requires Old River diversions January-August to extent possible, diversion reduced during dry conditions, reservoir refilling criteria, reservoir releases in spring)
Export/Inflow (EI) ratio	SWRCB D-1641
X2	SWRCB D-1641
31-day export limit (Mid-April-Mid-May)	SJRA-VAMP SWRCB D-1641
Delta outflow	SWRCB D-1641 (minimum outflow July-January: 3,000-8,000 cfs, habitat protection outflow February-June: 7,100-29,200 cfs, February Salinity Starting Condition Determination)

Action	Requirement for Action
Water quality	SWRCB D-1641 (M&I standards, agricultural standards for Western/Interior Delta and southern Delta, fish and wildlife standards for San Joaquin River and Suisun Marsh)
Joint Point of Diversion (JPOD)	SWRCB D-1641
Intertie	CALFED ROD
<b>VII. Friant Division</b>	
Millerton Lake and Friant Dam operations, Friant-Kern Canal operations, and Madera Canal operations	Corps Flood Control Diagram, Mammoth Pool Operating Contract (with Southern California Edison [SCE], Water Deliveries [Class I, Class II, and Section 215 supply], SJRWR [flow at Gravelly Ford], Miller and Lux Water Rights exchange)
<b>VIII. West San Joaquin Division</b>	
San Luis Reservoir, Gianelli Pumping and Generating Plant, San Luis Canal, O'Neill Forebay operations, and Dos Amigos Pumping Plant	1961 DWR/Reclamation Agreement (as amended) CVP Water Service Contracts and Deliveries
<b>IX. San Felipe Division</b>	
Pacheco Pumping Plant, Santa Clara Pipeline, Hollister Conduit, and Coyote Pumping Plant	CVP Water Service Contracts and Deliveries for Santa Clara Valley Water District and San Benito County
<b>X. Other</b>	
Actions using (b)(1), (b)(2)	CVPIA AFRP 2003 Final Decision on (b)(2) Implementation
EWA	CALFED ROD and Programmatic BOs EWA Operating Principles CVPIA

Table 1-2 Proposed SWP Operational Actions for Consultation.

Action	Requirement for Action
<b>I. Delta Field Division</b>	
Clifton Court Forebay gate operations	1986 Settlement Agreement with SDWA
Clifton Court inflow criteria	USACE Public Notice #5820A (October 13, 1981)
Clifton Court storage	DWR's Division of Safety of Dams Criteria
500 cfs	USACE permit # 199900715
Skinner Fish Facility	DWR/DFG Agreement
Banks Pumping Plant	SWRCB D-1641
North Bay Aqueduct	SWRCB D-1641
Suisun Marsh Salinity Control Gates	SWRCB D-1641
Temporary Barriers	1986 Settlement Agreement with SDWA; USACE permit, Numbers SPK-200100121, SPK-20000696
Export/Inflow (EI) ratio	SWRCB D-1641
X2	SWRCB D-1641
31-day export limit (Mid-April to Mid-May)	SJRA-VAMP SWRCB D-1641
Delta outflow	SWRCB D-1641 (minimum outflow July-January: 3,000-8,000 cfs, habitat protection outflow February-June: 7,100-29,200 cfs, February Salinity Starting Condition Determination)
Water quality	SWRCB D-1641 (M&I standards, agricultural standards for Western/Interior Delta and southern Delta, fish and wildlife standards for San Joaquin River and Suisun Marsh)
Joint Point of Diversion (JPOD)	SWRCB D-1641
South Delta Improvements Program, Stage 1*	CALFED ROD
<b>II. San Joaquin Field Division</b>	
San Luis Reservoir, Gianelli Pumping and Generating Plant, San Luis Canal, O'Neill Forebay operations, and Dos Amigos Pumping Plant	1961 DWR/Reclamation Agreement (as amended) CVP Water Service Contracts and Deliveries
<b>III. Oroville Field Division</b>	
Oroville Facilities**	DWR's Division of Safety of Dams Criteria, FERC License #P-2100 Requirements
<b>IV. Other</b>	
EWA	CALFED ROD and Programmatic BOs EWA Operating Principles and annual interim protocols CVPIA

\*Operations, not construction, of the SDIP permanent gates are included in this consultation.

\*\*The Oroville Facilities are included in this summary for reference only and are not submitted for consultation because DWR is obtaining separate biological opinions for these operations pursuant to the relicensing process with FERC.

## Action Area

The Action Area is defined as those areas directly or indirectly affected by the Proposed Action. Therefore, the Action Area for this BA is as follows including the waters of the lake or reservoir (if included) for each watercourse:

- Sacramento River from Shasta Lake downstream to and including the Sacramento-San Joaquin Delta;
- Feather River from Lake Oroville to its confluence with the Sacramento River;
- Trinity River from Trinity Lake to its confluence with the Klamath River;
- Klamath River from the confluence with the Trinity River down to and including the Klamath River estuary and plume;
- Clear Creek from Whiskeytown Reservoir to its confluence with the Sacramento River;
- American River from Folsom Lake downstream to its confluence with the Sacramento River
- Stanislaus River from New Melones Reservoir to its confluence with the San Joaquin River;
- San Joaquin River from the confluence with the Stanislaus River downstream to and including the Sacramento-San Joaquin Delta; and
- San Francisco Bay