

3 Description of the Proposed Action

3.1 Introduction

The CVP/SWP comprises two major inter-basin water storage and delivery systems that divert and re-divert water from the southern portion of the Delta. The CVP/SWP includes major reservoirs upstream of the Delta, and transports 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, respectively.

The California State Water Resources Control Board (SWRCB) permits the CVP and SWP to store water during wet periods, divert unstored water, and re-divert water that has been stored in upstream reservoirs. The CVP/SWP operates 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/SWP to meet specific water quality, quantity, and operational criteria within the Delta. Reclamation and the California Department of Water Resources (DWR) closely coordinate the CVP/SWP operations, respectively, to meet these conditions.

The proposed action (PA) includes new water conveyance facility construction, new conveyance facility operation in coordination with operation of existing CVP/SWP Delta facilities, maintenance of the existing facilities and newly constructed facilities, implementation and maintenance of conservation measures, and required monitoring and adaptive management activities. Each of these components of the PA is described in detail below. The chapter ends with a discussion of activities that may be interrelated or interdependent with the PA.

Table 3.1-1 identifies the proposed new facilities, identifies the existing requirements that apply to CVP/SWP facilities in the Delta region, and notes which requirements are (or are not) incorporated in the PA. As such, Table 3.1-1 clarifies which facilities and activities addressed under the 2008 U.S. Fish and Wildlife Service (USFWS) and 2009 National Marine Fisheries Service (NMFS) Biological Opinions (BiOps) will be replaced and superseded by the PA once the new facilities are operational, provided, however, that requirements listed in Table 3.1-1 may be adjusted to the extent allowed by law based on new data and/or scientific analyses, including data from the coordinated monitoring and research to be conducted under the Coordinated Science and Adaptive Management Program and real time operations, such that operations will still adequately protect listed species from jeopardy while maximizing water supplies.

Table 3.1-1. CVP/SWP Facilities and Actions Included and Not Included in the Proposed Action

Topic	Action	Description	Source	Comments
Facilities and Activities Included in the PA				
New Facilities	Conveyance facilities construction	Construction, operations, and maintenance of the proposed north Delta intakes and associated conveyance facilities.	This document	

north Delta export facilities become operational and Reclamation determines, after conferring with FWS and NMFS, that those criteria are required to ensure the coordinated operations of the CVP and SWP are not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat for those species. Further, those criteria were developed based on the best available scientific information at the time this document was prepared. This determination will be based on the best scientific and commercial data available at the time the north Delta export facilities become operational, including data collected and analysis conducted through the collaborative science and adaptive management program described in Section 3.4.8.3, *Monitoring Prior to Operations*. If those data and analyses indicate that one or more of the water operations flow criteria in Table 3.3-1 should be eliminated or modified, Reclamation will, if required, reinstate consultation pursuant to Section 7 of the ESA and/or DWR will, if required, commence a permit amendment process under California law to modify the operating criteria, as appropriate.

As previously stated, DWR has entered into a settlement agreement with CCWD, the effects of which are not evaluated in this BA. When operational and maintenance actions associated with implementation of the agreement are sufficiently defined to provide for analysis of potential adverse effects to listed species and critical habitat, a supplement to this BA will be provided to the Services.

3.3.1 Implementation

Implementation of the PA will include operations of both new and existing water conveyance facilities once the new north Delta diversion facilities are completed and become operational. Most existing facilities will continue to be operated consistent with existing regulatory authorizations, including the USFWS (2008) and NMFS (2009)¹¹ BiOps. However, operational limits included in this PA for south Delta export facilities will replace the south Delta operational limits currently implemented in compliance with the USFWS (2008) and NMFS (2009) BiOps when the proposed north Delta diversion becomes operational. See Table 3.1-1 for a complete summary of facilities and actions included in the proposed action. The PA also includes criteria for spring outflow and new minimum flow criteria at Rio Vista during the months of January through August that will apply when the proposed north Delta diversion becomes operational. The north Delta diversions and the head of Old River gate are ‘new’ facilities for the SWP and will be operated consistent with the PA criteria presented in this BA for these facilities.

The USFWS (2008) and NMFS (2009) BiOps for CVP/SWP operations will continue to apply for CVP/SWP activities not covered in this BA. For Shasta operations, the NMFS (2009) RPA adjustment (Action Suite 1.2) for seasonal temperature management that will likely be completed in late 2016 will apply. The proposed CWF operating criteria are not intended to change Shasta operations; thus, the NMFS (2009) RPA adjustment (Action suite 1.2) for seasonal temperature management will control if there are any unforeseen conflicts in Shasta operations between the proposed CWF operating criteria and the adjusted RPA. To summarize the proposed action includes modified or new operational criteria for the following facilities:

¹¹ Note: Any reference to the NMFS (2009) BO in this Chapter is to include the amendments to that BO, as issued by NMFS on April 7, 2011.

- north Delta Intakes
- south Delta export facilities
- Head of Old River (HOR) gate operations

Additionally, the operation of the following facilities is included in the PA once the north Delta diversions are operational, but no changes to their operations are proposed.

- Delta Cross Channel (DCC) gate operations
- Suisun Marsh facilities
- North Bay Aqueduct (NBA) Intake

The proposed operational criteria are described in the following sections and in Table 3.3-1. The longfin smelt is a species listed under the California Endangered Species Act (CESA). Therefore, it will be necessary for DWR to meet CESA permit issuance criteria for this species. To avoid a reduction in overall abundance for longfin smelt, the PA includes spring outflow criteria, which are intended to be provided by appropriate beneficiaries through the acquisition of water from willing sellers. If sufficient water cannot be acquired for this purpose, the spring outflow criteria will be accomplished through operations of the CVP/SWP to the extent an obligation is imposed on either the SWP or CVP under federal or applicable state law. Best available science, including that developed through a collaborative science program, will be used to analyze and make recommendations on the role of such flow in supporting longfin smelt abundance to CDFW, who will determine whether it is necessary to meet CESA permitting criteria.

Operations under the PA may result in substantial change in Delta flows compared to the expected flows under the existing Delta configuration, and in some instances real-time operations will be applied for water supply, water quality, flood control, and/or fish protection purposes. Two key drivers of CVP/SWP operations, Fall X2 and spring outflow, as well as many of the individual operational components described below, are designed to adapt to developing scientific information as a consequence of the level of uncertainty associated with those criteria. A Collaborative Science and Adaptive Management Program will be used to evaluate and consider changes in the operational criteria based on information gained before and after the new facilities become operational. Described in more detail in Section 3.4.6 *Collaborative Science and Adaptive Management Program* this program will be used to consider and address scientific uncertainty regarding the Delta ecosystem and to inform implementation of the operational criteria in the near term for existing BiOps for the coordinated operations of the CVP/SWP (U.S. Fish and Wildlife Service 2008, National Marine Fisheries Service 2009) and the 2081b permit for the SWP facilities and operations (California Department of Fish and Game 2009), as well as in the future for the new BiOp and 2081(b) for this PA.

3.3.2 Operational Criteria

Table 3.3-1 provides an overview of the proposed new criteria and other key criteria assumed for Delta operations when the proposed north Delta diversion intakes are operational. The proposed