

Introduction

This Mitigated Negative Declaration (MND)/Environmental Assessment (EA) evaluates the impacts of implementing the 2-Gates Demonstration Project (2-Gates Project, or Project) in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Project would be located in the Sacramento-San Joaquin River Delta (Delta), which is a vital source of drinking water for 25 million Californians and supports more than 1.3 million acres of irrigated agricultural lands. The 2-Gates Project would install and operate removable gates in two key channels in the central Delta (Old River and Connection Slough) for a five-year period in order to control flows and thereby help reduce entrainment of delta smelt (*Hypomesus transpacificus*) at the State Water Project (SWP) and Central Valley Project (CVP) export pumps.

1.1 CEQA REQUIREMENTS, LEAD AGENCY, AND STATE ACTIONS

This document is being prepared in accordance with relevant provisions of CEQA (Public Resources Code [PRC] 21000 et seq.), and the CEQA Guidelines as amended (California Code of Regulations [CCR], Title 14, Division 6, 15000 et seq.). The foundation of CEQA documents is the Initial Study environmental checklist included in Section 4 of this document. Section 15063(c) of the CEQA Guidelines indicates that the purposes of an Initial Study include:

- Provide the lead agency, the San Luis and Delta-Mendota Water Authority (SLDMWA), with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration.
- Enable the lead agency to modify a project and mitigate adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
- Identify the effects determined not to be significant.
- Explain the reasons why potentially significant effects would not be significant.
- Facilitate environmental assessment early in the design of a project.
- Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
- Eliminate unnecessary EIRs.

CEQA Guidelines Section 15070 indicates that an MND is appropriate when:

- The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- The Initial Study identifies potentially significant effects but;
- Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed MND and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

- There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

An MND is the appropriate CEQA document for the 2-Gates Project because the above guidelines have been met. Adequate mitigation measures have been incorporated into the Project to either avoid significant impacts or reduce them to less than significant.

Section 15050(a) of the CEQA Guidelines indicates that the lead agency is the public agency with the principal responsibility for carrying out or approving a project. The lead agency is to decide whether an EIR or Negative Declaration will be required and will initiate the preparation of the document as identified in CEQA Guidelines Sections 15367, 15051(a). SLDMWA is the lead agency for the preparation of this MND under CEQA because it would be be responsible for constructing the 2-Gates Project.

1.2 NEPA REQUIREMENTS, LEAD AGENCY, AND FEDERAL ACTIONS

The EA has been prepared in accordance with NEPA (42 United States Code [USC] 4321 et seq.) and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508. An EA is a concise public document that has three defined functions: (1) it briefly provides sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS); (2) it aids an agency's compliance with NEPA when no EIS is necessary (i.e., it helps to identify better alternatives and mitigation measures); and (3) it facilitates preparation of an EIS when one is necessary (40 CFR 1508.9(a)). Since the EA is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed Project and alternatives, and a list of agencies and persons consulted (40 CFR 1508.9(b)). An EA also may include mitigation measures that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant."

Reclamation is the lead agency for compliance with NEPA because it would be responsible for 2-Gates Project operations.

1.3 BACKGROUND

A substantial amount of the water exported from the Delta is conveyed by the SWP and CVP. The SWP is operated to provide flood control and water supply for agricultural, municipal, industrial, recreational, and environmental purposes. The California Department of Water Resources (DWR) has State Water Resources Control Board (SWRCB) permits and licenses to appropriate and divert (or redivert) water for the SWP. Water is conserved in the Oroville Reservoir and released to three Upper Feather River area contractors, two contractors served by the North Bay Aqueduct, and the Harvey O. Banks Pumping Plant (Banks) in the Delta, after which it is delivered to the remaining 24 contractors in the SWP service areas south of the Delta. In addition, Banks pumps water from other sources entering the Delta (i.e., the Sacramento River, San Joaquin River, and Mokelumne River). The current operations of the SWP reservoirs, pumping plants, and aqueducts vary throughout the year based on changing hydrologic and

environmental factors, as well as regulations and agreements governing the operation of the SWP.

The CVP is operated by Reclamation and includes several reservoirs, hydroelectric plants, and pumping plants, including the Jones Pumping Plant in the south Delta near Tracy. The CVP's major storage facilities are Shasta, Trinity, Folsom, and New Melones. The upstream reservoirs release water to provide water for the Delta, of which a portion is exported through Jones Pumping Plant for storage in San Luis Reservoir (jointly operated by the CVP and SWP) or delivered down the Delta Mendota Canal to south of Delta contractors. DWR and Reclamation collectively have built water conservation and water delivery facilities in the Central Valley in order to deliver water supplies to water rights holders as well as CVP and SWP contractors. Some CVP facilities were developed in coordination with the SWP. Both the CVP and the SWP use the San Luis Reservoir, O'Neill Forebay, and more than 100 miles of the California Aqueduct and its related pumping and generating facilities.

Both DWR and Reclamation's water rights are conditioned by the SWRCB to protect the beneficial uses of water within each respective project and jointly for the protection of beneficial uses in the Sacramento Valley and the Sacramento-San Joaquin Delta Estuary. The Coordinated Operations Agreement was signed in 1986 and defines both SWP and CVP facilities and their water supplies, sets forth procedures for coordination of operations, identifies formulas for sharing joint responsibilities for meeting Delta standards, as the standards existed in the SWRCB Water Right Decision 1485 (D-1485), and other legal uses of water, identifies how unstored flow will be shared, sets up a framework for exchange of water and services between the two projects, and provides for periodic review of the Agreement. Additional water management restrictions are included in the SWRCB Water Right Decision 1641 (D-1641).

The combination of tidal flows, channel geometry and connections of Franks Tract, Old River and Middle River, export pumping at the CVP and SWP pumps near Tracy, along with salinity, temperature, and turbidity gradients conducive to delta smelt movement can all influence the movement of delta smelt into the south Delta toward the export pumps. This unnatural movement makes these sensitive fish more vulnerable to entrainment. The 2-Gates Project seeks to demonstrate that operable barriers can reduce delta smelt entrainment at the state and federal pumps and, once proven, allow for an increased ability to deliver water within existing permits and other conditions. Delta smelt is a federally and state-listed threatened species, and both the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (DFG) are considering petitions to change its status to endangered.

The Biological Opinion (BO) for the Operations Criteria and Plan (OCAP) for the Operation of the CVP and SWP (USFWS 2008b) further constrains the operation of these facilities for the protection of delta smelt. This BO thoroughly describes the components of the CVP and SWP and evaluates the operation of these components for species listed under the federal Endangered Species Act (ESA). This BO also identifies modified operations of the CVP and SWP as a "Reasonable and Prudent Alternative" (RPA) to current operations. The set of RPAs forms the basis for an incidental take statement, under Section 7 of the ESA, and generally form the basis for operations in compliance with the ESA. The RPAs are summarized in Table 1-1.

The description of existing conditions and the evaluation of impacts of the 2-Gates Project consider the various components of D-1641 and the Coordinated Operations Agreement (e.g., water quality standards, discharge requirements, and allowed diversions), as well as the permit conditions issued by others, particularly those contained in the OCAP BO. This layering of conditions and constraints provided a range of conditions that were used to bound the analysis. During certain time periods and environmental conditions, the components of D-1641 provide the bounding condition, while during under other time periods and environmental conditions, the OCAP BO RPAs describe the limit of operational conditions.

Table 1-1 OCAP Biological Opinion RPAs						
RPA Component	Actions/ Objectives	Action	Timing	Triggers	Suspension of Action	Off-Ramps
Component 1 Protection of the Adult Delta Smelt Life Stage	Action 1 Designed to protect upmigrating delta smelt Objective: Protect pre-spawning adult delta smelt from entrainment during 1 st flush Provide advantageous hydrodynamic conditions early in the migration period	Limit <u>exports</u> so OMR flows <u>are</u> \geq -2,000 <u>cubic feet per second</u> (cfs) (14-day average) with 5-day running average \geq -2,500 cfs (\pm 25%)	Part A: <u>December</u> 1 to <u>December</u> 20 (Low-Entrainment Risk Period)	Turbidity: <u>Three</u> -day average \geq 12 <u>Nephelometric Turbidity Unit</u> (NTU) at Prisoner's Point, Holland Cut, and Victoria Canal (all three) USFWS discretion based on turbidity, flows, <u>Fall Midwater Trawl</u> (FMWT), and salvage		Temperature: <u>Three-station</u> daily mean water temperatures at Mossdale, Antioch, and Rio Vista \geq 12° <u>Centigrade</u> (C) OR Biological: Onset of spawning (presence of spent females in <u>Spring Kodiak Trawl</u> (SKT) or at Banks or Jones)
			Part B: After <u>December</u> 20 (High Entrainment Risk Period)	Turbidity: <u>Three</u> -day average \geq 12 NTU at Prisoner's Point, Holland Cut, and Victoria Canal (all three) OR Salvage: <u>Daily</u> salvage index value \geq 0.5 (daily delta smelt salvage > 1/2 prior year FMWT index value)		Same as above
	Action 2 Designed to protect adult delta smelt that have migrated upstream and are	Net daily <u>Old and Middle River</u> (OMR) flows \geq -1,250 to -5,000 cfs (determined by <u>Smelt Working</u>	Immediately after Action 1 If Action 1 not implemented, SWG will determine start		Flow: <u>Three</u> -day average flow on Sacramento River at Rio Vista \geq 9,000 cfs AND	Same as above

Table 1-1 OCAP Biological Opinion RPAs

RPA Component	Actions/ Objectives	Action	Timing	Triggers	Suspension of Action	Off-Ramps
	residing in the Delta prior to spawning Objective: Same as Action 1 above	Group [SWG]	date		on San Joaquin River at Vernalis $\geq 10,000$ cfs	
Component 2 Protection of Larval & Juvenile Delta Smelt	Action 3 Entrainment protection of larval smelt Objective: Minimize the number of larval delta smelt entrained at the CVP/SWP facilities	Net daily OMR flows $\geq -1,250$ to $-5,000$ cfs based on a 14-day running average with 5-day running average $\pm 25\%$ of required OMR	Initiate action when triggers met	Temperature: 3 station daily mean water temperature at Mossdale, Antioch, and Rio Vista $\geq 12^{\circ}\text{C}$ OR Biological: Onset of spawning (presence of spent females in SKT or at Banks or Jones)		Temporal: June 30 OR Temperature: Daily average of 25°C for three consecutive days at Clifton Court Forebay
	Action 5 Temporary Spring Head of Old River Barrier (HORB) and Temporary Barrier Project (TBP) Objective: Minimize entrainment of larval and juvenile delta smelt at the CVP/SWP facilities	Do not install HORB if delta smelt is a concern. Operate TBP as described in project description If HORB installed (no smelt concerns), tie open TBP flap gates	Spring (varies depending on conditions)	When particle tracking model results show entrainment levels of delta smelt increase $> 1\%$ at Station 815 as a result of installation of HORB		If Action 3 ends or May 15, whichever comes first
Component 3 Improve Habitat for Delta Smelt Growth & Rearing	Action 4 Estuarine Habitat During Fall Objective: Improve fall habitat for delta smelt by managing X2 (location of 2 parts per thousand [ppt] salinity isohaline) through	Provide sufficient Delta outflow to maintain X2 west of 74 kilometers (km) in fall following wet years and 81 km in fall following above normal years	September 1 to November 30	Wet and above normal water years classified from the 1995 Water Quality Control Plan used to implement D-1641		

Table 1-1 OCAP Biological Opinion RPAs

RPA Component	Actions/ <u>Objectives</u>	Action	Timing	Triggers	Suspension of Action	Off-Ramps
	increasing Delta outflow					
<u>Component 4</u> Habitat Restoration	<u>Action 6</u> Habitat Restoration Objective: Improve habitat conditions for delta smelt by enhancing food production <u>and</u> availability	Create or restore a minimum of 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh	Begin restoration program by <u>December 15, 2009</u> (within 12 months of BO) AND Complete by <u>December 15, 2018</u> (within 10 years of BO)			
<u>Component 5</u> Monitoring and Reporting						

1.4 CONTENTS AND ORGANIZATION OF THE MND/EA

Together, SLDMWA and Reclamation have the responsibility for the scope, content, and legal adequacy of the MND/EA. The terminology and specific needs of CEQA and NEPA do not entirely overlap; therefore, modifications have been made to the standard requirements of each to accommodate these differences. For example, CEQA uses the term “proposed project or project” to refer to the subject of the document, whereas NEPA uses the term “proposed action.” In this MND/EA, the term used is “Project.” The resources include those that are typically evaluated under both NEPA and CEQA; additionally, Section 5 includes discussions of resources that are required by NEPA, but not CEQA, including environmental justice, Indian Trust Assets, socioeconomics, wild and scenic rivers, and irreversible and irretrievable commitments of resources. Significance criteria for evaluating impacts on resources that are considered under both NEPA and CEQA have been provided in the environmental checklist included in Section 4. They are based on the CEQA Guidelines, Appendix G, and modified where appropriate to address impacts specific to the Project. NEPA does not require the use of specific significance criteria, and specifies that the description of their impacts is to be based on the context and intensity of the impacts and on the relationship between them. Thus, no significance criteria have been provided for those resources required only in an EA.

This MND/EA is organized as follows:

- **Section 1.** Introduces the Project and the uses of the MND/EA.
- **Section 2.** Describes the Project, required permits and approvals, and alternatives that were considered.

- **Section 3.** Describes related projects that are included in the cumulative impact analysis.
- **Section 4.** Provides an environmental evaluation/checklist identifying the environmental setting and impacts of the Project categorized pursuant to Appendix G of the CEQA Guidelines as “potentially significant unless mitigation incorporated,” “less than significant,” and “no impact” (in response to the checklist findings). It also provides mitigation measures for any impacts found to be “potentially significant unless mitigation incorporated.” Impacts of the No Project Alternative also are considered, as are cumulative impacts.
- **Section 5.** Evaluates potential impacts on climate change and growth inducement, as well as impacts on resource areas required by NEPA but not CEQA.
- **Section 6.** Identifies references used in this document.
- **Section 7.** Lists agencies contacted.
- **Section 8.** Lists the document preparers.