

1 S E C T I O N 3

2 Related Projects Considered
3 in the Cumulative Impact
4 Analysis

5 Both the California Environmental Quality Act (CEQA) and the National Environmental Policy
6 Act (NEPA) require the analysis of the cumulative impacts of a proposed project in combination
7 with those of other related projects (CEQA Guidelines Section 15065(a)(3) and CEQA
8 Regulations Sections 1508.7 and 1508.8). Cumulative impacts refer to two or more individual
9 impacts that, when considered together, are considerable or that compound or increase other
10 environmental impacts. A cumulative impact is the change in the environment that results from
11 the incremental impact of a project when added to other closely related past, present, or
12 reasonably foreseeable future projects. Cumulative impacts can result from individually minor but
13 collectively significant impacts taking place over time.

14 The following projects were identified after consultation with relevant federal, state, and local
15 agencies and review of other current environmental documents being prepared in the vicinity of
16 the Project. The cumulative impacts of these projects in combination with the 2-Gates Project are
17 addressed in Section 4.

18 **3.1 CALIFORNIA DEPARTMENT OF WATER RESOURCES – BAY-DELTA**
19 **CONSERVATION PLAN**

20 The Bay-Delta Conservation Plan (BDCP) is being developed as a collaborative process to set
21 near-term and long-term approaches to meet the following objectives: (1) providing for the
22 conservation of covered species and their habitats, (2) addressing the requirements of the federal
23 and state endangered species laws, and (3) improving water supply reliability. Specifically, the
24 BDCP would serve as a habitat conservation plan that satisfies the requirements of Section 10 of
25 the federal Endangered Species Act (ESA) and provide the basis for consultations between the
26 U.S. Bureau of Reclamation (Reclamation), U.S. Fish and Wildlife Service (USFWS), and
27 National Marine Fisheries Service (NMFS) under Section 7 of the ESA. The BDCP would also
28 provide the basis for compliance with State law under the Natural Communities Conservation
29 Planning Act and/or the California Endangered Species Act ([CESA](#)). Successful completion of
30 the plan approval process will result in long-term “take” authorizations for covered activities,
31 including certain water operations of the State Water Project (SWP) and Central Valley Project
32 (CVP), and operations of certain Mirant Delta power plants. The plan is expected to achieve these
33 objectives through a number of actions: habitat restoration and enhancement to increase the
34 quality and quantity of habitat in the Delta; other conservation actions to help address a number
35 of stressors on covered species; conveyance facilities to enhance operational flexibility and water
36 supply reliability; water operations; and a comprehensive monitoring, assessment and adaptive
37 management program.

The planning area for the BDCP will consist of the aquatic ecosystems and natural communities, and potentially adjacent riparian and floodplain natural communities, within the Statutory Delta. The Statutory Delta includes parts of Yolo, Solano, Contra Costa, San Joaquin, and Sacramento counties. However, it may be necessary for the BDCP to include conservation actions outside of the Statutory Delta that advance the goals and objectives of the BDCP within the Delta, including as appropriate, conservation actions in the Suisun Marsh, Suisun Bay, and areas upstream of the Delta.

The covered species that are the initial focus of the BDCP include certain aquatic species such as:

- Central Valley steelhead (*Oncorhynchus mykiss*)
- Central Valley Chinook salmon (*Oncorhynchus tshawytscha*) (spring-run and fall/late fall-runs)
- Sacramento River Chinook salmon (*Oncorhynchus tshawytscha*) (winter-run)
- Delta smelt (*Hypomesus transpacificus*)
- Green sturgeon (*Acipenser medirostris*)
- White sturgeon (*Acipenser transmontanus*)
- Splittail (*Pogonichthys macrolepidotus*)
- Longfin smelt (*Spirinchus thaleichthys*)

Other species that will be considered for inclusion in the BDCP include, but may not be limited to:

- Swainson's hawk (*Buteo swainsoni*)
- Bank swallow (*Riparia riparia*)
- Giant garter snake (*Thamnophis gigas*)
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)

(Note: the list of covered species will be updated as appropriate.) An Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is currently being developed assessing the potential impacts of implementation of the BDCP. The EIR/EIS will analyze the impacts of alternative conservation actions including improved water conveyance infrastructure in the Delta (e.g., dual or isolated conveyance systems). New dual or isolated conveyance systems would require a canal from the Sacramento River to the SWP Harvey O. Banks and the CVP C.W. Jones pumping plants near Tracy. The EIR/EIS will also analyze the impacts of alternative water operations and management actions to achieve conservation and water supply reliability goals. The 2-Gates Project is one of the actions that is included in the BDCP. A Notice of Preparation was prepared in March 2008. A public draft is expected to be released toward the end of 2009, with acceptance of the plan at the end of 2010. Given the complexity of the BDCP, it is likely that its full implementation would be outside of the five-year horizon established for the 2-Gates Project.

3.2 CALIFORNIA DEPARTMENT OF WATER RESOURCES AND U.S. BUREAU OF RECLAMATION – FRANKS TRACT PROJECT

Note: this discussion may be revised pending input from Reclamation regarding the project name/status. This project involves constructing a new flow control facility in the Franks Tract area of the Delta, approximately 3 miles north of the Old River site. The new facility would provide the California Department of Water Resources (DWR) and Reclamation with the operational flexibility to better manage hydrodynamic conditions and salinity concentration in the central and south Delta and thereby improve water quality and fish habitat conditions. The project involves installing and operating flow control gates on up to two Delta waterways (Three Mile Slough and West False River) to protect fish resources and reduce seawater salinity intrusion into the Delta. Four flow control gate locations on Three Mile Slough are under consideration: (1) approximately 700 feet east of the State Route 160 bridge; (2) approximately 4,100 feet from the bridge; (3) approximately 8,600 feet north of the southwestern corner of Twitchell Island along Three Mile Slough, and (4) approximately 1,600 feet north of the southwestern corner of Twitchell Island along Three Mile Slough. On West False River, only one flow control gate location is being considered, approximately 1,800 feet east of the confluence with the San Joaquin River. The EIS/EIR for this project is currently under development. A Notice of Preparation was published September 18, 2008. Potential environmental effects of the project include direct effects to the hydrodynamic characteristics and circulation of Delta waterways which would affect the movement and habitat of Delta fish species of concern, including delta smelt, longfin smelt, and Chinook salmon. The project could also result in temporary and/or permanent loss of habitat supporting special-status plant or wildlife species, wetlands, or aquatic species residing in the project area. Vessel passage and navigation also could be impeded by the gates, although the control structure would include a boat passage facility for commercial and recreation boats.

3.3 CALIFORNIA DEPARTMENT OF WATER RESOURCES AND U.S. BUREAU OF RECLAMATION – SOUTH DELTA IMPROVEMENTS PROGRAM

Note: this discussion may be revised pending input from Reclamation regarding the project status. The South Delta Improvements Program (SDIP) is a series of interrelated actions to manage water levels and water quality, protect fish and provide increased flexibility for operations of the CVP and the SWP. The specific actions include the following: (1) replace four seasonal rock gates with permanent operable flow gates on Middle River, Grantline Canal, Old River (near the city of Tracy), and at the head of Old River, (2) improve flow conditions in south Delta channels with limited dredging in Middle River, Old River, and West Canal, (3) extend 24 existing local agricultural diversions in the south Delta to deeper water to limit the necessity for more frequent gate operations, and (4) increase the permitted diversion capacity at the SWP Clifton Court Forebay (CCF) to allow more operational flexibility to increase diversion rates when the increase will not harm the Delta's fisheries or local agricultural users.

The SDIP has three objectives:

- Reduce the movement of San Joaquin River watershed Central Valley fall-/late fall-run juvenile Chinook salmon into the south Delta via Old River;
- Maintain adequate water levels and water quality available for agricultural diversions in the south Delta, downstream of the head of Old River; and

- Increase water deliveries and delivery reliability for SWP and CVP water contractors south of the Delta and provide opportunities to convey water for fish and wildlife purposes by increasing the maximum diversion through the existing intake gates at CCF to 8,500 cfs.

The SDIP will meet these objectives by providing increased operational flexibility and the ability to respond to real-time fish conditions while improving water supply reliability. The four gates will be operated from April through November on an as-needed basis to protect water levels and water quality for local agricultural diversions. The gates on Middle River, Old River near Tracy and Grantline Canal will increase circulation in local south Delta channels, thereby improving water quality and dissolved oxygen levels beyond the existing conditions provided by the rock gates. The gate at the head of Old River will normally be closed from September through October, as needed, to improve dissolved oxygen content on the stretch of the San Joaquin River from Old River to the Stockton Deep Water Ship Channel for in-migrating adult salmon during the pre-spawning period. Also, the gate at the head of Old River will be closed from mid-April through mid-May during the out-migration period for San Joaquin River salmon smelts to impede the fish from migrating into the interior south Delta, where they could be exposed to further loss from the effects of local agricultural diversions and the operation of CVP and SWP export facilities.

Operation of the gates outside of these “pre-set” periods will only be on an as-needed basis subject to prior approval by state and federal fish and wildlife agencies.

DWR and Reclamation will utilize specific protective measures during times when permanent south Delta gates are constructed and dredging/diversion relocations are conducted to ensure no harm is caused to Delta fisheries.

The permanent gates (except the Middle River gate) will feature boat locks to avoid any potential adverse effects to Delta boaters. This will be a net improvement to the existing rock gates, which have seasonal boat ramps at gate sites. No adverse effects to boating or recreation are expected from SDIP.

Detailed hydrodynamic and water quality studies of SDIP have concluded that there will not be any significant adverse effects to Bay-Delta water quality from SDIP implementation. In addition, DWR and Reclamation will work to identify and implement additional actions that may be needed to provide for the continuous improvement in water quality called for in the California Bay-Delta Program Authority Program.

SDIP has completed the final EIS/EIR and has entered into the permitting phase. Prior to obtaining the required permits, the USFWS and NMFS must issue biological opinions, which are currently expected to be completed by spring of 2009. After permits have been acquired, DWR will proceed with construction, expected to begin in 2010.

3.4 CONTRA COSTA WATER DISTRICT – WATER QUALITY IMPROVEMENT PROJECTS

3.4.1 Alternative Intake Project

The Alternative Intake Project is a drinking water quality improvement project that would protect and improve delivered water quality for Contra Costa Water District (CCWD) customers by enabling the CCWD to relocate some of its existing diversions to Victoria Canal, a Delta location with better source water quality than is currently available at its Old River and Rock Slough

intakes. The alternative intake would divert up to 250 cfs from a new intake on Victoria Canal; however, the project would not increase CCWD's total Delta diversion capacity and would not change demands or the quantity of water delivered to its service area each year.

The project includes a new, screened water intake and pump station located along the lower third of Victoria Canal, on Victoria Island in the central Delta, and a buried pipeline that would extend 12,000 to 14,000 feet from the new intake directly across Victoria Island and beneath Old River and tie into CCWD's existing Old River conveyance system on Byron Tract. The project would also involve adding a new point of diversion to certain existing water rights held by CCWD and Reclamation. The EIR/EIS for this project was completed and record of decision signed in May 2008. This project is currently under construction and is expected to be operational in 2010.

3.4.2 Contra Costa Canal Replacement Project

The project involves replacing the unlined portion of the Contra Costa Canal, approximately 3.97 miles in length, with a buried pipeline within Reclamation's existing right-of-way. The project site is located in the south Delta in eastern Contra Costa County, in the city of Oakley or its sphere of influence. The purpose of this project is to eliminate shallow groundwater seepage from entering the Canal, eliminate non-engineered berms and improve safety and security in a growing urban area.

An Initial Study/Mitigated Negative Declaration was adopted by the CCWD Board of Directors in November 2006 and Reclamation completed an Environmental Assessment and Finding of No Significant Impact for this project in July 2007. No significant impacts are anticipated from this project. In addition the USFWS has issued a non-jeopardy biological opinion on the delta smelt and determined that the project will not result in the adverse modification or destruction of delta smelt critical habitat. CCWD is planning to construct the first 2,000 feet of the Canal Replacement Project from Pumping Plant No. 1 to Marsh Creek in 2009. Ultimately, CCWD will replace the entire 21,000 feet of the unlined canal.

3.4.3 Contra Costa Water District and U.S. Bureau of Reclamation – Los Vaqueros Reservoir Expansion Project

Expansion of the Los Vaqueros Reservoir from 100,000 acre-feet to as large as 275,000 acre-feet is being evaluated for the ability to protect and restore Delta fisheries and improve Bay Area water quality and reliability. The Draft EIS/EIR was issued in February 2009, and a Final EIS/EIR is expected to be issued in September 2010.

With an expanded reservoir, the Bay Area would have a more reliable supply of higher quality water when faced with water shortages caused by drought, emergencies in the Delta, or regulatory restrictions on Delta pumping. An expanded reservoir could also provide water supplies for environmental water management in the Delta to support fish protection, habitat management and other environmental water needs. In 2007, key decision-makers became increasingly convinced of the need to expand the reservoir as one of many timely actions needed to protect the Delta and the Bay Area's water supplies, and Governor Schwarzenegger specifically named the reservoir expansion in his proposals to upgrade the state's water infrastructure.

The environmental effects of the expansion project have been evaluated in an EIS/EIR. The expansion project is being designed to create environmental and water supply reliability benefits without creating any associated impacts on the Delta ecosystem or water quality. General effects of the reservoir expansion may include a net shift in timing of Delta export pumping to periods of less fishery sensitivity, and from drier years to wetter years. These effects would help reduce or

mitigate for other cumulative impacts on the Delta ecosystem and water quality. Project construction is expected to commence as early as 2012.

3.5 CENTRAL VALLEY PROJECT IMPROVEMENT ACT REQUIRED PROGRAM

The Central Valley Project Improvement Act includes a requirement for Reclamation to develop and implement a program to mitigate fishery impacts resulting from the operation of Pumping Plant No. 1. The program may include a fish screen at Rock Slough (just south of the Old River site), modified operations, or other measures to mitigate fishery impacts. Reclamation is required to develop a fish mitigation program (including the possible installation of a fish screen at the headworks) by December 31, 2008. CCWD and Reclamation are in the process of seeking an extension of the December 31, 2008 requirement. Note: this needs to be updated with input from Reclamation. Construction and operation of the 2-Gates Project would provide further justification for this extension.

3.6 SACRAMENTO COUNTY WATER AGENCY AND EAST BAY MUNICIPAL UTILITIES DISTRICT – FREEPORT REGIONAL WATER PROJECT

The Freeport Regional Water Project is a cooperative effort of Sacramento County Water Agency (SCWA) and East Bay Municipal Utilities District (EBMUD) to supply surface water from the Sacramento River to customers in central Sacramento County and in Alameda and Contra Costa counties. The project will provide SCWA with up to 85 million gallons of water per day (mgd) which will in turn be supplied to customers in central Sacramento County to supplement groundwater use in the central part of the county. Sacramento will begin receiving water from this project in 2011 after construction of the Vineyard Surface Water Treatment Plant is completed. EBMUD will use up to 100 mgd of water during dry years only, estimated to be three out of every 10 years, as a supplemental water source to complement existing conservation programs. EBMUD will be able to receive water from the Project by the end of 2009. An EIR/EIS was completed for this project in July 2005. Significant, unavoidable impacts of the project were determined to be short-term increases in construction noise in the project area during the day, an exposure of noise-sensitive land uses to general construction noise at night, and an increase in ambient noise levels in the project area due to facility operations. Construction for this project is currently underway and is expected to be completed in July 2009. The project is expected to be operational beginning December 2009.

3.7 OTHER POTENTIAL PROJECTS

Reclamation has considered constructing a barrier-gate near the head of Georgiana Slough to block highly turbid waters from entering the central Delta. If pursued and implemented, this could be tested as a complementary action to the 2-Gates Project at a future date.

While not currently a part of the proposed Project, and not evaluated in this MND/EA, the Old River gate could be operated in conjunction with potentially modified Delta Cross Channel gate operations or upstream reservoir releases to provide additional flow to the San Joaquin River, and help push conditions favorable to smelt in a seaward direction.

Other construction projects in Contra Costa County are listed in Table 3-1. No related projects were identified for San Joaquin County.

Table 3-1 Other Projects—Approved, Proposed, or under Construction

Project Name	Status	Acreage	Proposed/Existing Use		
			Residential Units	Industrial SF	Commercial SF
Cypress Grove	Under construction	147	637	—	—
Dutch Slough Properties	Proposed	320	Approximately 1,275	—	Approximately 100,000
East Cypress Corridor Specific Plan	Proposed	2,546	5,759	166,356 (5.7 acres)	638,600
Summer Lake (formerly Cypress Lake and Country Club)	Under construction (although changes have been proposed for the northern, as-yet-undeveloped portion of the project site)	678 ^a	1,330 ^b (with an additional 119 units proposed)	166,356 (5.7 acres)	10,000 ^d
Tuscany Estates (formerly Baldocchi property)	Approved	24	100	—	—
Dutch Slough Community Park (formerly Emerson Dairy)	Planning	55	—	—	—
Lindquist Landing project on Holland Tract Road	Planning	19	Add 50,000 sq feet boat storage	—	—
Dutch Slough Wetland Restoration Project (DWR)	Planning	1,166	1,166	—	—
Holland Tract Wetlands Project Wildlands Inc.	Construction expected starting in 2009	263	263	109	
Ironhouse Sanitary District Waste Water Expansion Project, 8 Million Gallon per day Tertiary Treatment Plant	Construction schedule to begin in 2009 and online in 2011	—	—	—	—
^a This acreage is included in the acreage shown for the East Cypress Corridor Specific Plan. ^b These units are included in the total number of units shown for the East Cypress Corridor Specific Plan. ^c This industrial development is included in the development shown for the East Cypress Corridor Specific Plan. ^d This commercial square footage is included in the development shown for the East Cypress Corridor Specific Plan. Source: Data compiled by EDAW 2005/CCWD 2008					