

*The Bay Delta Conservation Plan (BDCP) is a long-term multiple purpose plan that consists of a habitat conservation plan (HCP) and a natural community conservation plan for the Sacramento–San Joaquin River Delta. It is being developed pursuant to the federal Endangered Species Act, the California Natural Community Conservation Planning Act, and other pertinent environmental laws and policies. The BDCP sets out a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework through the following.*

- *New and/or modified State water conveyance facilities and operation of the State Water Project and the federal Central Valley Project.*
- *Conservation, protection, restoration, and enhancement of habitats for native fish, wildlife, and plants within the Delta.*
- *Actions to address other ecological stressors to covered aquatic species in the Delta.*
- *Adaptive management of water conveyance facilities operations; the protection, restoration and enhancement of habitats; and measures to reduce other ecological stressors.*

## 1.1 About the BDCP

The California Department of Water Resources (DWR) and several state and federal water contractors,<sup>1</sup> collectively referred to as the BDCP proponents, propose to implement the BDCP (also referred to as the Plan), a comprehensive conservation strategy to advance the planning goal of restoring ecological functions of the Sacramento–San Joaquin Delta (Delta) and improving water supply reliability in the state of California, and are applying for certain permits under state and federal endangered species laws. DWR, acting as lead agency for compliance with the California Environmental Quality Act (CEQA), and the U.S. Department of the Interior (DOI) Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS), acting as lead agencies for compliance with the National Environmental Policy Act (NEPA), have prepared this joint draft environmental impact report/environmental impact statement (EIR/EIS) in compliance with CEQA and NEPA to analyze and disclose the potential environmental effects associated with the BDCP alternatives, proposed issuance of take permits<sup>2</sup>, and to identify potentially feasible ways to avoid, minimize, or mitigate adverse effects.

<sup>1</sup> The BDCP proponents include the following state and federal water contractors under either the SWP or CVP: Alameda County Flood Control and Water Conservation District, Zone 7; Kern County Water Agency; Metropolitan Water District of Southern California; San Luis & Delta-Mendota Water Authority; Santa Clara Valley Water District; and Westlands Water District. Additional water contractors may become BDCP proponents in the future through the BDCP process.

<sup>2</sup> For the USFWS and NMFS, this refers to incidental take permits under ESA Section 10(a)(1)(B). For CDFW, this refers to an NCCP permit under Section 2835 of the Fish and Game Code.

1 The proposed BDCP, incorporated herein by reference<sup>3</sup>, is a unique undertaking by the BDCP  
2 proponents; Reclamation; the California Department of Fish and Wildlife (CDFW); USFWS; NMFS;  
3 environmental organizations; and other federal, state, and local agencies and organizations that  
4 desire a plan for the long-term sustainability of the Delta. The BDCP, EIR/EIS, and supporting  
5 documentation will provide the basis for decisions concerning the applications for issuance of  
6 endangered species take permits for restoration activities and facility and operational changes in the  
7 State Water Project (SWP) and authorizations related to operational changes in the federal Central  
8 Valley Project (CVP). The BDCP is an HCP and a natural community conservation plan (NCCP)  
9 developed pursuant to the federal Endangered Species Act (ESA), the California Natural Community  
10 Conservation Planning Act (NCCPA). The BDCP sets out a comprehensive long-term conservation  
11 strategy for the Delta designed to restore and protect ecosystem health, water supply, and water  
12 quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear  
13 collaboration between DWR, Reclamation, state and federal fish and wildlife agencies, state and  
14 federal water contractors, nongovernmental organizations, agricultural interests, and the general  
15 public. Detailed descriptions of the proposed approach, purpose and need, objectives, conservation  
16 strategy, and actions to be covered under the BDCP alternatives are presented in Chapter 2, *Project*  
17 *Objectives and Purpose and Need*, and Chapter 3, *Description of Alternatives*, of this EIR/EIS. More  
18 information on the conservation strategy and covered actions is also provided in the proposed  
19 BDCP.

20 The alternative actions evaluated in this EIR/EIS comprise combinations of the following:  
21 conservation measures (CMs) identified in the BDCP conservation strategy that include a proposal  
22 for water conveyance facilities (CM1) with a primary focus to improve the routing, timing, and  
23 amount of flow through the Delta while establishing an interconnected system of conservation lands  
24 across the BDCP Plan Area (CM1–CM3); measures to protect, restore, enhance, and manage physical  
25 habitat to expand the extent and quality of intertidal, floodplain, and other habitats across defined  
26 conservation zones (the Plan Area is subdivided into 11 conservation zones [CZs] within which  
27 conservation targets for natural communities and BDCP covered species' habitats have been  
28 established) and restoration opportunity areas (ROAs, which encompass those locations in the Plan  
29 Area considered most appropriate for the restoration of tidal habitats and within which restoration  
30 goals for tidal and associated upland natural communities will be achieved) (CM2–CM11); and  
31 measures to reduce the effect of various stressors on covered species, such as toxic contaminants,  
32 nonnative predators, illegal harvest, and nonproject water diversions, many of which are unrelated  
33 to operation and conveyance of water by Delta SWP/CVP facilities (CM12–CM22). CM1–CM22 are  
34 common to all the alternatives, with varying designs, locations, and operational scenarios for water  
35 conveyance facilities proposed under CM1 and varying amounts of habitat restoration and  
36 enhancement for CM2–CM11. Additionally, the USFWS and NMFS would determine whether to issue  
37 50-year ITPs under ESA Section 10(a)(1)(B) for the incidental take of BDCP covered species from  
38 the construction, operation, and maintenance associated with water conveyance, ecosystem  
39 restoration, and other activities as described in the BDCP. Detailed descriptions of the BDCP  
40 alternatives, including the specific components of CM1–CM22 and their timing and implementation,  
41 are provided in Chapter 3, *Description of Alternatives*, as well as throughout this EIR/EIS and the  
42 BDCP. In addition, Chapter 3, *Description of Alternatives*, Section 3.8 describes options for funding

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<sup>3</sup> The full Draft EIR/EIS should be understood to include not only the EIR/EIS itself and its appendices but also the proposed BDCP documentation including all appendices. For example, the Chapter 5, *Effects Analysis*, and its associated appendices are repeatedly referred to herein and include much of the substantial evidence supporting the environmental analysis and conclusions herein, and Chapter 3, *Conservation Strategy*, more fully describes the proposed project.

1 the conservation measures through charges under existing provisions of the SWP long-term water  
2 supply contracts, amending the SWP long-term water supply contracts, and/or entering into BDCP  
3 funding agreements with participating water agencies. Any of these options could be used, possibly  
4 in combination, to fund costs of future facilities that could result from the BDCP. Under any  
5 alternative, the SWP water supply contracts could be amended to define the obligations for funding  
6 and the allocation of benefits of a new Delta conveyance for specific SWP water agencies. The  
7 potential that such an amendment to the SWP contracts would reallocate and redistribute SWP  
8 water, such as from agricultural to municipal uses, is discussed in Chapter 30, *Growth Inducement  
9 and Other Indirect Effects*. Chapter 4, *Approach to the Environmental Analysis*, describes the approach  
10 to the analysis, including the rationale for the project-level and program-level analyses.

11 This chapter introduces the BDCP EIR/EIS and provides context for the reader and decision makers  
12 to understand the history and complexity of issues that have led to the development of the proposed  
13 BDCP and application for the ITPs/NCCP permit. This chapter also provides an overview and  
14 definition of the project area, summarizes the statutory basis and intended uses of the EIR/EIS,  
15 describes the various agencies' roles and responsibilities, discusses the approval process, identifies  
16 issues of known controversy and unresolved issues, and describes the organization of the EIR/EIS.

## 17 1.2 Background

18 The Delta, shown in Figure 1-1, is a vitally important ecosystem that is home to hundreds of aquatic  
19 and terrestrial species, many of which are endemic to the area and a number of which are  
20 threatened or endangered, as identified by the California Endangered Species Act (CESA) and ESA.  
21 The watersheds of the Sacramento and San Joaquin Rivers are at the core of California's water  
22 system, which conveys water to millions of Californians throughout the San Francisco Bay Area (Bay  
23 Area), the Central Valley, and southern California. Water conveyed through the Delta supports farms  
24 and ranches from the north Delta to the Mexican border that are a source of financial stability for the  
25 state and that produce roughly half the nation's domestically grown fresh produce.<sup>4</sup> These  
26 watersheds capture runoff from approximately 40% of the land in California (Department of Water  
27 Resources 2009). That water is used in the Delta, the Sacramento River watershed, the San Joaquin  
28 watershed, the San Francisco Bay Area, the central coast region, and Southern California.

29 The Delta region is a key recreational destination. Its waterways and managed wetlands support  
30 many activities including fishing, boating, and hunting. It sustains distinctive geographical and  
31 cultural characteristics and supports extensive infrastructure of statewide importance, such as  
32 aqueducts, natural gas pipelines, and electricity transmission lines; railroads, commercial navigation  
33 (ports and shipping channels), and recreational navigation (marinas, docks, launch ramps);  
34 agricultural production and distribution; wildlife refuges; public and private levee systems; and  
35 highways. The Delta contains the largest natural gas production field in California, as well as  
36 California's largest natural gas storage facility (below McDonald Island in the central Delta),  
37 producing 20% of California's natural gas-powered electricity. Major electricity transmission lines  
38 in the Delta interconnect California with the Pacific Northwest and carry roughly 10% of the state's  
39 summer electricity load. Gasoline and aviation fuel pipelines crossing the Delta supply large portions  
40 of northern California and Nevada. The ports of Stockton and Sacramento are focal points of regional

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<sup>4</sup> A report by the Delta Protection Commission estimates that total agricultural revenues in the Delta were at \$795 million in 2009, including \$702 million in crop revenue and \$93 million from animals and animal products (Delta Protection Commission 2011).

1 economic development and rely on through-Delta shipping channels. State Route (SR) 12, SR 4, and  
2 through-Delta railways are also important links in the Delta transportation system (Delta Protection  
3 Commission 2011).

4 Regarding long-standing conflicts over how best to use and conserve its water and biological  
5 resources, the Delta remains a center of controversy. Several fish species, including delta smelt  
6 (*Hypomesus transpacificus*) and winter-run Chinook salmon (*Oncorhynchus tshawytscha*), are listed  
7 under ESA and CESA and have recently experienced the lowest population numbers in their  
8 recorded history; levees and the Delta infrastructure they protect are at risk from earthquake  
9 damage, continuing land subsidence, and rising sea level. The biological opinions (BiOps) that  
10 USFWS and NMFS issued (and are revising as per Court remand) significantly changed the manner  
11 in which the CVP and SWP operate, influencing the amounts of water conveyed through the south  
12 Delta. USFWS issued its Biological Opinion on the Coordinated Long Term Operation of the CVP and  
13 SWP on December 15, 2008. NMFS issued its BiOp on Long-Term Operation of the Central Valley  
14 Project and State Water Project on June 4, 2009. The BiOps called for changes in water pumping  
15 operations to avoid jeopardizing the continued existence of delta smelt (issued by USFWS) and  
16 winter and spring-run Chinook salmon, Central Valley steelhead (*Oncorhynchus mykiss*), the  
17 southern population of North American green sturgeon (*Acipenser medirostris*), and southern  
18 resident killer whales (*Orcinus orca*) (issued by NMFS), and to avoid adverse modification or  
19 destruction of designated critical habitat. Operational changes are tied to water year type, and  
20 exceptions are provided for drought and health and safety issues.

21 The proposed BDCP alternatives were developed in response to these ecological and water supply  
22 issues and to meet the stated objectives and purpose of and need for the proposed BDCP (see  
23 Chapter 2, *Project Objectives and Purpose and Need*). The following sections provide a brief overview  
24 of the Delta and the watershed of the Sacramento/San Joaquin Rivers, the SWP and CVP, regulatory  
25 and other measures that affect operations of the SWP and CVP, and the relationship of the BDCP to  
26 other long-term planning efforts like CALFED and the Delta Plan. Appendix 1A, *Primer on California*  
27 *Water Delivery Systems and the Delta*, includes a more detailed presentation of these topics.

## 28 **1.3 Water Supply Development and Management**

29 The development and management of California's surface water resources is a process that has  
30 spanned many decades, and to which private companies and local, state, and federal agencies have  
31 contributed. Early on, California's two major population centers, the Los Angeles and San Francisco  
32 Bay areas, recognized the need to augment local water supplies, and cities in these areas were the  
33 first to develop distant water sources. As California's growth continued, existing water projects  
34 became insufficient to meet demands. As a result, two major water projects in California—the CVP  
35 and SWP—were initiated in 1937 and 1957, respectively, and subsequently developed to serve  
36 agricultural, environmental, and municipal water users throughout California.

37 The SWP and CVP water infrastructure are operated in a coordinated manner. Joint points of  
38 diversion allow the use of one project's diversion facility by the other under certain conditions. In  
39 part, both the SWP and CVP water delivery systems rely on runoff and reservoir releases in areas  
40 upstream of the Delta to deliver contracted water via the Sacramento and San Joaquin Rivers to  
41 Delta export pumps in the south Delta. DWR exports water from the Delta into the SWP system at  
42 the Harvey O. Banks Pumping Plant (Banks pumping plant) (which supplies the California  
43 Aqueduct). Reclamation exports water into the CVP system at the C. W. "Bill" Jones Pumping Plant

1 (Jones pumping plant) (which supplies the Delta-Mendota Canal). Figure 1-2 shows the major  
2 components of the SWP and CVP, and Figure 1-3 shows the extent of the CVP and SWP service areas  
3 and export service areas (i.e., those areas that receive Delta water delivered from the Banks and  
4 Jones pumping plants).

5 In addition to the CVP and SWP, other resources, facilities, and practices—such as groundwater  
6 storage, conservation, water use efficiencies, hydropower, project and system re-operation,  
7 desalination, recycling, and reuse—are being used to help meet growing water demands for urban,  
8 agricultural, and environmental uses. While these elements may be physically independent of the  
9 BDCP, they may affect or be affected by, or otherwise benefit from the BDCP. Moreover, they are  
10 collectively vital and relevant to understanding water supply development and management in  
11 California. (Appendix 1B, *Water Storage*, provides an overview of the potential for additional water  
12 storage in California. Appendix 1C, *Water Demand Management*, provides an overview of water  
13 demand management relating to Delta waters. Appendix 1E, *Water Transfers in California: Types,  
14 Recent History, and General Regulatory Setting*, provides an overview of water transfers).

### 15 **1.3.1 State Water Project**

16 The SWP is a complex system comprising 20 pumping plants, 5 hydroelectric power plants, 33  
17 storage facilities with combined storage capacity of approximately 5.8 million acre-feet (MAF), and  
18 approximately 700 miles of pipelines and canals. It is the largest state-built water storage and  
19 conveyance project in the United States. DWR operates and maintains the SWP, which delivers  
20 water to 29 agricultural and municipal and industrial (M&I) contractors in northern California, the  
21 San Joaquin Valley, the Bay Area, the Central Coast, and southern California. SWP deliveries provide  
22 water to 25 million Californians and about 750,000 acres of irrigated farmland (Department of  
23 Water Resources 2010). Other project functions include flood management, water quality  
24 maintenance, power generation, recreation, and fish and wildlife enhancement. Major components  
25 of the SWP system are shown in Figure 1-2.

26 The SWP operates under long-term contracts with water contractors throughout California from  
27 counties north of the Delta to Bay Area counties, through the San Joaquin Valley and coastal  
28 counties, and finally to southern California. These water contractors in turn deliver water to  
29 wholesalers or retailers or deliver it directly to agricultural and M&I water users (Bureau of  
30 Reclamation and California Department of Water Resources 2005). Of the contracted water supply,  
31 approximately 75% goes to M&I users and 25% to agricultural users.

32 More detail on the SWP facilities and service areas is provided in Chapter 5, *Water Supply*, Section  
33 5.1.2.2.

### 34 **1.3.2 Central Valley Project**

35 The CVP comprises some 18 reservoirs with a combined storage capacity of more than 11 MAF, 11  
36 power plants, and more than 500 miles of major canals and aqueducts. Major components of the CVP  
37 system are shown in Figure 1-2. Reclamation operates and maintains the CVP, which is generally  
38 operated as an integrated project, and coordinates operations with the SWP. Authorized project  
39 purposes include flood management; navigation; provision of water for irrigation and domestic  
40 uses; fish and wildlife protection, restoration, enhancement, and creation; and power generation.  
41 However, not all facilities are operated to meet each of these purposes. Reclamation has entered into  
42 approximately 250 long-term contracts with water districts, irrigation districts, and others for

1 delivery of CVP water. Currently, there are eight divisions of the project and ten corresponding  
 2 units. Of the contracted water supply, approximately 70% goes to agricultural users, almost 20% is  
 3 dedicated to fish and wildlife habitat, and nearly 10% goes to M&I water users (Bureau of  
 4 Reclamation 2011).

5 More detail on the CVP facilities and service areas is provided in Chapter 5, *Water Supply*, Section  
 6 5.1.2.1.

## 7 **1.4 Historical Context**

8 Beginning in the 1850s, the construction of a network of levees facilitated the reclamation of the  
 9 Delta for agriculture, human habitation, and other human uses. Combined with the straightening,  
 10 widening, and dredging of channels, levee construction increased shipping access to the Central  
 11 Valley and improved downstream water conveyance for flood control. Since then, the combined  
 12 effects of continued land subsidence, sea level rise, increasing seismic risk, and worsening winter  
 13 floods all increase the vulnerability of the extensive levee system. Besides degradation of water  
 14 quality, levee failure could also result in flooding of Delta communities, farmland, and habitat;  
 15 exposure of adjacent islands to increased seepage and wave action; and impacts on water supply,  
 16 communication, and energy distribution systems. For more historical context, see Appendix 1A,  
 17 *Primer on California Water Delivery Systems and the Delta*.

18 Because of heightened regulation of the CVP and SWP in response to species decline, many water  
 19 users recognized the need to change their delivery strategy. DWR, Reclamation, certain CVP and  
 20 SWP contractors, USFWS, NMFS, the California Bay-Delta Authority, and CDFW responded to the  
 21 anticipated and continued uncertainty regarding water supply and ecosystem protection, the  
 22 growing sentiment that a new approach to the Delta was needed, and a relatively new water  
 23 delivery strategy, in part, by executing a Memorandum of Agreement (MOA) on July 28, 2006. That  
 24 MOA was intended to further the development of what has now become the proposed BDCP.  
 25 Roughly 2 months later, those same entities were joined by other water users and nongovernmental  
 26 organizations in execution of the Planning Agreement Regarding the Bay Delta Conservation Plan  
 27 (BDCP Planning Agreement dated October 2006). The BDCP Planning Agreement established the  
 28 Planning Goals for the BDCP that are incorporated in the Project Objective and Purpose and Need  
 29 Statements presented in Chapter 2, *Project Objectives and Purpose and Need*. For a detailed  
 30 discussion of the development of project alternatives, please see Chapter 3, *Description of*  
 31 *Alternatives*, Section 3.2.1.

### 32 **1.4.1 Delta Environmental Protection**

33 The SWP and CVP were planned and constructed with an emphasis on delivering water to develop  
 34 California's agricultural economy and urban growth, before environmental laws and regulatory  
 35 practices emerged to protect endangered species, and when much less was known about the Bay-  
 36 Delta ecosystem and the potential ecosystem impacts of water development. However, since about  
 37 1968, emerging laws, regulations, and policies were enacted to protect, conserve, and restore  
 38 environmental resources, shaping the way that DWR and Reclamation manage and operate the SWP  
 39 and CVP facilities. Reservoir releases and Delta exports must be coordinated to ensure that both  
 40 projects operate within agreed-upon procedures and in a manner consistent with terms and  
 41 conditions imposed in their water rights permits and licenses. State Water Resources Control Board

1 (State Water Board) decisions and orders, the BiOps under the ESA, the State's CESA, and other  
2 permits, statutes and regulations largely determine Delta regulatory requirements for water quality,  
3 flow, and operations. The State Water Board's Water Quality Control Plan (WQCP) and applicable  
4 water rights decisions, as well as other regulatory processes, are also important in understanding  
5 the operations of both the SWP and CVP. Some of the major state and federal regulatory actions that  
6 influence operations of the SWP and CVP are listed below. For additional discussion on the state and  
7 federal actions affecting California's water system, please refer to Appendix 1A, *Primer on California*  
8 *Water Delivery Systems and the Delta*.

- 9 • **Coordinated Operations Agreement (COA) (1986)**. The purpose of the COA is to establish  
10 rules by which DWR and Reclamation coordinate operations of the SWP and the CVP such that  
11 each obtains its share of water flowing into the Delta and bears its share of obligations to protect  
12 the other beneficial uses of water in the Delta and Sacramento Valley as defined by regulatory  
13 requirements. Coordinated operation under agreed-on criteria is intended to improve the  
14 efficiency of both the SWP and CVP.
- 15 • **Central Valley Project Improvement Act (CVPIA) (1992)**. The CVPIA mandated changes in  
16 management of the CVP and, among other requirements, provided for the protection,  
17 restoration, and enhancement of fish and wildlife, including dedication of certain quantities of  
18 CVP water for that purpose.
- 19 • **Water Right Decision 1641 (D-1641)**. The State Water Board's D-1641 (adopted in 1999,  
20 revised in 2000) implemented water quality objectives for flow and salinity in the Delta.
- 21 • **CALFED Bay Delta Program Record of Decision (ROD 2000)**. In 2000, several state and  
22 federal agencies including Reclamation, DWR, USFWS, DFG, and NMFS released the CALFED Bay  
23 Delta Programmatic Record of Decision (ROD) and EIR/EIS that outlined a 30-year plan to  
24 improve the Delta's ecosystem, water supply reliability, water quality, and levee stability. The  
25 CALFED ROD remains in effect and, although many of the state, federal, and local projects begun  
26 under CALFED continue, future direction, administration, and implementation will be  
27 coordinated through the Delta Stewardship Council. The California Supreme Court upheld the  
28 adequacy of the EIR component of the EIR/EIS for the CALFED ROD. (*In re Bay-Delta*  
29 *Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143,  
30 1166.)
- 31 • **USFWS Biological Opinion (2008)**. USFWS issued a BiOp concluding that the effects of the  
32 proposed long-term operation of the SWP and CVP are likely to jeopardize the continued  
33 existence of delta smelt. Under ESA Section 7 (50 Code of Federal Regulations [CFR] 402.02),  
34 USFWS developed a five-part reasonable and prudent alternative (RPA) that would likely avoid  
35 jeopardy to delta smelt and adverse modification of its critical habitat. On December 14, 2011,  
36 USFWS provided a first draft BiOp to Reclamation to assist in Reclamation's NEPA analysis and  
37 development of an updated biological assessment.
- 38 • **NMFS Biological Opinion (2009)**. NMFS issued a BiOp concluding that the effects of the  
39 proposed long-term operation of the CVP and SWP are likely to jeopardize the continued  
40 existence of the following species: Sacramento River winter-run Chinook salmon, Central Valley  
41 spring-run Chinook salmon, Central Valley steelhead, the southern Distinct Population Segment  
42 (DPS) of North American green sturgeon, and southern resident killer whale. NMFS further  
43 concluded that operation of the SWP and CVP is not likely to jeopardize the continued existence  
44 of central California coast steelhead. NMFS developed an RPA composed of numerous elements  
45 for each of the various project divisions and associated stressors and determined that the RPA

1 must be implemented in its entirety in order to avoid jeopardy and adverse modification of  
2 critical habitat.

3 These and other past actions have been implemented to attempt to establish a balance between  
4 consumptive and other beneficial uses of Sacramento and San Joaquin Rivers and Delta surface  
5 water resources and to address the current altered condition of the Delta ecosystem. In addition to  
6 the effect of water supply diversions and Delta export, it is acknowledged that other Delta conditions  
7 related to the factors listed below may have contributed to the degradation of the Delta ecosystem,  
8 including a reduction in the amount, complexity, and diversity of aquatic and terrestrial habitat in  
9 the Delta.

- 10 ● Presence of invasive nonnative fish, wildlife, and plant species.
- 11 ● Barriers to fish migration.
- 12 ● Changes in Delta water quality constituents, turbidity, and toxicity from natural and human-  
13 made sources.
- 14 ● Effects of unscreened power plant and agricultural diversions.
- 15 ● Changes in Delta water salinity, largely due to reduced Delta outflow and increased agricultural  
16 runoff.
- 17 ● Predation and illegal harvest of native fish.
- 18 ● Hatchery management practices.

19 The BDCP approach to addressing the Delta's challenges reflects a comprehensive and collaborative  
20 approach to improving the health of the ecological system by implementing conservation measures  
21 to minimize and mitigate potential SWP and CVP impacts. These measures include protection,  
22 restoration, and enhancement of large portions of Delta habitat to benefit native species and the  
23 reduction of other ecological stressors. The BDCP also attempts to balance contributions to the  
24 conservation of species in a way that is feasible in view of the variety of important uses in the  
25 Delta—especially flood protection, agriculture, and recreation (California Natural Resources Agency  
26 2010).

## 27 **1.4.2 CALFED and Delta Vision**

28 The CALFED Program was evaluated in a Program EIS/EIR under CEQA and NEPA (CALFED Bay-  
29 Delta Program Final Programmatic Environmental Impact Statement/Environmental Impact  
30 Report). One of the components of the CALFED Program was a comprehensive Ecosystem  
31 Restoration Program to improve aquatic and terrestrial habitats; the program included a number of  
32 steps and mitigation measures to reduce the environmental effects of ecosystem restoration,  
33 particularly on farmland.

34 The Ecosystem Restoration Program was initially envisioned as an integral component of a two-  
35 tiered system of regulatory compliance for Delta water operations and other covered activities  
36 under CESA, ESA, and the California Natural Community Conservation Planning Act, as described in  
37 the CALFED Program Multi-Species Conservation Strategy.

38 In April 2006, the CALFED Program issued a 10-Year Action Plan to evaluate financing and  
39 governance issues and refocus the Program based on evolving science and changing conditions in  
40 the Delta. The 10-Year Action Plan noted that, in addition to changes in governance, a new direction

1 for the CALFED Program is needed to respond to new scientific information becoming available and  
2 significant changes occurring in the Delta, including new concerns about seismic stability and the  
3 Pelagic Organism Decline. The 10-Year Action Plan contemplates the CALFED Program answering  
4 the question: “Should the screened Sacramento River diversion be built or should alternatives to the  
5 Through-Delta conveyance approach be reconsidered?” A major priority element of the 10-Year  
6 Action Plan is the development of a voluntary planning agreement and HCP/NCCP(s) for Delta and  
7 anadromous species. The Action Plan notes that “several Bay-Delta system users ... are working  
8 cooperatively to explore preparation of one or more Habitat Conservation Plans...” (CALFED Bay-  
9 Delta Program 2006:52) and notes the first step is negotiation of a Planning Agreement (CALFED  
10 Bay-Delta Program 2006:53).

11 Delta Vision was created by Executive Order of Governor Schwarzenegger on September 17, 2006,  
12 to “develop a durable vision for sustainable management of the Delta” so it can support  
13 environmental and economic functions important to the people of the State (Delta Vision Blue  
14 Ribbon Task Force 2007:68–69). The Executive Order called for creation of an independent Blue  
15 Ribbon Task Force charged with completing a “vision” report by January 1, 2008, and a “strategic  
16 plan” by October 31, 2008. (Delta Vision Blue Ribbon Task Force 2007:70) The Executive Order  
17 specifically directed that the Delta Vision process “inform and be informed by current and future  
18 Delta planning decisions such as those pertaining to the CALFED Bay Delta Program, Bay Delta  
19 Conservation Plan” and others. (Delta Vision Blue Ribbon Task Force 2007:69.) The Task Force  
20 issued its Delta Vision report, “Our Vision for the California Delta,” in November 2007, which  
21 restated as a primary recommendation the restoration of the Delta’s ecosystem function as an  
22 integral part of a healthy estuary, including expanded areas of seasonal and tidal wetlands (Delta  
23 Vision Blue Ribbon Task Force 2007:9). The Task Force identified twelve integrated and linked  
24 recommendations that were at the heart of its vision (Delta Vision Final Report 2007:1–2). Those  
25 recommendations included the three listed below.

- 26 ● The Delta ecosystem and a reliable water supply for California are the primary, coequal goals for  
27 sustainable management of the Delta.
- 28 ● The Delta ecosystem must function as an integral part of a healthy estuary.
- 29 ● New facilities for conveyance and storage, and better linkage between the two, are needed to  
30 better manage California’s water resources for both the estuary and exports.

31 In October 2008, the Blue Ribbon Task Force issued the Delta Vision Strategic Plan, which contains  
32 specific recommendations for implementing the Delta Vision to “sustain the Delta in future decades  
33 while ensuring a reliable water supply for the two-thirds of California’s population who depend in  
34 whole or in part on water from the Delta” (Delta Vision Blue Ribbon Task Force 2008:v).

35 The Strategic Plan contains recommended strategies and actions including restoration of tidal and  
36 riparian habitats and increased frequency of floodplain inundation, improving migratory corridors,  
37 addressing invasive species, relocating export diversions and implementing conveyance  
38 improvements, revising flow standards and operating criteria, and improving water quality (Delta  
39 Vision Blue Ribbon Task Force 2008:ix–x). The cover letter for the Strategic Plan explained the Task  
40 Force’s perspective that to achieve a healthy Delta and a more reliable water system, policy makers  
41 must undertake the challenges listed below.

- 42 ● Legally acknowledge the co-equal goals of restoring the Delta ecosystem and creating a more  
43 reliable water supply for California.

- 1 • Restore the Delta ecosystem as the heart of a healthy estuary.
- 2 • Build facilities to improve the existing water conveyance system and expand statewide storage,
- 3 and operate both to achieve the co-equal goals.

4 Many of the concepts presented in the Strategic Plan are being pursued through the BDCP.

5 The heart of the BDCP is a long-term conservation strategy that sets forth actions needed for a  
6 healthy Delta, building upon the framework set forth through the CALFED Program and Delta Vision  
7 processes. In February 2008, Governor Schwarzenegger directed DWR to proceed with the  
8 NEPA/CEQA analysis of four alternatives for Delta conveyance (consistent with the alternatives  
9 analyzed in the EIR/EIS; see Chapter 3, *Description of Alternatives*).

### 10 **1.4.3 Relationship to the Delta Reform Act and Delta Plan**

11 The Sacramento-San Joaquin Delta Reform Act (Reform Act), passed in 2009, made it state policy to  
12 manage the Delta in support of the coequal goals of water supply reliability and ecosystem  
13 restoration in a manner that acknowledges the evolving nature of the Delta as a place for people and  
14 communities. The Reform Act created the Delta Stewardship Council (DSC) and empowered it to  
15 develop a comprehensive management plan (Delta Plan). State and local agencies proposing certain  
16 kinds of actions or projects in the Delta need to certify for the DSC that those efforts are consistent  
17 with the Delta Plan.

18 In the Reform Act, the Legislature, in part, found and declared:

19 The Sacramento–San Joaquin Delta watershed and California’s water infrastructure are in crisis and  
20 existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization  
21 of the state’s management of Delta watershed resources (Water Code Section 85001[a]).

22 The economies of major regions of the state depend on the ability to use water within the Delta  
23 watershed or to import water from the Delta watershed. More than two-thirds of the residents of the  
24 state and more than two million acres of highly productive farmland receive water exported from the  
25 Delta watershed (Water Code Section 85004[a]).

26 Providing a more reliable water supply for the state involves implementation of water use efficiency  
27 and conservation projects, wastewater reclamation projects, desalination, and new and improved  
28 infrastructure, including water storage and Delta conveyance facilities. (Water Code Section  
29 85004[b]).

30 The BDCP is intended to be incorporated into the Delta Plan but must be approved by CDFW as an  
31 NCCP and must meet the requirements of California Water Code Section 85320. The Reform Act  
32 prescribes that the BDCP must comply with CEQA and undergo comprehensive review and analysis  
33 of the following components.

- 34 • A reasonable range of flow criteria, rates of diversion, and other operational criteria required to  
35 satisfy the criteria for approval of a natural community conservation plan as provided in  
36 subdivision (a) of Section 2820 of the Fish and Game Code, and other operational requirements  
37 and flows necessary for recovering the Delta ecosystem and restoring fisheries under a  
38 reasonable range of hydrologic conditions, which will identify the remaining water available for  
39 export and other beneficial uses.
- 40 • A reasonable range of Delta conveyance alternatives, including through-Delta, dual conveyance,  
41 and isolated conveyance alternatives and including further capacity and design options of a  
42 lined canal, an unlined canal, and pipelines.

- 1 • The potential effects of climate change, possible sea level rise up to 55 inches, and possible
- 2 changes in total precipitation and runoff patterns on the conveyance alternatives and habitat
- 3 restoration activities considered in the environmental impact report.
- 4 • The potential effects on migratory fish and aquatic resources (Water Code section 85320 et
- 5 seq.).
- 6 • The potential effects on Sacramento River and San Joaquin River flood management.
- 7 • The resilience and recovery of Delta conveyance alternatives in the event of catastrophic loss
- 8 caused by earthquake, flood, or other natural disaster.
- 9 • The potential effects of each Delta conveyance alternative on Delta water quality.

10 Under California Water Code Section 85320, subdivision (c), DWR is required to consult with the  
 11 DSC and the Delta Independent Science Board during development of the BDCP, and the DSC  
 12 functions as a responsible agency in the development of the environmental impact report. Under  
 13 Water Code Section 85320, subdivision (e), the DSC must incorporate the BDCP into the Delta Plan if  
 14 (i) CDFW approves the BDCP as an NCCP pursuant to California Fish and Game Code Sections 2800  
 15 et seq., (ii) CDFW concludes that the BDCP EIR complies with CEQA and comprehensively review  
 16 and analyzes the topics set forth above, and (iii) the BDCP has been approved as an HCP under the  
 17 provisions of ESA Section 10(a)(1)(B). The DSC also has a potential appellate role to play under the  
 18 Delta Reform Act because the CDFW determination that the BDCP met the requirements for an NCCP  
 19 may be appealed to the DSC.

20 For further description regarding BDCP's requirements under the Delta Reform Act, see Appendix  
 21 3I, *BDCP Compliance with the Delta Reform Act*. For more information on the Delta Plan see Chapter  
 22 13, *Land Use*, Section 13.2.2.2.

## 23 1.5 BDCP EIR/EIS Project Area

24 The project area for the actions evaluated in this EIR/EIS is larger than the proposed BDCP Plan  
 25 Area because some of the effects of implementing the BDCP would extend beyond the boundaries of  
 26 this region. The project area consists of the following three geographic regions, as shown in Figure  
 27 1-4.

- 28 • Upstream of the Delta region.
- 29 • Delta Region (referred to hereinafter as the Plan Area, and distinct from the larger Delta region
- 30 considered for some areas, consists generally of the statutory Delta, the Yolo Bypass north of the
- 31 statutory Delta, and Suisun Marsh, as well as the Areas of Additional Analysis<sup>5</sup>, which apply to
- 32 several BDCP EIR/EIS alternatives).
- 33 • SWP and CVP Export Service Areas.

34 Study areas have been more specifically defined for each resource (refer to Chapters 5–30 for  
 35 definitions of the study area particular to each resource topic).

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<sup>5</sup> The Areas of Additional Analysis are two areas outside the defined Plan Area that encompass power transmission corridors. One area lies west of the Plan Area and is considered in analysis of proposed BDCP alternatives that include the west alignment (Alternatives 1C, 2C, and 6C). The other area lies east of the Plan Area and represents the proposed transmission line alignment for the modified pipeline/tunnel alignment (Alternative 4).

### 1.5.1 Upstream of the Delta Region

The Upstream of the Delta region is shown in Figures 1-5 through 1-8. This region comprises those areas in the SWP and CVP system upstream of the Delta. Operational changes at SWP facilities in this area may be necessary to move fresh water through and/or around the Delta consistent with operations of CM1.

### 1.5.2 Delta Region (Plan Area)

The Plan Area includes the aquatic and terrestrial ecosystems and natural communities and adjacent riparian and floodplain natural communities within the statutory Delta (as defined in Water Code Section 12220), as well as the Suisun Marsh and the Yolo Bypass north of the statutory Delta. The statutory Delta includes parts of Yolo, Solano, Contra Costa, San Joaquin, and Sacramento Counties. The implementation of conservation measures for all BDCP alternatives would most likely entail actions within and outside the statutory Delta, including in the Suisun Marsh, Suisun Bay, and the Yolo Bypass. Any conservation actions outside the statutory Delta would be implemented pursuant to cooperative agreements or similar mechanisms with local agencies, interested nongovernmental organizations, landowners, and others.

For the purposes of this EIR/EIS, the Delta Region—or Plan Area and Areas of Additional Analysis—encompass the statutory Delta, as well as the areas where CM1–CM22 occur outside the statutory Delta (Figure 1-9). All the water conveyance features that would be constructed as part of CM1 and, for certain alternatives, including new intake facilities, would be located within the Delta region.

### 1.5.3 SWP and CVP Service Areas

The SWP and CVP Service Areas region includes water supply delivery infrastructure that may be affected by implementation of CM1 under all the BDCP alternatives. DWR has long-term water supply contracts with 29 agencies and districts to provide water from the SWP, and Reclamation has long-term contracts with approximately 250 water districts, irrigation districts, and others for delivery of CVP water. The effects of BDCP implementation in these delivery areas are primarily addressed in Chapter 30, *Growth Inducement and Other Indirect Effects*.

## 1.6 Intended Uses of this EIR/EIS and Agency Roles and Responsibilities

This document is a joint EIR/EIS prepared in compliance with the requirements of CEQA and NEPA. Before the selection and approval of one of the BDCP alternatives considered in this EIR/EIS, the lead agencies must comply with the necessary state and federal environmental review requirements. This document is intended to provide sufficient CEQA and NEPA support for approval of the proposed BDCP and to inform permit decisions for the issuance of the proposed ITPs/NCCP permit. The EIR/EIS is thus intended to provide complete “project level” analysis for actions by USFWS and NMFS permitting the BDCP under the ESA, and for action by CDFW approving the BDCP as an NCCP under the NCCPA. With respect to particular components of the BDCP that must be implemented separately through individualized permit actions or other discretionary decisions, the EIR/EIS provides a mixture of project- and program-level components. Specifically, the EIR/EIS is intended to provide project-level assessment of the potential effects of modified and/or new

1 conveyance facilities (CM1), including project-specific mitigation, and SWP water supply contract  
2 amendments and/or funding agreements (described further in Chapter 3, *Description of Alternatives*,  
3 Section 3.8). In assessing environmental effects associated with CM1, the EIR/EIS also refers to  
4 environmental commitments and other BDCP conservation measures that are intended to reduce,  
5 avoid, or minimize these effects. Additional site-specific environmental compliance documents,  
6 however, will likely be required for implementation of some conservation measures (including, for  
7 example, wetland permitting actions by the Corps of Engineers). Additional information and/or  
8 documentation may be necessary during consideration of related permit application and decision-  
9 making processes.

10 CEQA (Public Resources Code 21000 et seq.) requires preparation of an EIR when there is  
11 substantial evidence in light of the whole record that an agency action, such as approval and  
12 implementation of the BDCP, may have a significant impact on the environment. An EIR is a  
13 document disclosing and analyzing the potential environmental impacts of a project and discussing  
14 ways to mitigate or avoid the significant effects. Pursuant to Section 15126.6(a) of the State CEQA  
15 Guidelines, an EIR must describe a range of reasonable alternatives that would feasibly attain all or  
16 most of the basic project objectives but would avoid or substantially lessen any of the significant  
17 impacts of the project, and it must evaluate the comparative merits of the alternatives. Under CEQA,  
18 a *program EIR* may be prepared on a series of actions that can be characterized as one large project,  
19 such as for an NCCP (State CEQA Guidelines Section 15168). A program EIR generally establishes a  
20 framework for subsequent *tiered* or project-level environmental documents that are prepared in  
21 accordance with a program. It is meant to provide a basis for evaluating environmental effects and  
22 supporting a reasoned choice among alternatives when site-specific data may not yet be available.  
23 The degree of specificity in a program EIR's impact analysis need only be as detailed as the  
24 description of the elements in the program (State CEQA Guidelines Section 15146). A *project EIR*, in  
25 contrast, "examines the environmental impacts of a specific development project," so that, once the  
26 EIR is certified, no further CEQA analysis is required prior to construction. Nothing in CEQA  
27 prohibits a single EIR from containing both program and project elements. In fact, documents taking  
28 such an approach are common in California.

29 Similarly, under NEPA (42 U.S. Code (USC) 4321) and the Council on Environmental Quality's  
30 regulations for implementing NEPA (40 CFR 1500-1508), federal agencies are required to prepare  
31 an EIS for major federal actions significantly affecting the quality of the human environment. "The  
32 EIS must rigorously explore and objectively evaluate (CEQ 40 questions) the environmental effects  
33 of an action, including a range of reasonable alternatives, and identify mitigation measures to  
34 minimize adverse effects for the range of impacts of the proposal when they propose to carry out,  
35 approve, or fund a project that may have a significant effect on the environment. [T]o ensure  
36 environmental effects of a proposed action are fairly assessed, the probability of the mitigation  
37 measures being implemented must also be discussed and the EIS and Record of Decision should  
38 indicate the likelihood that such measures will be adopted or enforced, and when they might be  
39 available (40 CFR 1502.16[h] and 1505.2)." A *programmatic EIS* under CEQ regulations for  
40 implementing NEPA (40 CFR 1500.4(i), 1502.4(b) and (c), 1502.20) may be prepared to analyze  
41 broad-scope actions that are similar in terms of timing, geography, or other characteristics.  
42 Subsequent analysis of more specific proposals is generally required under NEPA, and information  
43 from a programmatic EIS can be referenced (tiered) in the subsequent NEPA document to reduce  
44 redundancy. Like EIRs, however, a single EIS can contain both programmatic and site-specific  
45 (project-level) elements.

1 Under both CEQA and NEPA, a combined joint document may be prepared to meet the requirements  
2 of both CEQA and NEPA. As explained above, the joint EIR/EIS intends to provide a combination of  
3 project-level and program-level analyses for individual elements of the BDCP, which in total is  
4 intended to provide a sufficient level of detail to comply with NEPA and allow USFWS and NMFS to  
5 make an informed decision on their action of considering issuance of an incidental take permit  
6 under Section 10 of the ESA. Similarly this document is intended to provide sufficient level of detail  
7 to comply with CEQA to allow for approval of the BDCP as an NCCP by CDFW under the NCCPA.

8 Design information for CM1, which consists of water conveyance facilities and existing facility  
9 operational changes, is available at a project level; accordingly, this EIR/EIS analyzes the potential  
10 environmental effects of this conservation measure at the project level of detail, and is meant to  
11 provide the CEQA and NEPA lead agencies with sufficient information to make a decision on  
12 whether to permit and/or carry out the water supply conveyance and operational changes to move  
13 fresh water through and/or around the Delta (CM1) after the BDCP EIR/EIS has been completed  
14 (and subject to the approval of related permits). Although the EIR/EIS is intended to provide  
15 sufficient NEPA coverage for ESA permitting actions by the USFWS and NMFS, the Corps of  
16 Engineers, in considering whether to grant “fill permits” under the Clean Water Act, may require  
17 additional analyses for NEPA and other permitting necessary for the component pieces of CM1 that  
18 affect federally protected wetlands.

19 Design information for CM2–CM22, which includes restoration and conservation strategies for  
20 aquatic and terrestrial habitat and other stressor reduction measures, is currently at a conceptual  
21 level. Accordingly, although this EIR/EIS is intended to provide the full CEQA and NEPA analysis  
22 needed for the issuance of take permits for the BDCP, this EIR/EIS provides only programmatic level  
23 analysis of these conservation measures, describing what environmental effects may occur in this  
24 future phase of the BDCP. Consequently, although USFWS, NMFS, and CDFW may approve and issue  
25 permits under the BDCP based on this EIR/EIS, other authorizations by agencies subject to NEPA  
26 and CEQA necessary to implement CM2–CM22 may not be obtained until a later date, when more  
27 detailed design information is available. At this later time, it will be determined whether more  
28 focused, project-level environmental review is required. Additionally, the USFWS and NMFS would  
29 determine whether to issue 50-year ITPs under ESA Section 10(a)(1)(B) for the incidental take of  
30 species covered under the BDCP related to the construction, operation, and maintenance associated  
31 with water conveyance, ecosystem restoration, and other activities as described in the BDCP.

32 With this project/program approach to preparing the BDCP EIR/EIS, this document intends to  
33 provide the NEPA/CEQA compliance necessary for approval of the entire BDCP (including both  
34 project and program elements), subject to and other pertinent laws and policies, and related permit  
35 approval processes. Accordingly, although this EIR/EIS is intended to provide the full CEQA and  
36 NEPA review necessary for approval of and issuance of take permits under the BDCP as an  
37 HCP/NCCP, this EIR/EIS provides only programmatic level analysis for CM2–22. The following  
38 sections describe the relevant review, approval, and consultation requirements necessary to  
39 implement the BDCP.

## 40 **1.6.1 Overview of BDCP Approval Process**

41 As stated above, the BDCP is being proposed by DWR in collaboration with the SWP and CVP water  
42 contractors, including those listed below, who are collectively, with DWR, referred to as BDCP  
43 proponents.

- 1 • Alameda County Flood Control and Water Conservation District, Zone 7
- 2 • The Metropolitan Water District of Southern California
- 3 • The Kern County Water Agency
- 4 • The San Luis and Delta-Mendota Water Authority
- 5 • The Santa Clara Valley Water District
- 6 • The Westlands Water District

7 Additional water contractors may become BDCP proponents in the future through the BDCP process.

8 DWR has the responsibility to operate and maintain the SWP and would be involved in all aspects of  
 9 implementation of CM1 related to the SWP, as well as any discretionary actions related to  
 10 coordination with Reclamation or its contractors. The SWP contractors may be involved, among  
 11 other actions, in decisions related to contract amendments to fund CM1 of a selected BDCP  
 12 alternative. In addition, both SWP and CVP south-of-Delta water contractors may be involved in  
 13 implementing and/or funding other conservation measures of a selected BDCP alternative. In  
 14 addition to the BDCP proponents, the BDCP is being prepared with the participation of Reclamation,  
 15 USFWS, NMFS, the U.S. Army Corps of Engineers (USACE), the California Natural Resources Agency,  
 16 CDFW, the State Water Board, and various stakeholders. These organizations are helping to guide  
 17 the preparation of the BDCP. The regulatory agencies—USFWS, NMFS, CDFW, USACE, and the State  
 18 Water Board—are participating to provide technical input and guidance in support of planning  
 19 efforts to complete the BDCP. USFWS and NMFS are also co-lead agencies with Reclamation in  
 20 accordance with NEPA and are working with cooperating agencies (e.g., USACE and the U.S.  
 21 Environmental Protection Agency [EPA]) under NEPA, along with DWR, as CEQA lead agency, and  
 22 responsible agencies (e.g., CDFW and State Water Board) to prepare this EIR/EIS.

23 The BDCP is intended to secure those authorizations that would allow for the actions set out in the  
 24 BDCP—restoration and protection of ecosystem health, water supply, and water quality—to  
 25 proceed within a stable regulatory framework. The BDCP proponents have developed a plan that  
 26 will be submitted to the USFWS and NMFS as an HCP under the provisions of ESA Section  
 27 10(a)(1)(B) and to CDFW as an NCCP under California Fish and Game Code Sections 2800 et seq.  
 28 The BDCP EIR/EIS is also intended to inform the associated biological assessment and ESA Section 7  
 29 consultations, and provide other appropriate information to make a decision on selecting which  
 30 alternative to implement regarding approval of the BDCP and issuance of the ITPs/NCCP permit.

31 The BDCP proponents will apply for take authorizations under ESA Section 10 (a)(1)(B) and under  
 32 the Section 2835 of the Fish and Game Code for the covered activities described in the BDCP,  
 33 including water operations and management activities. ESA and CESA prohibit the *take* of  
 34 endangered or threatened species. Under the broad definition of take under ESA,<sup>6</sup> the term  
 35 encompasses actions that harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or  
 36 attempt to engage in any such conduct (16 USC 1532[19]). *Incidental take* of threatened and  
 37 endangered species occurs when such taking is incidental to, and not the purpose of, the carrying  
 38 out of an otherwise lawful activity (16 USC 1539[a][1][B]). Take authorization under state law is  
 39 expected to occur under the NCCPA, which provides an alternative to take authorization under  
 40 CESA. Pursuant to the 2009 Delta Reform Act, state take authorization for the BDCP must be sought

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<sup>6</sup> *Take* under California law is defined more narrowly than under ESA. California Fish and Game Code Section 86 provides that “‘take’ means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

1 under the NCCPA rather than CESA if the BDCP is to be integrated into the Delta Plan, as adopted by  
 2 the DSC, under the process set forth in that legislation. The incidental take provisions of both ESA  
 3 Section 10 (a)(1)(B) and the NCCPA allow for applicants to also address as *covered species* those  
 4 species that are not currently listed as threatened or endangered under federal and state law, but  
 5 also fully protected species and species that are not currently listed, but may become listed in the  
 6 future. BDCP covered species are listed in Table 1-1.

7 **Table 1-1. BDCP Covered Species**

No.	Common Name	Scientific Name	Status (Fed/State/CNPS) <sup>1</sup>
<b>Fish (11 species)</b>			
1	delta smelt <sup>‡</sup>	<i>Hypomesus transpacificus</i>	T/E/-
2	longfin smelt <sup>‡</sup>	<i>Spirinchus thaleichthys</i>	C/T/-
3	Chinook salmon, Sacramento River winter-run ESU*	<i>Oncorhynchus tshawytscha</i>	E/E/-
4	Chinook salmon, Central Valley spring- run ESU*	<i>Oncorhynchus tshawytscha</i>	T/T/-
5	Chinook salmon, Central Valley fall- and late fall-run ESU*	<i>Oncorhynchus tshawytscha</i>	-/SSC/-
6	Steelhead, Central Valley DPS*	<i>Oncorhynchus mykiss</i>	T/-/-
7	Sacramento splittail <sup>‡</sup>	<i>Pogonichthys macrolepidotus</i>	-/SSC/-
8	green sturgeon, southern DPS*	<i>Acipenser medirostris</i>	T/SSC/-
9	white sturgeon*	<i>Acipenser transmontanus</i>	-/-/-
10	Pacific lamprey <sup>‡</sup>	<i>Entosphenus tridentatus</i>	-/-/-
11	river lamprey <sup>‡</sup>	<i>Lampetra ayresii</i>	-/-/-
<b>Mammals (5 species)</b>			
12	riparian brush rabbit <sup>‡</sup>	<i>Sylvilagus bachmani riparius</i>	E/E/-
13	riparian woodrat (San Joaquin Valley) <sup>‡</sup>	<i>Neotoma fuscipes riparia</i>	E/SSC/-
14	salt marsh harvest mouse <sup>‡</sup>	<i>Reithrodontomys raviventris</i>	E/E, FP/-
15	San Joaquin kit fox <sup>‡</sup>	<i>Vulpes macrotis mutica</i>	E/T/-
16	Suisun shrew <sup>‡</sup>	<i>Sorex ornatus sinuosus</i>	-/SSC/-
<b>Birds (11 species)</b>			
17	California black rail <sup>‡</sup>	<i>Laterallus jamaicensis coturniculus</i>	-/T, FP/-
18	California clapper rail <sup>‡</sup>	<i>Rallus longirostris obsoletus</i>	E/E, FP/-
19	greater sandhill crane <sup>‡</sup>	<i>Grus canadensis tabida</i>	-/T,FP/-
20	least Bell's vireo <sup>‡</sup>	<i>Vireo bellii pusillus</i>	E/E/-
21	Suisun song sparrow <sup>‡</sup>	<i>Melospiza melodia maxillaries</i>	-/SSC/-
22	Swainson's hawk <sup>‡</sup>	<i>Buteo swainsoni</i>	-/T/-
23	tricolored blackbird <sup>‡</sup>	<i>Agelaius tricolor</i>	-/SSC/-
24	western burrowing owl <sup>‡</sup>	<i>Athene cunicularia hypugaea</i>	-/SSC/-
25	western yellow-billed cuckoo <sup>‡</sup>	<i>Coccyzus americanus occidentalis</i>	C/E/-
26	white-tailed kite <sup>‡</sup>	<i>Elanus leucurus</i>	-/FP/-
27	yellow-breasted chat <sup>‡</sup>	<i>Icteria virens</i>	-/SSC/-
<b>Reptiles (2 species)</b>			
28	giant garter snake <sup>‡</sup>	<i>Thamnophis gigas</i>	T/T/-
29	western pond turtle <sup>‡</sup>	<i>Actinemys marmorata</i>	-/SSC/-

No.	Common Name	Scientific Name	Status (Fed/State/CNPS) <sup>1</sup>
<b>Amphibians (2 species)</b>			
30	California red-legged frog <sup>‡</sup>	<i>Rana draytonii</i>	T/SSC/-
31	California tiger salamander (Central Valley DPS) <sup>‡</sup>	<i>Ambystoma californiense</i>	T/T/-
<b>Invertebrates (7 species)</b>			
32	California linderiella <sup>‡</sup>	<i>Linderiella occidentalis</i>	-/-/-
33	conservancy fairy shrimp <sup>‡</sup>	<i>Branchinecta conservation</i>	E/-/-
34	longhorn fairy shrimp <sup>‡</sup>	<i>Branchinecta longiantenna</i>	E/-/-
35	midvalley fairy shrimp <sup>‡</sup>	<i>Branchinecta mesovallensis</i>	-/-/-
36	valley elderberry longhorn beetle <sup>‡</sup>	<i>Desmocerus californicus dimorphus</i>	T/-/-
37	vernal pool fairy shrimp <sup>‡</sup>	<i>Branchinecta lynchi</i>	T/-/-
38	vernal pool tadpole shrimp <sup>‡</sup>	<i>Lepidurus packardii</i>	E/-/-
<b>Plants (18 species)</b>			
39	alkali milk-vetch <sup>‡</sup>	<i>Astragalus tener</i> var. <i>tener</i>	-/-/1B
40	Boggs Lake hedge-hyssop <sup>‡</sup>	<i>Gratiola heterosepala</i>	-/E/1B
41	Brittlescale <sup>‡</sup>	<i>Atriplex depressa</i>	-/-/1B
42	Carquinez goldenbush <sup>‡</sup>	<i>Isocoma arguta</i>	-/-/1B
43	Delta button celery <sup>‡</sup>	<i>Eryngium racemosum</i>	-/E/1B
44	Delta mudwort <sup>‡</sup>	<i>Limosella subulata</i>	-/-/2
45	Delta tule pea <sup>‡</sup>	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	-/-/1B
46	dwarf downingia <sup>‡</sup>	<i>Downingia pusilla</i>	-/-/2
47	Heartscale <sup>‡</sup>	<i>Atriplex cordulata</i>	-/-/1B
48	Heckard's peppergrass <sup>‡</sup>	<i>Lepidium latipes</i> var. <i>heckardii</i>	-/-/1B
49	Legenere <sup>‡</sup>	<i>Legenere limosa</i>	-/-/1B
50	Mason's lilaeopsis <sup>‡</sup>	<i>Lilaeopsis masonii</i>	-/R/1B
51	San Joaquin spearscale <sup>‡</sup>	<i>Atriplex joaquiniana</i>	-/-/1B
52	side-flowering skullcap <sup>‡</sup>	<i>Scutellaria lateriflora</i>	-/-/2
53	slough thistle <sup>‡</sup>	<i>Cirsium crassicaule</i>	-/-/1B
54	soft bird's-beak <sup>‡</sup>	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	E/R/1B
55	Suisun Marsh aster <sup>‡</sup>	<i>Symphotrichum lentum</i>	-/-/1B
56	Suisun thistle <sup>‡</sup>	<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>	E/-/1B

No.	Common Name	Scientific Name	Status (Fed/State/CNPS) <sup>1</sup>
ESU = Evolutionarily Significant Unit			
DPS = Distinct Population Segment			
* Species under NMFS jurisdiction			
‡ Species under USFWS jurisdiction			
<sup>1</sup> Status:			
Federal			
E = Listed as endangered under ESA			
T = Listed as threatened under ESA			
C = Candidate for listing under ESA			
State			
E = Listed as endangered under CESA			
T = Listed as threatened under CESA			
R = Listed as rare under the California Native Plant Protection Act			
SSC = California species of special concern			
FP = Fully protected under the California Fish and Game Code			
California Native Plant Society (CNPS)			
1B = rare or endangered in California and elsewhere			
2 = rare and endangered in California, more common elsewhere			

1

2 If permits are issued, provisions under ESA Section 10 and the NCCPA would provide for take of  
3 covered species for the duration of the authorized permit period. The BDCP EIR/EIS is also intended  
4 to inform a Biological Assessment that Reclamation will submit to the USFWS, and NMFS to support  
5 an ESA Section 7 consultation. That statute provides federal agencies proposing actions that are  
6 likely to adversely affect endangered or threatened species with a process for obtaining a BiOp from  
7 USFWS and/or NMFS regarding whether the action would jeopardize the continued existence of a  
8 listed species or adversely modify or destroy critical habitat and may include incidental take  
9 authorization. The ESA Section 10 (a)(1)(B) process is not available to federal action agencies.

10 The BDCP proponents are seeking permits from USFWS and NMFS which would provide incidental  
11 take authorization for the ESA listed species. The permits will specify take limits for covered  
12 activities, which are defined by the flow criteria identified in Chapter 3, Section 3.4.1.4.3 of the BDCP  
13 and Table 3.4.1-1, and the community or habitat minimum acreage commitments identified in  
14 Chapter 3, Section 3.3.6 of the BDCP, and Table 3.3-2. The BDCP proponents are also seeking a take  
15 permit from CDFW under Section 2835 of the Fish and Game Code. Specifically, BDCP covered  
16 activities include operations for transport and delivery of water, construction of new water  
17 conveyance infrastructure and other facilities, maintenance and monitoring of that infrastructure,  
18 and impacts associated with implementation of the other conservation measures in the BDCP  
19 conservation strategy. See Chapter 3, *Description of Alternatives*, Section 3.3.1, for more detail of the  
20 proposed BDCP covered activities.

## 21 **Definition of Federal Agency Actions**

22 USFWS and NMFS are considering whether to issue ITPs under ESA Section 10(a)(1)(B) for the  
23 incidental take of federally listed species, fully protected species, and some non-listed species (i.e.,  
24 covered species) from the construction, operation, and maintenance associated with water  
25 conveyance, ecosystem restoration, and other covered activities as described in the BDCP. The

1 applicant's proposed duration of the ITPs is 50 years. USFWS and NMFS would issue separate ITPs  
2 covering species within their respective authority.

3 The covered species under USFWS's review authority and the covered species under NMFS's review  
4 authority pursuant to Section 10 (a)(1)(B) of the ESA are indicated in Table 1-1.

5 An HCP will be submitted as part of the ITP applications. The HCP describes activities that would be  
6 covered by the ITPs, the species for which incidental take would be authorized, and measures that  
7 would, to the maximum extent practicable, minimize the adverse effects on the covered species  
8 resulting from implementation of the covered activities, and mitigate<sup>7</sup> any remaining adverse effects  
9 through the protection, restoration, creation, and/or enhancement of habitat for the covered  
10 species. The covered species, covered activities, and proposed conservation program are described  
11 in Chapters 3 and 4 of the proposed BDCP. This EIR/EIS and the alternatives analyzed within or  
12 screened from further analysis, as well as the intra-service consultation under ESA Section 7 will  
13 provide the USFWS and NMFS with information to assist in making permit issuance decisions under  
14 ESA Section 10(a)(1)(B) and implementing regulations.

15 Reclamation operates the CVP in coordination with the SWP through the Coordinated Operation  
16 Agreement, which was entered into at the direction of Congress by the United States of America and  
17 the State of California in November 1986. Operation of new conveyance facilities and/or flow  
18 patterns proposed under the BDCP would require changes in existing CVP operations specific to the  
19 Delta that provide for diversion, storage, and conveyance of CVP water consistent with applicable  
20 law and contractual obligations. Reclamation's action in relation to the BDCP would be to adjust CVP  
21 operations specific to the Delta to accommodate new conveyance facility operations and/or flow  
22 requirements under the BDCP, in coordination with SWP operations. This EIR/EIS analyzes  
23 alternatives to CVP's Delta operations, including the Delta Cross Channel and Jones Pumping Plant,  
24 as well as various outflow regimes. At this time it is anticipated that CVP upstream operations will  
25 not change to accommodate construction and operation of new water conveyance facilities as may  
26 be proposed by the BDCP. However, if Reclamation determines that changes in upstream operations  
27 are warranted to maintain operational efficiencies or for other reasons, Reclamation may undertake  
28 additional environmental analysis.

29 Reclamation may, consistent with regulatory requirements, other programs, authorizations and  
30 appropriations, choose to undertake habitat restoration and monitoring actions described in the  
31 HCP. Future decisions regarding site specific restoration actions will likely be the subject of  
32 additional environmental analysis.

### 33 **Definition of No Federal Action**

34 The scenario characterized as *no federal action* (the No Action Alternative in Chapter 3, *Description*  
35 *of Alternatives*, Section 3.5.1) for the BDCP means that the federal ITPs related to the proposed BDCP  
36 would not be issued and that the applicant would remain subject to any applicable take prohibition

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<sup>7</sup> Minimization and mitigation actions under HCPs usually take one of the following forms: (1) avoiding the impact (to the extent practicable); (2) minimizing the impact; (3) rectifying the impact; (4) reducing or eliminating the impact over time; or (5) compensating for the impact. For example, project effects can be (1) avoided by relocating project facilities within the project area; (2) minimized through timing restrictions and buffer zones; (3) rectified by restoration and revegetation of disturbed project areas; (4) reduced or eliminated over time by proper management, monitoring, and adaptive management; and (5) compensated by habitat restoration or protection at an onsite or offsite location. In practice, HCPs often use several of these strategies simultaneously or consecutively (USFWS 1996).

1 for listed species and other ESA requirements. Ongoing activities or future actions that may result in  
2 the incidental take of federally listed species would need to be permitted through ESA Section 7 or  
3 Section 10 (a)(1)(B). Operation of the CVP would proceed as described under the 2008/2009  
4 USFWS/NMFS Biological Opinions regarding CVP/SWP operations, as those Biological Opinions may  
5 be modified, or pursuant to future Biological Opinions resulting from subsequent Section 7  
6 consultation.

7 A potential No Action Alternative in which no take of federally listed species occurs was not included  
8 as an EIS/EIR alternative because many of the activities that Reclamation and DWR engage in may  
9 result in the incidental take of listed species (see discussion of alternatives considered but not  
10 evaluated in detail in Chapter 3, *Description of Alternatives*, Section 3.2.2).

## 11 **1.6.2 Use of this EIR/EIS by Other Entities**

12 Implementation of the BDCP will require permits and approvals from public agencies other than the  
13 lead agencies. These other public agencies are referred to as responsible agencies and trustee  
14 agencies under CEQA (State CEQA Guidelines Sections 15381 and 15386) and cooperating agencies  
15 under NEPA (e.g., USACE and EPA). Responsible agencies are state or local public agencies other  
16 than the CEQA lead agency that have discretionary approval over the project. In most circumstances,  
17 CEQA requires a responsible agency to use the lead agency's CEQA document to support its own  
18 decision-making process (State CEQA Guidelines Section 15096). Trustee agencies include state  
19 agencies that have jurisdiction by law over natural resources affected by a project that are held in  
20 trust for the people of California.

21 As described in CEQ's NEPA regulations (40 CFR 1501.6), federal agencies other than the NEPA lead  
22 agency that have jurisdiction by law or special expertise with respect to the environmental effects  
23 anticipated from the project can be included as cooperating agencies. Federal agencies may use the  
24 lead agency's NEPA document to support their own decision-making process, if appropriate. A  
25 cooperating agency participates in the NEPA process and may provide input (i.e., expertise) during  
26 preparation of the NEPA document. Federal agencies may designate and encourage nonfederal  
27 public agencies, such as state, local, and tribal agencies that meet the same criteria as federal  
28 cooperating agencies, to participate in the NEPA process as cooperating agencies (40 CFR 1508.5).

29 Additionally, other federal and state agencies may contribute to and rely on information prepared as  
30 part of the environmental compliance process for the BDCP, including, but not limited to, this  
31 EIR/EIS and supporting materials. For example, USACE is expected to use the BDCP EIR/EIS as part  
32 of its permit issuance responsibilities regarding compliance with Section 404 of the Clean Water Act,  
33 which will result in a separate Record of Decision in consideration of related permit actions; Section  
34 404 compliance requires that USACE select the Least Environmentally Damaging Practicable  
35 Alternative for implementation under 40 C.F.R Part 230 (the "Guidelines"), and to assure compliance  
36 with the USACE/EPA joint "Mitigation Rule" (33 C.F.R. Parts 325 and 332, and 40 C.F.R. Part 230)  
37 USACE may rely on this EIS/EIR in whole or part in satisfying its NEPA obligations with respect to  
38 individual permit actions. In fulfilling its obligation with respect to those permits, USACE may  
39 determine that additional NEPA analysis is required.

40 A summary of the agencies and respective review/approval responsibilities, in addition to those  
41 under CEQA and NEPA, is provided in Table 1-2.

1 **Table 1-2. Summary of Agencies and Review, Approval, or Other Responsibilities, in Addition to Those**  
 2 **under CEQA and NEPA**

Agency	Permit, Decision, Approval, or Other Action <sup>a</sup>
<b>Federal</b>	
Bureau of Reclamation (NEPA lead agency)	ESA Section 7 consultation Federal Water Project Recreation Act (16 USC 460(L) 12-21) Section 106 of the National Historic Preservation Act Fish and Wildlife Coordination Act, 16 USC 661-667e (applies to restoration activities and not water operations) Archaeological Resource Protection Act Indian Trust Assets Central Valley Project Improvement Act
U.S. Fish and Wildlife Service (NEPA lead agency)	All provisions of the Endangered Species Act, including: Biological Opinion (Section 7 of ESA) Incidental Take Permit (Section 10 [a][1][B] of ESA) Section 106 of the National Historic Preservation Act Fish and Wildlife Coordination Act, 16 USC 661-667e Migratory Bird Treaty Act EO 13186 Migratory Birds EO 13112 Invasive Species Central Valley Project Improvement Act
National Marine Fisheries Service (NEPA lead agency)	All provisions of the Endangered Species Act, including: Biological Opinion (Section 7 of ESA) Incidental take permit (Section 10 [a][1][B] of ESA) Essential Fish Habitat under Magnuson-Stevens Fisheries Conservation and Management Act Fish and Wildlife Coordination Act, 16 USC 661-667e
U.S. Army Corps of Engineers (NEPA cooperating agency)	Clean Water Act Section 404 Rivers and Harbors Act Section 10 Rivers and Harbors Act Section 14, 33 USC 408 Federal Water Project Recreation Act 16 USC 460(L) 12-21 Flood Control Act (Public Law 78-534 Stat. 890) Protection of Wetlands (EO 11990) Fish and Wildlife Coordination Act, 16 USC 661-667e
U.S. Coast Guard	Rivers and Harbors Act Section 9 Bridge Permits Construction in Navigable Waters Navigational Aids – Private Aids to Navigation (PATON)
U.S. Environmental Protection Agency (NEPA cooperating agency)	Clean Water Act Section 404 oversight
Natural Resources Conservation Service	Farmland Protection Policy Act
<b>State</b>	
California Department of Boating and Waterways (potential <sup>b</sup> CEQA responsible agency)	Coordination on construction and placement of gates, signage, and use of gates

Agency	Permit, Decision, Approval, or Other Action <sup>a</sup>
California Department of Fish and Wildlife (CEQA responsible agency, trustee agency)	CA Fish & Game Code Section 5650 – water pollution CA Fish & Game Code Section 1790 – wetlands CA Fish & Game Code Section 3503 – Nests and Eggs Fish and Wildlife Coordination Act (FWCA), 16 USC 661-667e Instream Flow – CA Public Resources Code Section 10000 et seq. Migratory Birds, CA Fish & Game Code Section 3513 NCCP Findings and Approval, CA Fish & Game Code Sections 2800 et seq. Raptors, CA Fish & Game Code Section 3503.5 Streambed Alteration Master Agreement (CDFG Section 1602) Scientific Collection permits under Fish and Game Code Section 1002 and California Code of Regulations Title 14 Sections 650 and 670.7 (Plan implementation) State wildlife areas Encroachment Permit
California Department of Parks and Recreation (potential CEQA responsible agency, trustee agency)	Encroachment Permit
California Department of Public Health (potential CEQA responsible agency)	State Drinking Water Program Water Supply Permits for Operations of Public Drinking Water Systems
California Department of Transportation (CEQA responsible agency)	Encroachment Permit for realignment of State Route 160
California Department of Water Resources (CEQA lead agency)	CA Water Code Sections 11100 et. Seq. (Central Valley Project Act) CA Water Code Sections 12930 et. Seq. (California Resources Development Bond Act); CA Water Code 11451 (Control of Project). Approval of SWP water supply contract amendment and funding agreements
Central Valley Flood Protection Board (potential CEQA responsible agency)	Issuance of an encroachment permit under California Code of Regulations, Title 23
Central Valley Regional Water Quality Control Board (potential CEQA responsible agency)	Discharges Associated with Construction Activity (33 USC 1342) Regional General Permits Basin Plan Amendment (33 USC 13240) Waste Discharge Requirements for Dredging Projects or Fill-Related Activities
Delta Stewardship Council (CEQA responsible agency)	Determining, on appeal, whether the BDCP meets statutory criteria in the Delta Reform Act for inclusion in the Delta Plan
Division of Safety of Dams (potential CEQA responsible agency)	California Code of Regulations Title 23, Section 310
Regional Air Pollution Control Districts, California Air Resources Board (potential CEQA responsible agencies)	Permit to Operate an Internal Combustion Engine Stationary Source Permit Use of Portable Equipment During Construction Clean Air Act

Agency	Permit, Decision, Approval, or Other Action <sup>a</sup>
San Francisco Bay Area Conservation and Development Commission (potential CEQA responsible agency)	Coastal Zone Management Act, 16 USC 1451 et seq. California Coastal Act/McAteer-Petris Act
San Francisco Bay Regional Water Quality Control Board (potential CEQA responsible agency)	Basin Plan National Pollutant Discharge Elimination System (316(b) Permit) Stormwater Permit Waste Discharge Requirements for Dredging Projects or Fill-Related Activities
State Lands Commission (trustee agency)	Lease involving granted tide and submerged lands
State Water Resources Control Board (CEQA responsible agency)	Changes to Bay-Delta Water Quality Control Plan and Implementation (through Water Rights and other measures) Clean Water Act Section 402 National Pollutant Discharge Elimination System Permit Compliance General Certification Order for Dredging for Restoration Projects Groundwater Quality Monitoring Act, Water Code Sec 10780-10782.3 NPDES Construction Stormwater General Permit Petitions for Extension of Time for Existing Water Right Permits Porter-Cologne Act, California Water Code Sec 13000 et seq. Section 401 Water Quality Certification Surface Water Rights, California Code of Regulations Section 303 State Water Board Decision 1641 (Water Quality) Water Quality Control Plan for San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Order 99-08-DWQ: General Permit for Storm Water Discharges Associated with Construction Activity (33 USC 1342) Water Right Change Petitions Water Right for Long-term Transfer Petitions Basin Plan Amendment (33 USC 13240)
State Historic Preservation Officer (potential CEQA responsible agency)	Consultation under National Historic Preservation Act, Section 106
California Public Utilities Commission	Right of way
<b>Local and Other</b>	
State and Federal Contractors Water Agency (NEPA cooperating agency)	Joint Powers Authority created for purposes of pursuing BDCP research and study
Contra Costa County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act (SMARA)
Sacramento County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act (SMARA)

Agency	Permit, Decision, Approval, or Other Action <sup>a</sup>
Solano County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act (SMARA)
Yolo County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act (SMARA)
Reclamation District 999 (NEPA cooperating agency)	Easement/Right of way
Reclamation District 150 (NEPA cooperating agency)	Easement/Right of way
Reclamation District 551 (NEPA cooperating agency)	Easement/Right of way
Reclamation District 3 (NEPA cooperating agency)	Easement/Right of way
North Delta Water Agency (NEPA cooperating agency)	
<b>Individual SWP contractors</b>	
Alameda County Flood Control and Water Conservation District, Zone 7 (potential CEQA responsible agency)	Possible actions related to the BDCP
Santa Clara Valley Water District (potential CEQA responsible agency)	Possible actions related to the BDCP
Kern County Water Agency (potential CEQA responsible agency)	Possible actions related to the BDCP
Metropolitan Water District of Southern California (potential CEQA responsible agency)	Possible actions related to the BDCP
<b>Individual CVP contractors<sup>c</sup></b>	
San Luis & Delta-Mendota Water Authority (potential CEQA responsible agency)	Possible actions related to the BDCP
The Westlands Water District (potential CEQA responsible agency)	Possible actions related to the BDCP
<sup>a</sup> This list is not all inclusive and the agencies may use the EIR/EIS for other requirements not identified in this table. <sup>b</sup> The term <i>potential</i> is used in this table generally. Whether particular entities are responsible agencies will be determined when a final BDCP is approved. <sup>c</sup> To be determined when financing agreements are identified.	

## 1.6.3 Decisions to be Made

### 1.6.3.1 U.S. Fish and Wildlife Service

The USFWS must decide whether to issue a Section 10(a)(1)(B) permit for the BDCP. The ESA requires that specific criteria be met before USFWS may issue an ITP, including completion of intra-Service consultation under Section 7(a)(2) of the ESA.

#### Permit Issuance Criteria

The issuance criteria for an ITP are contained in Section 10(a)(2)(B) of the ESA and the ESA implementing regulations (50 CFR 17.22, 17.32[b][2][i]-[ii]). These issuance criteria include:

- The taking will be incidental to otherwise lawful activities.
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.
- The applicant will ensure that adequate funding for the conservation plan and procedures to deal with unforeseen circumstances will be provided.
- The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.
- The applicant will ensure that other measures that the USFWS may require will be provided.

As described in Section 10(a)(2)(A) of the ESA and its implementing regulations (50 CFR 17.22, 17.32[b][1][iii]), the applicant must prepare a conservation plan that specifies the following:

- The impact that will likely result from the taking.
- What steps the applicant will take to monitor, minimize, and mitigate such impacts; the funding available to implement such steps; and the procedures to be used to deal with unforeseen circumstances.
- What alternative actions to such taking the applicant considered and the reasons why those alternatives will not be used.
- Other measures that USFWS may determine to be necessary or appropriate.

### 1.6.3.2 National Marine Fisheries Service

NMFS must decide whether to issue a Section 10(a)(1)(B) permit for the BDCP. The ESA requires that specific criteria be met before NMFS may issue an ITP, including completion of intra-Service consultation under Section 7(a)(2) of the ESA.

#### Permit Issuance Criteria

The issuance criteria for an ITP are contained in Section 10(a)(2)(B) of the ESA and the ESA implementing regulations (50 CFR 222.307(c)). In order to issue a permit, NMFS must find that:

- The taking will be incidental;
- The applicant will, to the maximum extent practicable, monitor, minimize and mitigate the impacts of such taking;

- 1 • The taking will not appreciably reduce the likelihood of the survival and recovery of the species  
2 in the wild;
- 3 • The applicant has amended the conservation plan to include any measures (not originally  
4 proposed by the applicant) that the Assistant Administrator determines are necessary or  
5 appropriate; and
- 6 • There are adequate assurances that the conservation plan will be funded and implemented,  
7 including any measures required by the Assistant Administrator.

8 As described in Section 10(a)(2)(A) of the ESA and its implementing regulations (50 CFR  
9 222.307(b)(5)), the applicant must prepare a conservation plan that specifies the following:

- 10 • The anticipated impact (i.e. amount, extent, and type of anticipated taking) of the proposed  
11 activity on the species or stocks;
- 12 • The anticipated impact of the proposed activity on the habitat of the species or stocks and the  
13 likelihood of restoration of the affected habitat;
- 14 • The steps (specialized equipment, methods of conducting activities, or other means) that will be  
15 taken to monitor, minimize, and mitigate such impacts; and the funding available to implement  
16 such measures;
- 17 • The alternative actions to such taking that were considered and the reasons why those  
18 alternatives are not being used; and
- 19 • A list of all sources of data used in preparation of the plan, including reference reports,  
20 environmental assessments and impact statements, and personal communications with  
21 recognized experts on the species or activity who may have access to data not published in  
22 current literature.

23 Additionally, implementing regulations describe factors that are considered by NMFS in making a  
24 determination on permit issuance (50 CFR §222.307(c)(1)).

- 25 • The status of the affected species or stocks;
- 26 • The potential severity of direct, indirect, and cumulative impacts on the species or stocks and  
27 habitat as a result of the proposed activity;
- 28 • The availability of effective monitoring techniques;
- 29 • The use of the best available technology for minimizing or mitigating impacts; and
- 30 • The views of the public, scientists, and other interested parties knowledgeable of the species or  
31 stocks or other matters related to the application.

### 32 **1.6.3.3 U.S. Bureau of Reclamation**

33 Reclamation will make decisions regarding operation of the CVP specific to the Delta. These would  
34 include decisions regarding operations of Jones Pumping Plant, Delta Cross Channel and other CVP  
35 facilities that would support implementation of coordinated operation of the CVP with the SWP.  
36 Reclamation may also make decisions regarding wheeling CVP water through new Delta conveyance  
37 facilities as proposed by the BDCP. Reclamation may also use this document to make future  
38 decisions about implementing habitat restoration and monitoring actions that are consistent with  
39 Reclamation's regulatory requirements, programs, authorities and appropriations.

1 Reclamation will use this document to make decisions on participation in the implementation and  
2 governance structure of the BDCP if the permits are issued.

## 3 **1.7 Public Scoping and Issues of Known Controversy**

4 Public scoping meetings were held in 2008 and 2009 to gather public input on the scope of the  
5 EIR/EIS and to involve stakeholders, other agencies, and the public early in the decision-making  
6 process to identify issues and concerns to examine in the preparation of the EIR/EIS. During the  
7 scoping process, 2,950 comments were received. The majority of the comments related to BDCP  
8 water supply components referred to as conveyance alignment approaches. In addition to the formal  
9 scoping meetings, other opportunities to involve the public in the environmental review process  
10 included Steering Committee meetings from 2006 to 2009; public workshops in 2009; working  
11 group meetings and public information meetings in 2011; and ongoing briefings, presentations, and  
12 meetings with interested stakeholders throughout BDCP development. In each of these public  
13 settings, time has been allotted for public comment. More detailed information on the scoping  
14 process is provided in Chapter 32, *Public Involvement, Consultation, and Coordination*, Section 32.1.1.  
15 The scoping report is provided in Appendix 1D to this EIR/EIS, and includes the Notice of  
16 Preparation of an EIR/Notice of Intent to prepare an EIS, as well as written comments and testimony  
17 from agencies and the public from the NEPA/CEQA public scoping meetings. Comments received in  
18 other forums mentioned above have been considered throughout the planning effort and are part of  
19 the administrative record.

20 NEPA and CEQA require that the lead agencies identify issues of known controversy that have been  
21 raised during the scoping process and throughout the development of the BDCP alternatives. The  
22 BDCP proponents considered these concerns in the development of the BDCP, and the CEQA lead  
23 agency and NEPA lead agencies have considered these concerns in preparation of this EIR/EIS.  
24 Significant environmental effects resulting from constructing and operating facilities associated with  
25 the BDCP will be mitigated to the extent feasible, in some cases to less than significant levels. The  
26 following list outlines those issues that were identified by agencies and the public relative to the  
27 BDCP and this EIR/EIS.

- 28 ● **Range of Alternatives.** Because of the nature of water-related issues in California, the selection  
29 of a range of reasonable alternatives for analysis in the EIR/EIS is an issue of concern to the  
30 public as well as to governmental agencies.
- 31 ● **Biological Resources.** The complexity of the BDCP raises many concerns over environmental  
32 consequences for the aquatic ecosystem and fish species, and for the terrestrial ecosystem and  
33 plant and wildlife species. These include the effects of changes in existing land uses and habitats;  
34 the interrelationship between the BDCP and other HCPs and NCCPs; the ability of BDCP  
35 conservation measures to provide identified benefits; and the potential disparity between  
36 restored habitats and historical conditions, which could result in adverse effects on sensitive  
37 resources, including covered species.
- 38 ● **Biological Goals and Objectives.** Controversy exists between conservation goals and the  
39 reasonable use of natural resources and lands for economic development. The BDCP sets out  
40 extensive biological goals and objectives, including specific measurable targets developed on the  
41 basis of the best available scientific information. These goals and objectives are developed  
42 through a collaborative effort between state and federal agencies, local governments,  
43 community groups, and private interests, which bring varying interests and concerns.

- 1       ● **Water Supply, Surface Water Resources, and Water Quality.** Water supply and surface water  
2 resources—key drivers for development of the BDCP—remain controversial issues for a wide  
3 array of stakeholders (e.g., agricultural interests, hunting and fishing interests, water agencies,  
4 local jurisdictions) because of the changes in water operations, surface water flow conditions,  
5 and diversions that could occur with changes to the SWP and CVP systems. Water quality is an  
6 issue of concern because of uncertainties regarding activities associated with conveyance  
7 facilities and their operations and restored habitat that could lead to discharge of sediment,  
8 possible changes in salinity patterns, and water quality changes that could result from  
9 modifications to existing flow regimes. The BDCP proponents contemplate obtaining  
10 authorization from the State Water Board for new SWP points of diversion and compliance in  
11 the Delta, which would likely include State Water Board conditions on DWR and Reclamation  
12 water rights to protect beneficial uses in the Delta. Such changes would not include changes in  
13 water rights; however, there are concerns that the BDCP could result in the potential for  
14 increased exports and redistribution of Delta water.
- 15       ● **Flood Management.** Flood management is a potentially controversial issue because  
16 implementation of the BDCP would entail modification of some existing levees as well as  
17 changes in flow regimes and other changes, including habitat restoration in the Yolo Bypass and  
18 within ROAs in the Delta.
- 19       ● **Agricultural Resources.** Because the Plan Area is largely devoted to agricultural uses, the  
20 effects of the BDCP on existing agricultural activities constitute an issue of known controversy.  
21 In addition to conversion of agricultural lands to other uses (i.e., water conveyance facilities and  
22 restored/enhanced natural habitat areas), there are concerns that conflicts could arise between  
23 continuing agricultural operations and management requirements in areas targeted for  
24 conservation actions (e.g., changes in cultivation or pest management practices).
- 25       ● **Socioeconomics.** The key socioeconomic concerns involve the potential for loss of revenue and  
26 employment associated with the decrease in agricultural production associated with conversion  
27 of agricultural land to other uses, as well as the potential decrease in tax revenues due to such a  
28 decline in agricultural activities.
- 29       ● **Regional Economic Resources.** Like socioeconomic concerns, regional economic issues are  
30 controversial. In addition to the concerns discussed above, these concerns address a wider  
31 geographic scope and involve such issues as the preclusion of future development in areas of the  
32 Delta that are protected in perpetuity in ROAs associated with implementation of the BDCP, as  
33 well as the costs of implementation and the potential loss of revenues to local jurisdictions.  
34 Potential conflicts between operable barriers and gates may divert recreation away from the  
35 Delta and affect businesses related to recreational boating and fishing marinas.
- 36       ● **Recreation.** Concerns relating to recreation include potential conflicts between construction  
37 and operation of facilities associated with the BDCP and ongoing Delta recreational activities  
38 (e.g., boating, fishing, hunting, enjoyment of marinas). In addition, there are concerns about  
39 possible conflicts between operable barriers and gates in Delta waterways and recreational  
40 boating corridors.
- 41       ● **Mosquitoes and Other Hazards.** Public health hazards—particularly those associated with  
42 mosquitoes—must be addressed because of concerns that increased areas of natural habitat,  
43 especially those associated with periodic inundation, could lead to an increase in breeding  
44 habitat for mosquitoes as well as habitat for rodents and other wildlife species and,  
45 consequently, to an increase in potential disease vectors.

- 1       ● **Aesthetics/Visual Resources.** Potential effects on aesthetics/visual resources are controversial  
2       to area residents; these concerns focus largely on the proposed intake facilities and the power  
3       transmission facilities necessary to support them and, to a lesser degree, on new canals that are  
4       proposed under some of the alternatives.
- 5       ● **Growth.** One of the BDCP objectives is to increase water supply reliability to SWP and CVP  
6       contractors south of the Delta. Increasing the reliability of water may allow additional growth in  
7       export service areas. Concerns regarding the growth-inducing consequences of the BDCP  
8       generally focus on the potential effects of increased water supply to the southern part of the  
9       state.
- 10      ● **Community Issues.** Community issues, such as construction noise, air quality, and traffic  
11      circulation effects; conversion of existing land uses; and access to private lands have been  
12      controversial topics. Plans by DWR to conduct geotechnical drilling surveys were opposed by  
13      the local Farm Bureaus because of concerns over confidentiality of the survey results, and the  
14      eminent domain process is currently underway to allow acquisition of temporary entry rights  
15      on private land for survey work. Although population densities in the Plan Area are relatively  
16      low, existing farms and agricultural enterprises could be permanently divided, jeopardizing the  
17      ability of that land to continue serving productive agricultural uses. Residences, schools,  
18      religious institutions, and other sensitive community land uses could be disrupted by the BDCP  
19      during the 9-year-long construction period.

## 20    1.8    CEQA/NEPA Terminology

21       Both CEQA and NEPA require preparation of an environmental analysis to evaluate the potential  
22       environmental effects and effects to the human environment of proposed actions (and alternatives  
23       to those actions) that are subject to governmental approvals. However, there are several differences  
24       between the two in terminology, procedures, environmental document content, and substantive  
25       mandates to protect the environment. For this EIR/EIS, the more rigorous of the two laws was  
26       applied in cases in which NEPA and CEQA differ. As discussed in more detail in Chapter 4, *Approach*  
27       *to the Environmental Analysis*, Section 4.2.1.1, because CEQA and NEPA have different specifications  
28       related to determining environmental effects of project alternatives, separate baselines were  
29       developed, and separate presentations related to impact conclusions have been made for CEQA and  
30       NEPA.

31       Many concepts are common to NEPA and CEQA, including their intent and the review process that  
32       they dictate. Importantly, both statutes encourage a joint Federal and state review where a project  
33       requires both Federal and state approvals. Both processes require an initial review resulting in a  
34       notice to the public, scoping, development of alternatives, development of an environmental  
35       document analyzing the alternatives, and consideration of public and agency input. These steps are  
36       followed by the preparation of a final environmental document and agency decisions (Executive  
37       Office of the President of the U.S. and State of California, Governor's Office of Planning and Research  
38       2013). The laws sometimes use differing terminology for common concepts, as illustrated in Table  
39       1-3. Application of similar concepts may not be exactly analogous under NEPA and CEQA.

1 **Table 1-3. Correlated CEQA and NEPA Terminology**

CEQA Term	NEPA Term
Environmental Impact Report	Environmental Impact Statement
Notice of Preparation	Notice of Intent
Notice of Completion/Notice of Availability	USEPA Filing/Federal Register Notice and Agency/ Public Review (also known as a Notice of Availability)
Notice of Determination/Findings/Statement of Overriding Considerations	Record of Decision
Responsible Agency	Cooperating Agency
Project Objectives	Purpose and Need; Objectives and Constraints
Proposed Project and Alternatives	Proposed Action and Alternatives
No Project Alternative	No Action Alternative
Environmental Impacts	Environmental Consequences
Environmental Setting	Affected Environment
Threshold of Significance/Significant Impacts	although none are specified in NEPA, CEQ regulations require an EIS to identify the direct and indirect effects “and their significance” (40 CFR 1502.16)
Cumulative Impacts	Cumulative Effects

## 2 **1.9 Related Actions, Programs, and Planning Efforts**

3 This section is generally included in NEPA documents as *related actions, interrelated actions, or*  
4 *connected actions* as part of scoping (40 CFR 1508.25 ([a][1]). NEPA describes these actions as  
5 connected if they automatically trigger other actions that require an environmental analysis; if they  
6 cannot or will not proceed unless other actions are taken previously or simultaneously; or if they are  
7 interdependent parts of a larger action and depend upon the larger action for their justification  
8 (40 CFR 1508.25 [a][i, ii, iii]). There are several additional processes under the Clean Water Act and  
9 the Rivers and Harbors Act that could require separate Records of Decision from USACE. Connected  
10 actions are limited to actions that are currently proposed (ripe for decision). Actions that are not yet  
11 proposed are not connected actions, but may need to be analyzed in the cumulative effects analysis  
12 if they are reasonably foreseeable.

13 Due to the geographic area covered by the proposed BDCP, a large number of activities and studies  
14 that are currently ongoing or planned for the near future could affect or be affected by the proposed  
15 BDCP actions. Besides the CVP and SWP, additional activities in and around the BDCP Plan Area,  
16 including groundwater storage, conservation, water use efficiencies, hydropower, project and  
17 system re-operation, desalination, recycling, and reuse have either been proposed or are possible  
18 related to water supply development and management in California. These related studies and  
19 projects that have been conducted are summarized in Appendix 1A, *Primer on California Water*  
20 *Delivery Systems and the Delta*; Appendix 1B, *Water Storage*; Appendix 1C, *Water Demand*  
21 *Management*; and Appendix 1E, *Water Transfers in California: Types, Recent History, and General*  
22 *Regulatory Setting*. These actions are not directly or indirectly related to the BDCP. Where an action  
23 is directly or indirectly related to the BDCP, the effects of these actions are included in this EIR/EIS.  
24 The actions described in the appendices listed above should give the reader and decision makers a

1 general understanding of ongoing water resource issues in the State of California. If appropriate,  
 2 these actions are also identified and analyzed in the cumulative impact analysis in the relevant  
 3 resource chapter.

## 4 **1.10 EIR/EIS Organization**

5 This EIR/EIS is organized as shown below.

6 **Chapter 1: Introduction.** Contains a background summary and the project area; information  
 7 related to the statutory basis for preparing an EIR/EIS; intended uses of the document by lead,  
 8 responsible, cooperating, and trustee agencies; and a summary of document organization.

9 **Chapter 2: Purpose and Need/Project Objectives.** Describes the BDCP objectives and the purpose  
 10 of and need for the BDCP.

11 **Chapter 3: Description of Alternatives.** Describes the alternatives evaluated in the EIR/EIS.

12 **Chapter 4: Approach to the Environmental Analysis.** Summarizes the environmental impact  
 13 analysis approach, framework, and bases of comparison for CEQA and NEPA purposes; provides a  
 14 summary of the regulatory setting; and provides an overview of the cumulative effects analyses  
 15 conducted for each resource topic.

16 **Chapters 5 through 28:** Each of these chapters includes a discussion of the environmental  
 17 setting/affected environment, analysis methods, environmental consequences, mitigation  
 18 measures/environmental commitments for the BDCP alternatives, and the cumulative effects for  
 19 each of the individual resource topics.

- 20 ● Chapter 5: Water Supply
- 21 ● Chapter 6: Surface Water
- 22 ● Chapter 7: Groundwater
- 23 ● Chapter 8: Water Quality
- 24 ● Chapter 9: Geology and Seismicity
- 25 ● Chapter 10: Soils
- 26 ● Chapter 11: Fish and Aquatic Resources
- 27 ● Chapter 12: Terrestrial Biological Resources
- 28 ● Chapter 13: Land Use
- 29 ● Chapter 14: Agricultural Resources
- 30 ● Chapter 15: Recreation
- 31 ● Chapter 16: Socioeconomics
- 32 ● Chapter 17: Aesthetic and Visual Resources
- 33 ● Chapter 18: Cultural and Historic Resources
- 34 ● Chapter 19: Transportation
- 35 ● Chapter 20: Public Services and Utilities

- 1 • Chapter 21: Energy
- 2 • Chapter 22: Air Quality and Greenhouse Gas Emissions
- 3 • Chapter 23: Noise
- 4 • Chapter 24: Hazards and Hazardous Materials
- 5 • Chapter 25: Public Health
- 6 • Chapter 26: Mineral Resources
- 7 • Chapter 27: Paleontological Resources
- 8 • Chapter 28: Environmental Justice (NEPA only)

9 **Chapter 29: Climate Change.** Discusses climate change conditions associated with the BDCP  
10 alternatives.

11 **Chapter 30: Growth Inducement and Other Indirect Effects.** Describes the potential for the BDCP  
12 alternatives to either promote or remove an obstacle related to growth in the project area and the  
13 possible impacts of such growth.

14 **Chapter 31: Other CEQA/NEPA Required Sections.** Discusses the relationship between short-  
15 term uses of the environment, maintenance, and enhancement of long-term productivity, the  
16 irreversible and irretrievable commitment of resources, and potential environmental effects  
17 associated with environmental commitments and recommended mitigation measures.

18 **Chapter 32: Public Involvement, Consultation, and Coordination.** Describes the consultation  
19 and outreach activities that occurred during the document preparation process.

20 **Chapter 33: List of Preparers.** Identifies the individuals who prepared this document.

21 **Chapter 34: References.** Lists all sources cited in the text. References are also included at the end  
22 of each chapter.

23 **Chapter 35: Glossary.** Provides definitions for specialized terms related to the BDCP and effects  
24 analyses.

25 This EIR/EIS contains reference to numerous appendices prepared to support the various chapters.  
26 The Appendices are organized as shown below.<sup>8</sup>

- 27 • 1A: Primer on California Water Delivery Systems and the Delta.
- 28 • 1B: Water Storage.
- 29 • 1C: Water Demand Management.
- 30 • 1D: Final Scoping Report.
- 31 • 1E: Water Transfers in California: Types, Recent History, and General Regulatory Setting.
- 32 • 3A: Identification of Water Conveyance Alternatives, Conservation Measure 1.
- 33 • 3B: Environmental Commitments.
- 34 • 3C: Construction Assumptions for Water Conveyance Facilities.

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<sup>8</sup> See Footnote 2 at the beginning of this chapter for a description of other documents that should be understood to be part of this EIR/EIS.

- 1 • 3D: Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative
- 2 Impact Conditions.
- 3 • 3E: Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies.
- 4 • 3F: Intake Location Analysis.
- 5 • 3G: Background on the Process of Developing the BDCP Conservation Measures.
- 6 • 3H: Intermediate Forebay Location Analysis.
- 7 • 3I: BDCP Compliance with the Delta Reform Act.
- 8 • 4A: Summary of Survey Data Collection Efforts by Department of Water Resources to Obtain
- 9 Information Regarding Baseline Conditions in Areas That Could Be Affected by BDCP.
- 10 • 5A: BDCP EIR/EIS Modeling Technical Appendix.
- 11 • 5B: Responses to Reduced South of Delta Water Supplies.
- 12 • 5C: Historical Background of Cross-Delta Water Transfers and Potential Source Regions
- 13 • 5D: Water Transfer Analysis Methodology and Results
- 14 • 7A: Groundwater Modeling.
- 15 • 8A: Water Quality Criteria and Objectives.
- 16 • 8B: Summary of Data Available for Use in Environmental Setting.
- 17 • 8C: Screen Analysis.
- 18 • 8D: Source Water Fingerprinting Results.
- 19 • 8E: Bromide.
- 20 • 8F: Boron.
- 21 • 8G: Chloride.
- 22 • 8H: Electrical Conductivity.
- 23 • 8I: Mercury.
- 24 • 8J: Nitrate.
- 25 • 8K: Organic Carbon.
- 26 • 8L: Pesticide.
- 27 • 8M: Selenium.
- 28 • 8N: Trace Metals.
- 29 • 10A: Soil Associations.
- 30 • 10B: Natural Resources Conservation Service Soil Suitability Ratings.
- 31 • 10C: Soil Chemical and Physical Properties and Land Use Suitability.
- 32 • 11A: Covered Fish Species Descriptions.
- 33 • 11B: Noncovered Fish and Aquatic Species Descriptions.
- 34 • 11C: CALSIM II Model Results Utilized in the Fish Analysis.

- 1 • 11D: Sacramento River Water Quality Model and Reclamation Temperature Model Results
- 2 Utilized in the Fish Analysis.
- 3 • 12A: Special-Status Species Known to Occur or with the Potential to Occur in the Study Area.
- 4 • 12B: Common and Scientific Names of Terrestrial Species.
- 5 • 12C: DHCCP Data Summary Report.
- 6 • 12D: Conservation Strategy for Water Conveyance Construction Effects on Terrestrial Species.
- 7 • 12E: Detailed Accounting of Direct Effects of Alternatives on Natural Communities.
- 8 • 14A: Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction.
- 9 • 14B: Agricultural Stewardship Strategies.
- 10 • 15A: Privately Owned Recreation Facilities by County.
- 11 • 15B: Overview of Delta Recreation.
- 12 • 15C: Additional Recreation Figures.
- 13 • 16A: Regional Economic Impacts of Water Conveyance Facility Construction.
- 14 • 16B: Community Characterization Photographs.
- 15 • 17A: Candidate KOP Sensitivity Rating Scales.
- 16 • 17B: Photo Simulation Data Sources and Assumptions.
- 17 • 17C: Scenic Quality Rating Summaries.
- 18 • 17D: Permanent Impacts after Construction is Complete.
- 19 • 17E: Permanent Features.
- 20 • 18A: Cultural Resources Supporting Information.
- 21 • 18B: Identified Cultural Resources Potentially Affected by BDCP Alternatives.
- 22 • 19A: Traffic Study.
- 23 • 20A: Details of Public Services and Utilities Supporting the Plan Area.
- 24 • 22A: Air Quality Analysis Assumptions.
- 25 • 22B: Air Quality Assumptions.
- 26 • 22C: Health Risk Assessment.
- 27 • 22D: DWR Climate Action Plan.
- 28 • 22E: Conformity Letters.
- 29 • 24A: Draft Phase 1 Initial Site Assessment.
- 30 • 26A: Natural Gas Wells.
- 31 • 28A: Census Data.
- 32 • 29A: Effects of Sea-Level Rise on Delta Tidal Flows and Salinity.
- 33 • 29B: Climate Change Effects on Hydrology in the Study Area Used for CALSIM Modeling Analysis.

- 1 • 29C: Climate Change and the Effects of Reservoir Operations on Water Temperatures in the
- 2 Study Area.
- 3 • 30A: Population Density in Hydrologic Regions.
- 4 • 30B: Water Contractor Profiles.
- 5 • 30C: Summary of Significant Impacts.
- 6 • 31A: Potential Future Environmental Compliance Review.
- 7 • 32A: Public Involvement Informational Materials.

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