

1.1 About the BDCP/California WaterFix

The California Department of Water Resources (DWR), in coordination with the U.S. Bureau of Reclamation (Reclamation), and several state and federal water contractors, started planning efforts to implement a comprehensive strategy for restoring ecological functions of the Delta and improving water supply reliability in the State of California. The initial approach focused on the development of a conservation plan, referred to as the Bay Delta Conservation Plan (BDCP), which would include modifications to the State Water Project (SWP) to add intakes in the north Delta and would preserve and restore very substantial amounts of land in the Delta for the protection of various endangered and threatened species, as well as other “special status species.” In 2015, DWR and Reclamation introduced California WaterFix¹ (Alternative 4A), which was developed in response to public and agency input and which is the California Environmental Quality Act (CEQA) preferred alternative, replacing Alternative 4 (the proposed BDCP). Alternative 4A is also the National Environmental Policy Act (NEPA) proposed action and preferred alternative, a designation that was not attached to any of the alternatives presented in the Draft EIR/EIS.

In December 2013, DWR, acting as lead agency for compliance with CEQA, and Reclamation, USFWS, and NMFS, acting as lead agencies for compliance with NEPA, released a joint draft environmental impact report/environmental impact statement (Draft EIR/EIS) to analyze and disclose the potential environmental effects associated with the proposed BDCP and other action alternatives, all of which are intended to achieve the goals of restoring the ecological functions of the Delta and improving water supply reliability. The Draft EIR/EIS also identified potentially feasible ways to avoid, minimize, or mitigate adverse effects.

The BDCP would achieve compliance with the federal Endangered Species Act (ESA) through application for approval of a habitat conservation plan (HCP) from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) under Section 10 of the ESA, and would achieve compliance with the California Natural Community Conservation Planning Act (NCCPA) (and California Endangered Species Act (CESA) through request for approval of a Natural Community Conservation Plan (NCCP) from the California Department of Fish and Wildlife (CDFW).

The proposed BDCP, which is incorporated herein by reference,² would be a unique undertaking by the BDCP lead agencies; Reclamation; CDFW, USFWS, NMFS, environmental organizations, and other federal, state, and local agencies and organizations that desire a plan for the long-term sustainability of the Delta. The BDCP, along with this EIR/EIS and other supporting documentation, would provide the basis for decisions concerning the applications for issuance of endangered species take permits for restoration activities and facility and operational changes in the SWP and authorizations related to operational changes in the federal Central Valley Project (CVP). The BDCP sets out a

¹ Hereafter in this document and in associated documents, California WaterFix will often be referred to as Alternative 4A.

² The Final EIR/EIS includes the 2013 Draft EIR/EIS, BDCP, 2015 RDEIR/SDEIS, and all associated appendices with these documents; as well as revisions to these documents as contained in this Final EIR/EIS, and the Biological Assessment for the California WaterFix (July 2016).

1 comprehensive, long-term conservation strategy for the Delta designed to restore and protect
2 ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP
3 reflects the outcome of a multiyear collaboration between DWR, Reclamation, state and federal fish
4 and wildlife agencies, state and federal water contractors, nongovernmental organizations,
5 agricultural interests, and the general public.

6 The original Draft BDCP and Draft EIR/EIS were released together for public review on December
7 13, 2013, for what was initially intended to be a 120-day public review period. In response to
8 requests for additional time, however, the lead agencies extended the review period in April 2014
9 for an additional 60 days. In June 2014, the lead agencies decided to further extend the review
10 period to July 29, 2014, for a total review period of approximately 7½ months (228 days). During
11 the latter portion of the extended public review period, the lead agencies issued a draft
12 Implementation Agreement for a 60-day public review period to coincide with the last 60 days of the
13 Draft EIR/EIS review period.

14 Public comment received on the draft documents comprised a total of 12,204 comment letters—
15 1,518 unique letters from individual members of the public and 432 letters from agencies,
16 organizations, and stakeholder groups. The balance of comments consisted of form letters sent by
17 individuals and organized by various organizations. A total of 18,532 separate comments on the
18 draft documents were received during the public review period. All the comments were considered
19 in the decision to recirculate the environmental review documents.

20 In July 2015, the lead agencies issued the Bay Delta Conservation Plan/California WaterFix Partially
21 Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). The primary purposes of the
22 RDEIR/SDEIS were to provide the public and interested agencies with updated environmental
23 analysis to address certain revisions to the previously issued documents related to the BDCP and
24 Draft EIR/EIS, to introduce new alternatives (Alternatives 4A, 2D, and 5A), and to address certain
25 issues raised in comments received on the Draft EIR/EIS.

26 The RDEIR/SDEIS considered project revisions that were developed in response to input from the
27 Draft EIR/EIS comment period (see Section 1.7, *Public Scoping and Issues of Known Controversy*) as
28 well as from agencies' comments regarding the challenges with meeting the standards required to
29 issue long-term assurances associated with compliance with Section 10 of the ESA and the NCCPA.
30 These challenges related to the difficulties in assessing species status and issuing assurances over a
31 50-year period, in light of climate change, and accurately factoring in the benefits of long term
32 conservation in contributing to the recovery of the species. There were also questions raised as to
33 the ability to implement large-scale habitat restoration and an interest in exploring multiple
34 regulatory approaches that could facilitate expeditious progress on Delta solutions. To address these
35 concerns, and due to the desire to explore alternative regulatory approaches that could facilitate
36 expeditious progress on Delta solutions, the lead agencies revised the proposed project to allow for
37 an alternative implementation strategy for the new alternatives in the RDEIR/SDEIS. The alternative
38 implementation strategy relates to achieving the project goals and objectives, focusing on the
39 conveyance facility improvements necessary for the SWP to address more immediate water supply
40 reliability needs in conjunction with related ecosystem improvements, such as significantly reducing
41 reverse flows and direct fish species impacts associated with the existing south Delta intakes. The
42 alternative implementation strategy allows for other state and federal programs to address the long-
43 term conservation efforts for species recovery in programs separate from the proposed project.

1 The alternative implementation strategy added three new alternatives to the RDEIR/SDEIS analysis
2 (Alternatives 2D, 4A,³ and 5A). The alternatives in the Draft EIR/EIS are retained for the original
3 conservation plan implementation strategy. If the lead agencies ultimately choose the alternative
4 implementation strategy and select an alternative introduced in the RDEIR/SDEIS after completing
5 the CEQA and NEPA processes, elements of the conservation plan contained in the alternatives in the
6 Draft EIR/EIS may be utilized by other programs for implementation of the long-term conservation
7 efforts.

8 Subsequent to the commencement of the BDCP and Draft EIR/EIS review period, DWR also decided
9 that certain portions of the proposed conservation strategy, including *Conservation Measure (CM) 1*
10 *Water Facilities and Operation*, should be revised and modified to reduce environmental impacts, to
11 increase the effectiveness of the proposed conservation strategy, and to improve the feasibility of
12 conveyance facilities. The lead agencies determined that, in light of these changes and the
13 importance of other substantive modifications made to the Draft EIR/EIS, members of the public
14 and other interested agencies and entities should have a formal opportunity to review and comment
15 on these revisions to the Draft EIR/EIS. Those modifications were included in the RDEIR/SDEIS and
16 are reflected in this Final EIR/EIS.

17 The RDEIR/SDEIS was circulated for an additional public review period to disclose impacts and
18 mitigation measures of the new alternatives and other changes. The duration of the overall public
19 review period reflected the lead agencies' desire to ensure that agencies, members of the public, and
20 other entities had sufficient time in which to provide meaningful comments on all the draft
21 documents, many of which were lengthy, reflecting the complexity of the issues involved. The
22 RDEIR/SDEIS was circulated for public review on July 10, 2015 for a 112-day comment period that
23 closed on October 30, 2015.

24 Public comment received on the RDEIR/SDEIS comprised more than 21,700 comment letters—
25 5,920 unique letters from individual members of the public, 36 from elected officials, 117 letters
26 from governments or public agencies, and 464 from non-governmental organizations and
27 stakeholder groups. The balance of comments consisted of form letters sent by individuals and
28 organized by various organizations. A total of 12,492 separate comments on the recirculated
29 documents were received during the public review period. Formal responses to the comments
30 received on the Draft BDCP, the Draft EIR/EIS, and the RDEIR/SDEIS are included in this Final
31 EIR/EIS.

32 This chapter introduces the EIR/EIS and provides context for the reader and decision makers to
33 understand the history and complexity of issues that have led to the development of the proposed
34 BDCP and application for the incidental take permits (ITPs) and an NCCP, and development of the
35 California WaterFix. This chapter also provides an overview and definition of the project area,
36 summarizes the statutory basis and intended uses of the EIR/EIS, describes the various agencies'
37 roles and responsibilities, discusses the approval process, identifies issues of known controversy
38 and unresolved issues, and describes the organization of the EIR/EIS.

³ The California WaterFix.

1.2 Background

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

The Delta region is a key recreational destination. Its waterways and managed wetlands support many activities including fishing, boating, and hunting. It sustains distinctive geographical and cultural characteristics and supports extensive infrastructure of statewide importance, such as aqueducts, natural gas pipelines, and electricity transmission lines; railroads, commercial navigation (ports and shipping channels), and recreational navigation (marinas, docks, launch ramps); agricultural production and distribution; wildlife refuges; public and private levee systems; and highways. The Delta contains the largest natural gas production field in California, as well as California’s largest natural gas storage facility (below McDonald Island in the central Delta), producing 20% of California’s natural gas–powered electricity. Major electricity transmission lines in the Delta interconnect California with the Pacific Northwest and carry roughly 10% of the state’s summer electricity load. Gasoline and aviation fuel pipelines crossing the Delta supply large portions of northern California and Nevada. The ports of Stockton and Sacramento are focal points of regional economic development and rely on through-Delta shipping channels. State Route (SR) 12, SR 4, and through-Delta railways are also important links in the Delta transportation system (Delta Protection Commission 2011).

Regarding long-standing conflicts over how best to use and conserve its water and biological resources, the Delta remains a center of controversy. Several fish species, including delta smelt (*Hypomesus transpacificus*) and winter-run Chinook salmon (*Oncorhynchus tshawytscha*), are listed under the ESA and CESA and have recently experienced the lowest population numbers in their recorded history; levees and the Delta infrastructure they protect are at risk from earthquake damage, continuing land subsidence, and rising sea level. The biological opinions (BiOps) that USFWS and NMFS have issued in recent years have significantly changed the manner in which the CVP and SWP operate, influencing the amounts of water conveyed through the south Delta. USFWS issued the current Biological Opinion on the Coordinated Long Term Operation of the CVP and SWP on December 15, 2008. NMFS issued its BiOp on Long-Term Operation of the Central Valley Project and State Water Project on June 4, 2009. The BiOps⁴ called for changes in water pumping operations to avoid jeopardizing the continued existence of delta smelt (issued by USFWS) and winter and

⁴ On August 2, 2016, Reclamation and DWR jointly requested reinitiation of ESA Section 7 consultation with USFWS and NMFS on the Coordinated Long-term Operation of the CVP and SWP, based on new information related to multiple years of drought and recent data on Delta smelt and winter-run Chinook salmon population levels, and new information available and expected to become available as a result of ongoing work through collaborative science processes.

1 spring-run Chinook salmon, Central Valley steelhead (*Oncorhynchus mykiss*), the southern
 2 population of North American green sturgeon (*Acipenser medirostris*), and southern resident killer
 3 whales (*Orcinus orca*) (issued by NMFS), and to avoid adverse modification or destruction of
 4 designated critical habitat. Operational changes are tied to water year type, and exceptions are
 5 provided for drought and health and safety issues.

6 The proposed BDCP and other alternatives that contain an HCP/NCCP (Alternatives 1A, 1B, 1C, 2A,
 7 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9; referred to as “BDCP alternatives”) were developed in response
 8 to these ecological and water supply issues and to meet the stated objectives and purpose of, and
 9 need for, the proposed project (see Chapter 2, *Project Objectives and Purpose and Need*). The BDCP
 10 alternatives were originally presented in the Draft EIR/EIS. Three additional alternatives
 11 (Alternatives 4A, 2D, and 5A) were developed in response to these same issues and to meet the
 12 objectives and purpose and need. Alternatives 4A, 2D, and 5A would utilize an alternative
 13 implementation strategy for compliance with the ESA and CESA. The three alternatives were
 14 originally presented in the RDEIR/SDEIS.

15 **1.2.1 BDCP Alternatives**

16 The alternatives in this EIR/EIS that would function as HCPs/NCCPs comprise combinations of the
 17 following: conservation measures identified in the BDCP conservation strategy that include a
 18 proposal for water conveyance facilities (CM1) with a primary focus on improving the routing,
 19 timing, and amount of flow through the Delta while establishing an interconnected system of
 20 conservation lands across the BDCP Plan Area (CM1–CM3); measures to protect, restore, enhance,
 21 and manage physical habitat to expand the extent and quality of intertidal, floodplain, and other
 22 habitats across defined conservation zones⁵ and restoration opportunity areas⁶ (CM2–CM11); and
 23 measures to reduce the effect of various stressors on covered species, such as toxic contaminants,
 24 nonnative predators, illegal harvest, and nonproject water diversions, many of which are unrelated
 25 to operation and conveyance of water by Delta SWP/CVP facilities (CM12–CM21).

26 CM1–CM21 are common to all the BDCP alternatives, with varying designs, locations, and
 27 operational scenarios for water conveyance facilities proposed under CM1 and varying amounts of
 28 habitat restoration and enhancement for CM2–CM11. Additionally, 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 BDCP covered species from the construction, operation, and maintenance associated with water
 31 conveyance, ecosystem restoration, and other activities as described in the BDCP. Detailed
 32 descriptions of the BDCP alternatives, including the specific components of CM1–CM21 and their
 33 timing and implementation, are provided in Chapter 3, *Description of Alternatives*, as well as
 34 throughout this EIR/EIS and the BDCP. In addition, Section 3.8 of Chapter 3, *Description of*
 35 *Alternatives*, describes options for funding the conservation measures through charges under
 36 existing provisions of the SWP long-term water supply contracts, amending the SWP long-term
 37 water supply contracts, and/or entering into BDCP funding agreements with participating water
 38 agencies. Any of these options could be used, possibly in combination, to fund costs of future
 39 facilities that could result from the BDCP. Under any alternative, the SWP water supply contracts

⁵ The Plan Area is subdivided into 11 conservation zones [CZs] within which conservation targets for natural communities and BDCP covered species’ habitats have been established.

⁶ Restoration opportunity areas, which encompass those locations in the Plan Area considered most appropriate for the restoration of tidal habitats and within which restoration goals for tidal and associated upland natural communities will be achieved.

1 could be amended to define the obligations for funding and the allocation of benefits of a new Delta
 2 conveyance for specific SWP water agencies. The potential that such an amendment to the SWP
 3 contracts would reallocate and redistribute SWP water, such as from agricultural to municipal uses,
 4 is discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*. Chapter 4, *Approach to the*
 5 *Environmental Analysis*, describes the approach to the analysis, including the rationale for the
 6 project-level and program-level analyses.

7 **1.2.2 Addition of Alternatives 4A, 2D, and 5A**

8 As noted in Section 1.1, *About the BDCP/California WaterFix*, in response to public and agency
 9 comment, the lead agencies have decided to consider an alternative implementation strategy.
 10 Alternatives 4A, 2D and 5A are presented in this Final EIR/EIS due to the desire to explore
 11 alternative regulatory approaches that could facilitate expeditious progress on Delta solutions.
 12 Chapter 3, *Description of Alternatives*, provides a description of the new alternatives, and subsequent
 13 chapters present analysis of their potential environmental effects.

14 The three alternatives introduced in the RDEIR/SDEIS, Alternatives 4A, 2D, and 5A, are considered
 15 “sub-alternatives” to Draft EIR/EIS Alternatives 4, 2A, and 5 because the new alternatives generally
 16 adopt the same conveyance facility features as the original Draft EIR/EIS alternatives but with
 17 different operational characteristics. The new alternatives, however, are not presented as
 18 HCPs/NCCPs according to ESA Section 10 and the NCCPA; therefore, Alternatives 4A, 2D, and 5A are
 19 referred to as *non-HCP alternatives*. The proposed BDCP habitat restoration and stressor reduction
 20 measures (i.e., CM2–CM21) that were presented in the Draft BDCP are not carried forward fully for
 21 Alternatives 4A, 2D, and 5A, except where elements of the former conservation measures are
 22 retained to mitigate the potential impacts of the proposed project in compliance with CEQA, NEPA,
 23 and other environmental regulatory permitting requirements. Many of these original BDCP
 24 conservation measures may, however, be implemented through the separate and independent
 25 California EcoRestore (EcoRestore) program.⁷ Alternatives 4A, 2D, and 5A would achieve federal
 26 and state endangered species act compliance through the Section 7 process under the ESA, and the
 27 Section 2081 process under CESA.

28 As the CEQA and NEPA preferred alternative, Alternative 4A entails the construction and operation
 29 of north Delta intakes and associated tunnel conveyance facilities as a dual conveyance facility
 30 consistent with the updated Alternative 4 described in the RDEIR/SDEIS. Alternatives 2D and 5A
 31 entail conveyance facilities similar to those proposed under Alternatives 2A and 5 but with
 32 alignment and other improvements proposed under Alternatives 4 and 4A. Proposed facility
 33 operations and other actions reflect that revised approach: Alternatives 4A, 2D, and 5A do not
 34 include CM2–CM21 as they are described for the BDCP alternatives. However, the non-HCP
 35 alternatives do include some of the same restoration activities, but at a smaller magnitude, as
 36 Environmental Commitments. Compliance with the ESA would be achieved by Reclamation as the
 37 federal lead action agency under Section 7 of that act. Pursuant to the Coordinated Operations
 38 Agreement (COA), by which DWR and Reclamation coordinate their operations of the SWP and CVP,
 39 Reclamation, and DWR as the project applicant, would consult with both the USFWS and NMFS. This
 40 consultation also is intended to cover the U.S. Army Corps of Engineer’s (USACE’s) issuance of
 41 permits under the Clean Water Act (CWA) and Rivers and Harbors Act for the construction of the
 42 necessary diversion and conveyance facilities. Under the BDCP alternatives, in contrast, DWR would

⁷ https://s3.amazonaws.com/californiawater/pdfs/ECO_FS_Overview.pdf

1 submit an HCP in a request for a 50-year incidental take permit and appropriate assurances from
2 USFWS and NMFS under ESA Section 10, while Reclamation would separately consult with USFWS
3 and NMFS under Section 7. Compliance with state endangered species laws under Alternatives 4A,
4 2D, or 5A would be achieved through a request for authorization of the incidental take of species
5 listed under the CESA in the form of an incidental take permit issued by CDFW under Section
6 2081(b) of the CESA. Under the original conservation plan implementation strategy represented by
7 the BDCP alternatives, in contrast, DWR would submit an NCCP for a 50-year plan term under the
8 NCCPA for approval by CDFW.

9 Because Alternative 4A now represents the preferred alternative (and proposed action) being
10 pursued by DWR and Reclamation, those two agencies remain lead agencies. Because USFWS and
11 NMFS would not have a permitting role under Alternative 4A, those two agencies have assumed
12 roles as cooperating agencies for purposes of NEPA review of the RDEIR/SDEIS and this Final
13 EIR/EIS. The consultation and application processes with USFWS, NMFS, and CDFW, respectively,
14 will utilize, to the extent possible, analyses developed to date for the purposes of the BDCP, as
15 updated, modified, and augmented to address attributes unique to the non-HCP alternatives. New
16 information to address the potential change in the implementation strategy will also be
17 incorporated.

18 This Final EIR/EIS sufficiently describes and discloses, for purposes of CEQA and NEPA, the effects
19 of implementing the BDCP alternatives and Alternatives 4A, 2D, and 5A. Any new information
20 developed for the proposed BDCP since the December 2013 public draft that is needed to
21 adequately disclose environmental effects is included in Appendix 11F, *Substantive BDCP Revisions*.
22 However, the entire BDCP has not been further revised, nor will it be re-released to the public at this
23 time. Should DWR and Reclamation choose not to pursue the preferred alternative (Alternative 4A),
24 but instead choose the original conservation plan implementation strategy and a corresponding
25 action alternative (e.g., Alternative 4) that includes an HCP and NCCP, the current BDCP documents
26 would be updated as necessary. Despite the change in the preferred alternative, the conservation
27 plan alternatives analyzed in this Final EIR/EIS remain potentially feasible. The lead agencies will
28 consider those conservation plan alternatives, in addition to the three non-HCP alternatives
29 presented in this Final EIR/EIS, when completing the project approval process.

30 Section 1.3, *Water Supply Development and Management*, and Section 1.4, *Historical Context*, provide
31 a brief overview of the Delta and the watershed of the Sacramento/San Joaquin Rivers, the SWP and
32 CVP, regulatory and other measures that affect operations of the SWP and CVP, and the relationship
33 of the BDCP/California WaterFix to other long-term planning efforts such as CALFED and the Delta
34 Plan. Appendix 1A, *Primer on California Water Delivery Systems and the Delta*, includes a more
35 detailed presentation of these topics.

36 **1.3 Water Supply Development and Management**

37 The development and management of California's surface water resources is a process that has
38 spanned many decades, and to which private companies and local, state, and federal agencies have
39 contributed. Early on, California's two major population centers, the Los Angeles and San Francisco
40 Bay areas, recognized the need to augment local water supplies, and cities in these areas were the
41 first to develop distant water sources. As California's growth continued, existing water projects
42 became insufficient to meet demands. As a result, two major water projects in California—the CVP

1 and SWP—were initiated in 1937 and 1957, respectively, and subsequently developed to serve
2 agricultural, environmental, and municipal water users throughout California.

3 The SWP and CVP water infrastructure are operated in a coordinated manner. Joint points of
4 diversion allow the use of one project’s diversion facility by the other under certain conditions. In
5 part, both the SWP and CVP water delivery systems rely on runoff and reservoir releases in areas
6 upstream of the Delta to deliver contracted water via the Sacramento and San Joaquin Rivers to
7 Delta export pumps in the south Delta. DWR exports water from the Delta into the SWP system at
8 the Harvey O. Banks Pumping Plant (Banks pumping plant) (which supplies the California
9 Aqueduct). Reclamation exports water into the CVP system at the C. W. “Bill” Jones Pumping Plant
10 (Jones pumping plant) (which supplies the Delta-Mendota Canal). Figure 1-2 shows the major
11 components of the SWP and CVP, and Figure 1-3 shows the extent of the CVP and SWP service areas
12 and export service areas (i.e., those areas that receive Delta water delivered from the Banks and
13 Jones pumping plants).

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

25 **1.3.1 State Water Project**

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

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

42 More detail on the SWP facilities and service areas is provided in Chapter 5, *Water Supply*, Section
43 5.1.2.2.

1.3.2 Central Valley Project

The CVP comprises some 18 reservoirs with a combined storage capacity of more than 11 MAF, 11 power plants, and more than 500 miles of major canals and aqueducts. Major components of the CVP system are shown in Figure 1-2. Reclamation operates and maintains the CVP, which is generally operated as an integrated project, and coordinates operations with the SWP. Authorized project purposes include flood management; navigation; provision of water for irrigation and domestic uses; fish and wildlife protection, restoration, enhancement, and creation; and power generation. However, not all facilities are operated to meet each of these purposes. Reclamation has entered into approximately 250 long-term contracts with water districts, irrigation districts, and others for delivery of CVP water. Currently, there are eight divisions of the project and ten corresponding units. Of the contracted water supply, approximately 70% goes to agricultural users, almost 20% is dedicated to fish and wildlife habitat, and nearly 10% goes to M&I water users (Bureau of Reclamation 2011).

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

1.4 Historical Context

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

Because of heightened regulation of the CVP and SWP in response to species decline, many water users recognized the need to change their delivery strategy. DWR, Reclamation, certain CVP and SWP contractors, USFWS, NMFS, the California Bay-Delta Authority, and CDFW responded to the anticipated and continued uncertainty regarding water supply and ecosystem protection, the growing sentiment that a new approach to the Delta was needed, and a relatively new water delivery strategy, in part, by executing a Memorandum of Agreement (MOA) on July 28, 2006. That MOA was intended to further the development of what has evolved from BDCP and has now become the proposed project. Roughly 2 months after the MOA was signed, those same entities were joined by other water users and nongovernmental organizations in execution of the Planning Agreement Regarding the Bay Delta Conservation Plan (BDCP Planning Agreement dated October 2006). The BDCP Planning Agreement established the Planning Goals for the BDCP that are incorporated in the Project Objective and Purpose and Need Statements presented in Chapter 2, *Project Objectives and Purpose and Need*. For a detailed discussion of the development of project alternatives, please see Chapter 3, *Description of Alternatives*, Section 3.2.

1.4.1 Delta Environmental Protection

The SWP and CVP were planned and constructed with an emphasis on delivering water to develop California's agricultural economy and urban growth, before environmental laws and regulatory practices emerged to protect endangered species, and when much less was known about the Bay-Delta ecosystem and the potential ecosystem impacts of water development. Since about 1968, however, emerging laws, regulations, and policies were enacted to protect, conserve, and restore environmental resources, shaping the way that DWR and Reclamation manage and operate the SWP and CVP facilities. Reservoir releases and Delta exports must be coordinated to ensure that both projects operate within agreed-upon procedures and in a manner consistent with terms and conditions imposed in their water rights permits and licenses. State Water Resources Control Board (State Water Board) decisions and orders, the BiOps under the ESA, the State's CESA, and other permits, statutes and regulations largely determine Delta regulatory requirements for water quality, flow, and operations. The State Water Board's Water Quality Control Plan (WQCP) and applicable water rights decisions, as well as other regulatory processes, are also important in understanding the operations of both the SWP and CVP. Some of the major state and federal regulatory actions that influence operations of the SWP and CVP are listed below. For additional discussion on the state and federal actions affecting California's water system, please refer to Appendix 1A, *Primer on California Water Delivery Systems and the Delta*.

- **Coordinated Operations Agreement (COA) (1986).** The purpose of the COA is to establish rules by which DWR and Reclamation coordinate operations of the SWP and the CVP such that each obtains its share of water flowing into the Delta and bears its share of obligations to protect the other beneficial uses of water in the Delta and Sacramento Valley as defined by regulatory requirements. Coordinated operation under agreed-on criteria is intended to improve the efficiency of both the SWP and CVP.
- **Central Valley Project Improvement Act (CVPIA) (1992).** The CVPIA mandated changes in management of the CVP and, among other requirements, provided for the protection, restoration, and enhancement of fish and wildlife, including dedication of certain quantities of CVP water for that purpose.
- **Water Right Decision 1641 (D-1641).** The State Water Board's D-1641 (adopted in 1999, revised in 2000) implemented water quality objectives for flow and salinity in the Delta.
- **CALFED Bay Delta Program Record of Decision (ROD 2000).** In 2000, several state and federal agencies including Reclamation, DWR, USFWS, DFG, and NMFS released the CALFED Bay Delta Programmatic Record of Decision (ROD) and EIR/EIS. These documents outlined a 30-year plan to improve the Delta's ecosystem, water supply reliability, water quality, and levee stability. The CALFED ROD remains in effect and, although many of the state, federal, and local projects begun under CALFED continue, future direction, administration, and implementation of such projects will be coordinated through the Delta Stewardship Council. The California Supreme Court upheld the adequacy of the EIR component of the EIR/EIS for the CALFED ROD. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143.)
- **USFWS Biological Opinion (2008).** USFWS issued a BiOp concluding that the effects of the proposed long-term operation of the SWP and CVP are likely to jeopardize the continued existence of delta smelt. Under ESA Section 7 (50 Code of Federal Regulations [CFR] 402.02), USFWS developed a five-part reasonable and prudent alternative (RPA) that would likely avoid

1 jeopardy to delta smelt and adverse modification of its critical habitat. On December 14, 2011,
 2 USFWS provided to Reclamation a first draft of a revised BiOp to assist Reclamation with the
 3 development of an updated biological assessment and associated NEPA analysis.

- 4 • **NMFS Biological Opinion (2009).** NMFS issued a BiOp concluding that the effects of the
 5 proposed long-term operation of the CVP and SWP are likely to jeopardize the continued
 6 existence of the following species: Sacramento River winter-run Chinook salmon, Central Valley
 7 spring-run Chinook salmon, Central Valley steelhead, the southern Distinct Population Segment
 8 (DPS) of North American green sturgeon, and southern resident killer whale. NMFS further
 9 concluded that operation of the SWP and CVP is not likely to jeopardize the continued existence
 10 of central California coast steelhead. NMFS developed an RPA composed of numerous elements
 11 for each of the various project divisions and associated stressors and determined that the RPA
 12 must be implemented in its entirety in order to avoid jeopardy and adverse modification of
 13 critical habitat.

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

- 21 • Presence of invasive nonnative fish, wildlife, and plant species.
- 22 • Barriers to fish migration.
- 23 • Changes in Delta water quality constituents, turbidity, and toxicity from natural and human-
 24 made sources.
- 25 • Effects of unscreened power plant and agricultural diversions.
- 26 • Changes in Delta water salinity, largely due to reduced Delta outflow and increased agricultural
 27 runoff.
- 28 • Predation and illegal harvest of native fish.
- 29 • Hatchery management practices.

30 The proposed project's approach to addressing the Delta's challenges attempts to balance
 31 contributions to the protection of species in a way that is feasible in view of the variety of important
 32 uses in the Delta—especially flood protection, agriculture, and recreation (California Natural
 33 Resources Agency 2010).

34 **1.4.2 CALFED and Delta Vision**

35 The CALFED Program was evaluated in a Program EIS/EIR completed in 2000 under CEQA and
 36 NEPA (CALFED Bay-Delta Program Final Programmatic Environmental Impact
 37 Statement/Environmental Impact Report). One of the components of the CALFED Program was a
 38 comprehensive Ecosystem Restoration Program to improve aquatic and terrestrial habitats; the
 39 program included a number of steps and mitigation measures to reduce the environmental effects of
 40 ecosystem restoration, particularly on farmland.

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

5 In April 2006, the CALFED Program issued a 10-Year Action Plan to evaluate financing and
6 governance issues and refocus the Program based on evolving science and changing conditions in
7 the Delta. The 10-Year Action Plan noted that, in addition to changes in governance, a new direction
8 for the CALFED Program is needed to respond to new scientific information becoming available and
9 significant changes occurring in the Delta, including new concerns about seismic stability and the
10 Pelagic Organism Decline. The 10-Year Action Plan contemplates the CALFED Program answering
11 the question: “Should the screened Sacramento River diversion be built or should alternatives to the
12 Through-Delta conveyance approach be reconsidered?” A major priority element of the 10-Year
13 Action Plan is the development of a voluntary planning agreement and HCP/NCCP(s) for Delta and
14 anadromous species. The Action Plan notes that “several Bay-Delta system users ... are working
15 cooperatively to explore preparation of one or more Habitat Conservation Plans...” (CALFED Bay-
16 Delta Program 2006:52) and notes the first step is negotiation of a Planning Agreement (CALFED
17 Bay-Delta Program 2006:53).

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

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

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

42 The Strategic Plan contains recommended strategies and actions including restoration of tidal and
43 riparian habitats and increased frequency of floodplain inundation, improving migratory corridors,
44 addressing invasive species, relocating export diversions and implementing conveyance

1 improvements, revising flow standards and operating criteria, and improving water quality (Delta
2 Vision Blue Ribbon Task Force 2008:ix-x). The cover letter for the Strategic Plan explained the Task
3 Force’s perspective that to achieve a healthy Delta and a more reliable water system, policy makers
4 must undertake the challenges listed below.

- 5 • Legally acknowledge the co-equal goals of restoring the Delta ecosystem and creating a more
6 reliable water supply for California.
- 7 • Restore the Delta ecosystem as the heart of a healthy estuary.
- 8 • Build facilities to improve the existing water conveyance system and expand statewide storage,
9 and operate both to achieve the co-equal goals.

10 Many of the concepts presented in the Strategic Plan are being pursued through the California
11 WaterFix.

12 The heart of the California WaterFix is a proposed project that sets forth some of the actions needed
13 for a healthy Delta, building upon the framework set forth through the CALFED Program and Delta
14 Vision processes. In February 2008, Governor Schwarzenegger directed DWR to proceed with the
15 NEPA/CEQA analysis of four alternatives for Delta conveyance (consistent with the alternatives
16 analyzed in the EIR/EIS; see Chapter 3, *Description of Alternatives*).

17 **1.4.3 Relationship to the Delta Reform Act and Delta Plan**

18 The Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act) established in state law
19 and policy a scheme to achieve comprehensive management of the Delta in support of the coequal
20 goals of water supply reliability and ecosystem restoration in a manner that acknowledges the
21 evolving nature of the Delta as a place for people and communities. The Delta Reform Act created
22 the Delta Stewardship Council (DSC) and empowered it to develop a comprehensive management
23 plan (Delta Plan). State and local agencies proposing certain kinds of actions or projects in the Delta
24 need to certify for the DSC that those efforts are consistent with the Delta Plan. For a more detailed
25 discussion of the interplay between the BDCP/California WaterFix and the Delta Reform Act and the
26 Delta Plan, please see Appendix 3A, Section 3A.3.3, “Application of the Sacramento-San Joaquin Delta
27 Reform Act,” Appendix 3I, *BDCP Compliance with the 2009 Delta Reform Act*, and Appendix 3J,
28 *Alternative 4A (Proposed Project) Compliance with the 2009 Delta Reform Act*.

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

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

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

37 Providing a more reliable water supply for the state involves implementation of water use efficiency
38 and conservation projects, wastewater reclamation projects, desalination, and new and improved
39 infrastructure, including water storage and Delta conveyance facilities. (Water Code Section
40 85004[b]).

41 The BDCP alternatives, as set forth in the Draft EIR/EIS, are intended to be able to be incorporated
42 directly into the Delta Plan pursuant to Water Code Section 85320. That statute requires such direct

1 incorporation, provided that certain conditions are met. The Delta Reform Act provides that
 2 following completion of the BDCP, the BDCP shall be incorporated into the Delta Plan by operation
 3 of law if the California Department of Fish and Game (now CDFW) determines that the BDCP meets
 4 the requirements of Water Code sections 85320 and 85321. Among the conditions, Section 85320
 5 requires that the BDCP must have been approved by CDFW as an NCCP and by USFWS as an HCP,
 6 and the CEQA analysis must include a comprehensive review and analysis of all of the following
 7 components.

- 8 • A reasonable range of flow criteria, rates of diversion, and other operational criteria required to
 9 satisfy the criteria for approval of a natural community conservation plan as provided in
 10 subdivision (a) of Section 2820 of the Fish and Game Code, and other operational requirements
 11 and flows necessary for recovering the Delta ecosystem and restoring fisheries under a
 12 reasonable range of hydrologic conditions, which will identify the remaining water available for
 13 export and other beneficial uses.
- 14 • A reasonable range of Delta conveyance alternatives, including through-Delta, dual conveyance,
 15 and isolated conveyance alternatives and including further capacity and design options of a
 16 lined canal, an unlined canal, and pipelines.
- 17 • The potential effects of climate change, possible sea level rise up to 55 inches, and possible
 18 changes in total precipitation and runoff patterns on the conveyance alternatives and habitat
 19 restoration activities considered in the environmental impact report.
- 20 • The potential effects on migratory fish and aquatic resources.
- 21 • The potential effects on Sacramento River and San Joaquin River flood management.
- 22 • The resilience and recovery of Delta conveyance alternatives in the event of catastrophic loss
 23 caused by earthquake, flood, or other natural disaster.
- 24 • The potential effects of each Delta conveyance alternative on Delta water quality.

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

35 These requirements do not apply to Alternatives 2D, 4A, and 5A, as described in the RDEIR/SDEIS,
 36 because Water Code Section 85320 does not apply to alternatives that are not formulated as
 37 HCPs/NCCPs. For these alternatives, which would involve construction and operation of water
 38 intakes in the north Delta and associated conveyance facilities, Delta Reform Act compliance would
 39 be achieved through either the Delta Plan Consistency certification process (see Water Code Section
 40 85225 et seq.) or through a possible future amendment to the Delta Plan.

41 For further description regarding the proposed project's compliance with the Delta Reform Act, see
 42 Appendix 3I, *BDCP Compliance with the 2009 Delta Reform Act*. For more information on the Delta
 43 Plan see Chapter 13, *Land Use*, Section 13.2.2.2, and Appendix 3J, *Alternative 4A (Proposed Project)*

1 *Compliance with the 2009 Delta Reform Act. See also Section 1.6.2.6, Delta Stewardship Council, for a*
 2 *discussion of the Stewardship Council’s authority over the proposed project.*

3 **1.5 EIR/EIS Project Area**

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

- 8 • Upstream of the Delta region.
- 9 • Delta Region (referred to hereinafter as the Plan Area, and distinct from the larger Delta region
 10 considered for some areas, which consists generally of the statutory Delta, the Yolo Bypass
 11 north of the statutory Delta, and Suisun Marsh, as well as the Areas of Additional Analysis,⁸
 12 which apply to several EIR/EIS alternatives).
- 13 • SWP and CVP Export Service Areas.

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

16 **1.5.1 Upstream of the Delta Region**

17 The Upstream of the Delta region is shown in Figures 1-5 through 1-8. This region comprises those
 18 areas in the SWP and CVP system upstream of the Delta.

19 **1.5.2 Delta Region (Plan Area)**

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

30 For the purposes of this EIR/EIS, the Delta Region—or Plan Area and Areas of Additional Analysis—
 31 encompass the statutory Delta, as well as the areas where CM1–CM21 would be implemented
 32 outside the statutory Delta (Figure 1-9). All the water conveyance features that would be
 33 constructed, including new intake facilities, would be located within the Delta region.

⁸ 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 (Alternatives 4, 4A, 2D and 5A).

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 the project under all the action 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 project 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 action 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 project and to inform permit decisions for the issuance of the required clearances under federal and state endangered species laws. The EIR/EIS is thus intended to provide complete project-level analysis for such actions. For the BDCP alternatives addressed in the Draft EIR/EIS, such actions would be taken by USFWS and NMFS, which would permit the BDCP under the ESA, and by CDFW, which would approve the BDCP as an NCCP under the NCCPA. For the non-HCP alternatives described in the RDEIR/SDEIS, compliance with the ESA would be achieved by Reclamation as the federal lead action agency through compliance with Section 7 of that act. Pursuant to the COA, by which DWR and Reclamation coordinate their operations of the SWP and CVP, Reclamation, and DWR as the project applicant, would consult with both the USFWS and NMFS., DWR would comply with CESA by applying to CDFW for their issuance of an incidental take permit under Section 2081 of the California Fish and Game Code.

With respect to particular components of the BDCP alternatives 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, for such alternatives, the EIR/EIS is intended to provide project-level assessment of the potential effects of modified and/or new conveyance facilities (CM1), including project-specific mitigation, and SWP water supply contract amendments and/or funding agreements (described further in Chapter 3, *Description of Alternatives*, Section 3.8). In assessing environmental effects associated with the water conveyance facilities, the EIR/EIS also refers to Environmental Commitments, BDCP conservation measures, and avoidance and minimization measures (AMMs) that are intended to reduce, avoid, or minimize these effects. For CM2–CM21 evaluated in the BDCP alternatives, in contrast, the EIR/EIS provides program-level or programmatic review. Thus, additional site-specific environmental compliance documents will likely be required for implementation of some conservation measures associated with the BDCP alternatives (including, for example, wetland permitting actions by the USACE). Additional information and/or documentation may be necessary during consideration of related permit application and decision-making processes. This EIR/EIS is intended to provide CEQA and NEPA support for approval of any of the BDCP alternatives or non-HCP alternatives, and to inform decisions for the issuance of related permits. The EIR/EIS is thus intended to provide complete project-level analysis for actions presented in all the alternatives.

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

20 Similarly, under NEPA (42 U.S. Code (USC) 4321) and the Council on Environmental Quality (CEQ)
21 regulations for implementing NEPA (40 CFR 1500-1508), federal agencies are required to prepare
22 an EIS for major federal actions significantly affecting the quality of the human environment. The EIS
23 must rigorously explore and objectively evaluate the environmental effects of an action, including a
24 range of reasonable alternatives, and identify mitigation measures to minimize adverse effects for
25 the range of impacts of the proposal when they propose to carry out, approve, or fund a project that
26 may have a significant effect on the environment. To ensure environmental effects of a proposed
27 action are fairly assessed, the probability of the mitigation measures being implemented must also
28 be discussed and the EIS and Record of Decision should indicate the likelihood that such measures
29 will be adopted or enforced, and when they might be available (40 CFR 1502.16[h] and 1505.2; see
30 also Council on Environmental Quality 1981). A *programmatic EIS* under CEQ regulations for
31 implementing NEPA (40 CFR 1500.4(i), 1502.4(b) and (c), 1502.20) may be prepared to analyze
32 broad-scope actions that are similar in terms of timing, geography, or other characteristics.
33 Subsequent analysis of more specific proposals is generally required under NEPA, and information
34 from a programmatic EIS can be referenced (tiered) in the subsequent NEPA document to reduce
35 redundancy. Like EIRs, however, a single EIS can contain both programmatic and site-specific
36 (project-level) elements.

37 Under both CEQA and NEPA, a combined joint document may be prepared to meet the requirements
38 of both CEQA and NEPA. As explained above, the joint EIR/EIS intends to provide a combination of
39 project-level and program-level analyses for individual elements of the BDCP alternatives and
40 project-level analyses for the non-HCP alternatives. This document is intended to provide a
41 sufficient level of detail to comply with NEPA and, with the Biological Assessment, allow USFWS and
42 NMFS to make an informed decision under the ESA. Similarly this document is intended to provide
43 sufficient level of detail to comply with CEQA and, with the Section 2081(b) application, allow for
44 approvals needed by CDFW.

45 Design information for the water conveyance facilities and existing facility operational changes, is
46 available at a project level; accordingly, this EIR/EIS analyzes the potential environmental effects of

1 these elements (CM1 under the BDCP alternatives) at the project level of detail, and is meant to
2 provide the CEQA and NEPA Lead Agencies with sufficient information to make a decision on
3 whether to permit and/or carry out the water supply conveyance and operational changes to move
4 fresh water through and/or around the Delta after the EIR/EIS has been completed (and subject to
5 the approval of related permits). Although the EIR/EIS is intended to provide sufficient NEPA
6 coverage for Reclamation and ESA compliance by the USFWS and NMFS, the USACE, in considering
7 whether to grant permits under the Clean Water Act and Rivers and Harbors Act, may require
8 additional analyses for NEPA and other permitting necessary for the component pieces of the water
9 conveyance facilities that affect federally protected wetlands and other waters of the U.S. No such
10 additional analysis would be required by CEQA, which treats the fill of wetlands as mitigation
11 activities that need not be addressed at the same level of detail as other project components. (State
12 CEQA Guidelines Section 15126.4[a][1][D] [“[i]f a mitigation measure would cause one or more
13 significant effects in addition to those that would be caused by the project as proposed, the effects of
14 the mitigation measure shall be discussed but in less detail than the significant effects of the project
15 as proposed”]; *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603,
16 621-623 [upholds mitigation measure requiring off-site wetland mitigation despite the fact that the
17 challenged EIR did not identify the off-site location(s) at which such mitigation would occur].) It is
18 expected that no additional analysis would be required for CDFW to issue an approval under the
19 Lake and Streambed Alternation Program.

20 Because of the sheer size of the land area affected by the water conveyance facilities, the lead
21 agencies have used a mix of different methods to ensure adequate project-level analysis for those
22 facilities. For example, in addition to narrative text describing both existing environmental
23 conditions and the extent of anticipated environmental effects, graphics in Mapbooks accompanying
24 this EIR/EIS visually depict the footprints of proposed physical facilities and disturbance areas.
25 These footprint areas are sometimes oversized to some degree in order to conservatively depict
26 probable areas of impact. Readers should assume that, unless otherwise stated, the full areas
27 beneath the depicted footprints will be subject to surface impacts, even though the real physical
28 impacts, if and when they occur, may sometimes be more limited. Within the footprint areas
29 associated with future physical facilities and the areas that will be disturbed during construction,
30 temporary physical structures such as concrete batch plants, tunnel segment storage areas, and
31 staging areas could be located, depending on the sensitivity of surrounding areas. The potential
32 impacts of such temporary structures and uses on such potentially sensitive adjoining areas would
33 be minimized or eliminated through the use of avoidance and minimization measures,
34 environmental commitments, or mitigation measures. These means of reducing effects are described
35 throughout this document.

36 Design information for CM2–CM21 of the proposed BDCP alternatives, which include restoration
37 and conservation strategies for aquatic and terrestrial habitat and other stressor reduction
38 measures, is currently at a conceptual level. Accordingly, although this EIR/EIS is intended to
39 provide the full CEQA and NEPA analysis needed for the issuance of take permits for the BDCP
40 alternatives, this EIR/EIS provides only programmatic level analysis of these conservation
41 measures, describing what environmental effects may occur in this future phase of BDCP alternative
42 implementation. Consequently, if one of the BDCP alternatives is chosen, USFWS, NMFS, and CDFW
43 may approve and issue permits under the BDCP based on this EIR/EIS, but other authorizations by
44 agencies subject to NEPA and CEQA necessary to implement CM2–CM21 may not be obtained until a
45 later date, when more detailed design information is available. At this later time, it will be
46 determined whether more focused, project-level environmental review is required. Additionally, the

1 USFWS and NMFS would determine whether to issue 50-year ITPs under ESA Section 10(a)(1)(B)
 2 for the incidental take of species covered under the BDCP related to the construction, operation, and
 3 maintenance associated with water conveyance, ecosystem restoration, and other activities as
 4 described in the BDCP.

5 The lead agencies intend for this document to provide the NEPA/CEQA compliance necessary for
 6 approval of any of the alternatives that may be chosen, subject to other pertinent laws and policies,
 7 and related permit approval processes. The following sections describe the relevant review,
 8 approval, and consultation requirements necessary to implement the proposed project.

9 **1.6.1 Overview of Approval Process**

10 **1.6.1.1 BDCP Alternatives**

11 The alternatives in this EIR/EIS that would function as HCPs are being proposed by DWR in
 12 collaboration with the SWP and CVP water contractors, including those listed below, who are
 13 collectively, with DWR, referred to as project proponents.

- 14 • Alameda County Flood Control and Water Conservation District, Zone 7
- 15 • The Metropolitan Water District of Southern California
- 16 • The Kern County Water Agency
- 17 • The San Luis and Delta-Mendota Water Authority
- 18 • The Santa Clara Valley Water District
- 19 • The Westlands Water District

20 Additional water contractors may become project proponents in the future through the project's
 21 process if a BDCP alternative is chosen.

22 For BDCP Alternatives (and non-HCP Alternatives), DWR has the responsibility to operate and
 23 maintain the SWP and would be involved in all aspects of construction and operation of the water
 24 conveyance facilities, related to the SWP, as well as any discretionary actions related to coordination
 25 with Reclamation or its contractors. For the BDCP Alternatives (and non-HCP Alternatives), the SWP
 26 contractors may be involved, among other actions, in decisions related to contract amendments to
 27 fund construction of conveyance facilities for a selected action alternative. In addition, the Delta
 28 Reform Act (codified in Water Code Section 85089(a)) requires that, *a new Delta conveyance facility*
 29 *shall not be initiated until the persons or entities that contract to receive water from the State Water*
 30 *Project and the federal Central Valley Project or a joint powers authority representing those entities*
 31 *have made arrangements or entered into contracts to pay for both of the following: (a) The costs of*
 32 *the environmental review, planning, design, construction, and mitigation, including mitigation*
 33 *required pursuant to [CEQA], required for the construction, operation, and maintenance of any new*
 34 *Delta water conveyance facility. (b) Full mitigation of property tax or assessments levied by local*
 35 *governments or special districts for land used in the construction, location, mitigation, or operation of*
 36 *new Delta conveyance facilities.*

37 As previously stated, the BDCP Alternatives would achieve compliance with the ESA through
 38 application for approval of a HCP from USFWS and NMFS under Section 10 of the ESA, and would
 39 achieve compliance with the NCCPA (and CESA) through request for approval of a NCCP from CDFW.
 40 Should DWR and Reclamation choose to implement a BDCP Alternative (e.g., Alternative 4) that

1 includes an HCP and NCCP, the current BDCP documents would be updated as necessary and both
 2 USFWS and NMFS would again act as permitting agencies and be required to make appropriate
 3 findings as directed by NEPA.

4 **1.6.1.2 Alternatives 4A (California WaterFix), 2D, and 5A**

5 Alternatives 2D, 4A, and 5A are being proposed by DWR. Reclamation would retain its authority to
 6 coordinate CVP operations with the SWP, including the additional diversion facilities associated
 7 with the non-HCP Alternatives. As stated above, the SWP and CVP contractors will have a role in
 8 funding the alternatives. Compliance with the ESA would be achieved by Reclamation as the federal
 9 lead action agency under Section 7 of that act. Pursuant to the interagency consultation
 10 requirements of Section 7 of the ESA of 1972, as amended, a Biological Assessment has been
 11 prepared for Alternative 4A (California WaterFix) to assess the effects of the proposed action on
 12 species listed, or designated critical habitat under the ESA. Compliance with state endangered
 13 species laws under Alternatives 4A, 2D, or 5A would be through a request for authorization of the
 14 incidental take of species listed under the CESA in the form of an incidental take permit issued by
 15 CDFW under Section 2081(b) of the CESA.

16 **1.6.1.3 Lead Agencies**

17 Before the selection and approval of one of the alternatives considered through the CEQA and NEPA
 18 process, the Lead Agencies must comply with the necessary state and federal environmental review
 19 requirements. This Final EIR/EIS is intended to provide sufficient CEQA and NEPA support for
 20 project approval and to inform permit decisions for the issuance of various project permits and
 21 authorizations. DWR is lead agency for CEQA compliance purposes and Reclamation is lead agency
 22 for NEPA compliance purposes. As mentioned previously, USFWS and NMFS were originally
 23 participating as lead agencies for the Draft EIR/EIS, but because USFWS and NMFS would not have a
 24 permitting role under Alternative 4A, these two agencies have assumed roles as cooperating
 25 agencies for purposes of NEPA review of the RDEIR/SDEIS and this Final EIR/EIS.

26 DWR has the responsibility to operate and maintain the SWP and would be responsible for all
 27 construction activities associated with the proposed project and alternatives, including new intakes
 28 and associated conveyance facilities. DWR would operate and maintain any new SWP facilities and
 29 may also partake in discretionary actions related to coordination with Reclamation or its
 30 contractors. DWR may also have other actions related to contract amendments to fund the selected
 31 action.

32 While DWR would be responsible for construction of all water conveyance facilities, Reclamation
 33 would operate the relevant CVP Delta facilities in coordination with the SWP, including new intake
 34 and conveyance facilities, through the COA.⁹ SWP operation of new conveyance facilities and/or flow
 35 patterns proposed under the proposed project or alternatives would require changes in existing CVP
 36 operations specific to the Delta that provide for diversion, storage, and conveyance of CVP water
 37 consistent with applicable law and contractual obligations. Reclamation's action in relation to the
 38 proposed project or alternatives would be to adjust CVP operations in the Delta to accommodate
 39 new conveyance facility operations and/or flow requirements, in coordination with SWP operations.

⁹ COA was entered into at the direction of Congress by the United States of America and the State of California in November 1986.

1 At this time it is anticipated that CVP upstream operations will not change to accommodate
2 construction and operation of new water conveyance facilities as may be proposed.

3 **1.6.2 Use of this EIR/EIS by Other Entities**

4 This document is a joint Final EIR/EIS prepared in compliance with the requirements of CEQA and
5 NEPA. Before the selection and approval of an alternative considered, the Lead Agencies must
6 comply with the necessary state and federal environmental review requirements. This Final EIR/EIS
7 is intended to provide sufficient CEQA and NEPA support for approval of the proposed project or
8 any of the action alternatives for either compliance strategy. As implementation of the proposed
9 project or any of the action alternatives will require permits and approvals from public agencies
10 other than the Lead Agencies, the CEQA and NEPA documents are prepared to support the various
11 public agency permit approvals and other discretionary decisions. These other public agencies are
12 referred to as responsible agencies and trustee agencies under State CEQA Guidelines Sections
13 15381 and 15386 (e.g., CDFW and the State Water Board) and cooperating agencies under NEPA
14 (e.g., USFWS, NFMS, USACE, and the U.S. Environmental Protection Agency [EPA]). The key agencies
15 roles and responsibilities are summarized below.

16 Responsible agencies are state or local public agencies other than the CEQA lead agency that have
17 discretionary approval over aspects of the project. In most circumstances, CEQA requires a
18 responsible agency to use the lead agency's CEQA document to support its own decision-making
19 process (State CEQA Guidelines Section 15096). Trustee agencies are state agencies that have
20 jurisdiction by law over natural resources affected by a project that are held in trust for the people
21 of California (State CEQA Guidelines Section 15386). As described in CEQ's NEPA regulations (40
22 CFR 1501.6), federal agencies other than the NEPA lead agency that have jurisdiction by law or
23 special expertise with respect to the environmental effects anticipated from the project can be
24 included as cooperating agencies. Federal agencies may use the lead agency's NEPA document to
25 support their own decision-making process, if appropriate. A cooperating agency participates in the
26 NEPA process and may provide input (i.e., expertise) during preparation of the NEPA document.
27 Federal agencies may designate and encourage nonfederal public agencies, such as state, local, and
28 tribal agencies that meet the same criteria as federal cooperating agencies, to participate in the
29 NEPA process as cooperating agencies (40 CFR 1508.5).

30 Additionally, other federal and state agencies may contribute to and rely on information prepared as
31 part of the environmental compliance process, including this Final EIR/EIS and supporting
32 materials. A listing of the agencies and respective potential review/approval responsibilities, in
33 addition to those under CEQA and NEPA, is provided in Table 1-1.

34 **1.6.2.1 U.S. Fish and Wildlife Service and National Marine Fisheries** 35 **Service**

36 The United States Congress passed the ESA in 1973 to provide a means for conserving endangered
37 and threatened species and the ecosystems on which they depend. The ESA has three major
38 components relevant to the action alternatives, including the California WaterFix.

- 39 • Section 7 requires that federal agencies, in consultation with the federal fish and wildlife
40 agencies, ensure that their actions are not likely to jeopardize the continued existence of listed
41 species or result in adverse modification or destruction of critical habitat.
- 42 • Section 9 and regulations promulgated under Section 4(d) prohibit the taking of listed species.

- Section 10 allows permits to be issued that authorize the incidental take of threatened and endangered species.

Section 7 of the ESA provides that each federal agency must ensure, in consultation with the Secretary of the Interior or Commerce, that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat (16 United States Code [USC] 1536(a)(2)). Section 7 requires federal agencies to engage in formal consultation with USFWS and/or NMFS for any proposed actions that are likely to adversely affect listed species. A BiOp is issued by USFWS or NMFS at the completion of formal consultation. The BiOp can conclude that the project as proposed is either likely or not likely to jeopardize the continued existence of the species or destroy or adversely modify designated critical habitat. If the BiOp concludes no jeopardy, the action can proceed as proposed consistent with the incidental take statement, which specifies the impact (i.e., the amount or extent) of incidental taking of the species. The incidental take statement contains “reasonable and prudent measures” that are designed to minimize the level of incidental take, and terms and conditions that must be complied with to implement the reasonable and prudent measures. Any taking that is in compliance with the terms and conditions of the incidental take statement is not a prohibited taking under the ESA, and no other authorization or permit under the ESA is required (50 CFR 402.14(i)(5)). If the BiOp concludes jeopardy, USFWS or NMFS will identify “reasonable and prudent alternatives” to the proposed action that would avoid jeopardizing the species.

Section 9(a)(1)(B) of the ESA prohibits the take by any person of any endangered fish or wildlife species; take of threatened fish or wildlife species is prohibited by regulation. The ESA prohibits the take of any listed threatened fish or wildlife species in violation of any regulation promulgated by USFWS or NMFS. Take under ESA is defined broadly to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct (16 USC 1532 [1988]). Harm is defined by regulation to mean an act that actually kills or injures wildlife, including those activities that cause significant habitat modification or degradation resulting in the killing or injuring of fish or wildlife by significantly impairing essential behavior patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 17.3, 50 CFR 222.102). The take prohibitions of the ESA apply except as specifically provided under Section 7 or Section 10 of the ESA. The protections for listed plant species under the ESA are more limited than for fish and wildlife.

Section 10 of the ESA provides the basis for nonfederal entities to obtain authorization for the take of listed species. For those actions for which no federal nexus exists, private individuals, corporations, state and local government agencies, and other nonfederal entities that wish to conduct otherwise lawful activities that may incidentally result in the take of a listed species must first obtain a Section 10 permit from USFWS and/or NMFS. The nonfederal entity is required to develop an HCP as part of the permit application process.

Under Section 10(a)(1)(B) of the ESA, USFWS and NMFS may permit the incidental take of listed species that may occur as a result of an otherwise lawful activity. For an applicant to obtain a Section 10(a)(1)(B) permit, USFWS or NMFS must find that the permit application and HCP meet the following five issuance criteria.

- The taking will be incidental to an otherwise lawful activity.
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.

- 1 • The applicant will ensure that adequate funding for the Plan will be provided.
- 2 • The taking will not appreciably reduce the likelihood of the survival and recovery of the species
- 3 in the wild.
- 4 • Other measures, if any, which USFWS and NMFS require as being necessary or appropriate for
- 5 purposes of the Plan will be met (16 USC 1539(a)(2)(A)).

6 The proposed action and action alternatives will require ESA compliance, including the requirement
7 to obtain incidental take authorization. The following discussion presents the alternative
8 compliance strategies, depending on the particular alternative.

9 **Section 7 of the Endangered Species Act**

10 Where the alternative does not include preparation of an HCP (i.e., Alternatives 2D, 4A, and 5A), ESA
11 compliance for construction and operation of water intakes in the north Delta and associated
12 conveyance facilities would be achieved solely through Section 7. For these alternatives, USFWS and
13 NMFS would not issue a permit. Where Section 7 is the ESA compliance strategy, USFWS and NMFS
14 will assume roles as cooperating agencies, rather than as lead agencies, for purposes of the NEPA
15 review.

16 Reclamation would be the lead federal action agency for Section 7 compliance where a non-HCP
17 alternative is selected. Reclamation's Section 7 compliance would be expected to also address the
18 Section 7 compliance needs for the USACE permit actions. In cooperation with DWR, Reclamation
19 would prepare a biological assessment (BA) for submission to USFWS and NMFS requesting formal
20 consultation under ESA Section 7. It is expected that USFWS and NMFS would ultimately prepare a
21 BiOp including an incidental take statement for federally listed species.

22 **Section 10 of the Endangered Species Act**

23 Where the alternative involves preparation of an HCP (i.e., the BDCP alternatives), ESA compliance
24 will occur primarily through Section 10. Under this alternative compliance strategy, DWR and
25 certain federal and state water contractors¹⁰ would submit permit applications to USFWS and NMFS
26 for authorization, over a 50-year permit term, to take endangered or threatened species and non-
27 listed "covered species" related to a broad range of conservation measures, including construction
28 and operation of water intakes in the north Delta and associated conveyance facilities, and would
29 also request certain assurances over the 50 year permit term related to the proposed covered
30 species. The compliance process under Section 10 is separate from Section 7 consultations but
31 under this approach, USFWS, NMFS and Reclamation would all require compliance with Section 7,
32 though much of the same information developed during the Section 10 process would be utilized for
33 the Section 7 consultations.

34 **Magnuson-Stevens Fisheries Conservation and Management Act**

35 Section 305(b) of the Magnuson-Stevens Fisheries Conservation and Management Act as amended
36 by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires federal agencies to consult
37 with NMFS on activities that may adversely affect essential fish habitat (EFH) for species that are
38 managed under federal fishery management plans in United States waters. The statutory definition

¹⁰ Kern County Water Agency; Metropolitan Water District of Southern California; San Luis & Delta-Mendota Water Authority; Santa Clara Valley Water District; State and Federal Contractors Water Agency; Westlands Water District; and Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency).

1 of EFH includes *those waters and substrate necessary to fish for spawning, breeding, feeding or growth*
 2 *to maturity*, which encompasses all physical, chemical, and biological habitat features necessary to
 3 support the entire life cycle of the species in question. Waters potentially affected by either
 4 alternative compliance strategy include EFH for Pacific salmon, groundfish, and coastal pelagic
 5 fishes, and it is expected that compliance with the Magnuson-Stevens Act for the proposed project or
 6 any of the action alternatives will be integrated with consultation under Section 7 of the ESA.

7 **1.6.2.2 U.S. Army Corps of Engineers¹¹**

8 USACE has regulatory authority over activities within certain waters within the project area.
 9 Depending on the activity and the location of that activity in relation to particular resources, USACE
 10 may be required to issue an authorization for that activity under:

- 11 • Section 404 of the CWA (discharge of dredged or fill material into waters of the United States).
- 12 • Section 10 of the Rivers and Harbors Act (activities in, under, or over navigable waters of the
 13 United States).
- 14 • Section 14 of the Rivers and Harbors Act (activities that have the potential to affect USACE civil
 15 works projects, including project levees).

16 **Section 404 of the Clean Water Act**

17 Activities that would result in the discharge of dredged or fill materials into “waters of the U.S.” must
 18 obtain authorization from USACE pursuant to Section 404 of the CWA (33 USC 1251 et seq.). A
 19 permit issued under Section 404 can take the form of either a General Permit or an Individual
 20 Permit. Individual Permits are designed for activities that have the potential to have more than a
 21 minimal effect on jurisdictional waters or that otherwise do not qualify to proceed under a General
 22 Permit. The discharge activities that would occur in connection with either alternative compliance
 23 strategy, including that of the proposed project, or any action alternatives, would require an
 24 Individual Permit.

25 **Section 10 of the Rivers and Harbors Act**

26 Activities that would involve the construction of any structure in or over any navigable water of the
 27 United States must obtain authorization from USACE pursuant to Section 10 of the Rivers and
 28 Harbors Act of 1899 (33 USC Section 403 et seq.; 33 CFR Sections 322 et seq.). Structures or work
 29 outside the limits defined for navigable waters of the United States require a Section 10 permit if
 30 “the structure or work affects the course, location, or condition of the water body” (33 CFR Section
 31 322.3(a)). The law applies to any dredging or disposal of dredged materials, excavation, filling,
 32 rechannelization, or any other modification of a navigable water of the United States, and applies to
 33 all structures, from the smallest floating dock to the largest commercial undertaking (33 CFR Section
 34 322.2(b)).

35 Where the activities overlap, the process for obtaining a permit under Section 10 of the Rivers and
 36 Harbors Act is combined with the process for obtaining a permit under Section 404 of the CWA and
 37 compliance with the 404 permitting criteria will cover the substantive requirements of the Rivers
 38 and Harbors Act permitting process. The activities related to navigable waters would occur in
 39 connection with either alternative compliance strategy, including that of the proposed project, or

¹¹ See Appendix 1F for more detailed discussion of the USACE permit process and the specific informational needs of USACE under its various regulatory authorities.

1 any action alternatives, and would require a permit under Section 10 of the Rivers and Harbors Act.
 2 DWR would apply to USACE for issuance of one permit consistent with both Section 10 of the Rivers
 3 and Harbors Act and Section 404 of the CWA.

4 **Section 14 of the Rivers and Harbors Act**

5 Section 14 of the Rivers and Harbors Act (33 USC Section 408) requires permission from the
 6 Secretary of the Army, acting through USACE to alter an existing USACE civil works project. To grant
 7 permission under Section 408, USACE must determine that the proposed alteration does not impair
 8 the usefulness of the USACE project, and would not be injurious to the public interest. This is
 9 generally referred to as “Section 408 permission.” Section 408 permission would be required for
 10 alteration and/or modification of federally constructed levees associated with either alternative
 11 compliance strategy, including that of the proposed project, or any action alternatives. The
 12 informational requirements under the Section 408 process necessarily includes a detailed level of
 13 engineering design, as well as a detailed level of analysis related to effects to the USACE civil works
 14 projects and indirect hydraulic effects. The information contained in the current NEPA documents
 15 may not fully meet this level of detail and additional informational submittals and analysis may be
 16 necessary. As a result of these submittals, prior to issuance of final 408 permission, additional NEPA
 17 compliance by USACE may be required.

18 For USACE engagement in the permit and authorization activities described above, NEPA
 19 compliance will be necessary. USACE will be acting as a Cooperating Agency within the current
 20 NEPA process for the proposed project and all action alternatives. In addition, USACE has designated
 21 Reclamation as the lead federal action agency for purposes of compliance with Section 7 of the ESA.

22 **1.6.2.3 Environmental Protection Agency**

23 **CWA Section 404**

24 USACE is solely responsible for making final Section 404 (and Rivers and Harbors Act) permit
 25 decisions, including final determinations of compliance with USACE permit regulations, and the
 26 Section 404(b)(1) Guidelines (33 USC Section 1344; 40 CFR 230.11; Clean Water Act Section 404(q)
 27 Memorandum of Agreement Between The Environmental Protection Agency and The Department of
 28 the Army to “Minimize, to the Maximum Extent Practicable, Duplication, Needless Paperwork and
 29 Delays in the Issuance of Permits” (August 11, 1992)) (404(q) MOA). However, in conjunction with
 30 USACE, EPA promulgates guidelines (and guidance on those guidelines) that USACE applies to the
 31 Section 404 permit process, and EPA may provide USACE with comments during the permitting
 32 process (33 USC Section 1344(b)(1); 40 CFR 230, 40 CFR 230.2(c)). The EPA may elevate an
 33 Individual Permit (in relation to Section 404) in the event that the EPA Regional Administrator
 34 believes that the issuance of the permit would result in substantial and unacceptable impacts to
 35 “aquatic resources of national importance” pursuant to Section 404(q) (33 USC Section 1344(q))
 36 and the 404(q) MOA. Under Section 404(c) of the CWA, if the EPA determines, after notice and
 37 opportunity for public hearings, that the permitted activity would have unacceptable adverse
 38 impacts on an aquatic or wetland ecosystem which is likely to result in significant degradation of
 39 municipal water supplies or on fishing, wildlife or recreation areas (33 USC 1344(c); 40 CFR
 40 231.2(e), 231.3, 231.4), the EPA may “veto” the Individual Permit (in relation to Section 404).
 41 Specifically, EPA may 1) prohibit the specification (including the withdrawal of specification) of any
 42 defined areas as a disposal site and 2) deny or restrict the use of any defined area for specification
 43 (including the withdrawal of specification as a disposal site) (33 USC Section 1344(c)).

1 NEPA Review

2 Section 309 of the Clean Air Act (codified at 42 USC Section 7609) requires EPA to review and
 3 publicly comment on the environmental impacts of major Federal actions. EPA interprets Section
 4 309 as requiring it to review and comment on all draft EISs. EPA's *Policy and Procedures for the*
 5 *Review of Federal Actions Impacting the Environment* published in 1984 establishes rating system
 6 criteria for EISs that establishes two separate determinations. The first basis of review is the
 7 environmental impacts of the action and results in one of the following ratings: LO (Lack of
 8 Objections), EC (Environmental Concerns), EO (Environmental Objections), and EU
 9 (Environmentally Unsatisfactory). The second area of review rates the adequacy of the draft EIS and
 10 results in one of the following ratings: 1 (adequate), 2 (Insufficient Information), or 3 (Inadequate).

11 Section 309 requires that when EPA determines that a proposed action “is unsatisfactory from the
 12 standpoint of public health or welfare or environmental quality, the matter shall be referred to the
 13 Council on Environmental Quality (CEQ).” CEQ has issued rules establishing a process for handling
 14 referrals from EPA. The rules encourage agencies to make concerted efforts to resolve their NEPA
 15 disputes informally and limit the CEQ to resolving referrals only for those interagency disputes that
 16 rise to the level of national importance (42 USC Section 7609; 40 CFR 1504).

17 Water Quality Control Plans

18 In California, the State Water Board has the authority to adopt water quality control plans. Under the
 19 CWA, new or revised water quality standards must be approved by EPA. Therefore, EPA's Section
 20 309 review of a federal agency's EIS will necessarily encompass its authority under the CWA.

21 1.6.2.4 California Department of Fish and Wildlife

22 The CESA prohibits the take of wildlife or plant species designated as threatened or endangered by
 23 the California Fish and Game Commission (Fish and Game Code Section 2080). Take under the CESA
 24 is defined as any action or attempt “to hunt, pursue, catch, capture, or kill” (Fish and Game Section
 25 Code 86). Like the ESA, the CESA allows for exceptions to the take prohibitions for otherwise lawful
 26 activities. The requirements of an application for incidental take under the CESA are described in
 27 Section 2081 of the Fish and Game Code. Incidental take of endangered, threatened, or candidate
 28 species may be authorized if an applicant demonstrates, among other things, that the effects of the
 29 proposed take will be minimized and fully mitigated (Fish and Game Code Section 2081(b)(2)). The
 30 NCCPA provides a mechanism for compliance with state endangered species regulatory
 31 requirements through the development of comprehensive, broad-scale NCCPs that focus on the
 32 needs of natural communities and the range of species that inhabit them (Fish and Game Code
 33 Section 2800 et seq.). Take of species listed under the CESA and covered by the NCCP may be
 34 authorized by CDFW (Fish and Game Code Section 2835).

35 California Fish and Game Code Section 2081 (b)

36 Where the alternative does not include preparation of an HCP, CESA compliance for construction
 37 and operation of water intakes in the north Delta and associated conveyance facilities would be
 38 achieved through Fish and Game Code Section 2081(b). The CESA allows CDFW to issue an
 39 incidental take permit for a State-listed threatened and endangered species only if specific criteria
 40 are met. For this alternative compliance strategy, CDFW would be a Responsible Agency, as well as a
 41 Trustee Agency (State CEQA Guidelines, 15386, subdivision (a)), for CEQA compliance purposes.

1 These criteria are reiterated in Title 14 of California Code of Regulations (CCR), Sections 783.4(a)
2 and (b), which are paraphrased below:

- 3 • The authorized take is incidental to an otherwise lawful activity;
- 4 • The effects of the authorized take are minimized and fully mitigated;
- 5 • The measures required to minimize and fully mitigate the effects of the authorized take:
 - 6 ○ Are roughly proportional in extent to the effect of the taking on the species;
 - 7 ○ Maintain the applicant's objectives to the greatest extent possible; and
 - 8 ○ Are capable of successful implementation;
- 9 • Adequate funding is provided to implement the required minimization and mitigation measures
10 and to monitor compliance with and the effectiveness of the measures; and
- 11 • Issuance of the permit will not jeopardize the continued existence of a state-listed species.

12 An adaptive management and monitoring program would be implemented to use new information
13 and insight gained during the course of construction and operation of water conveyance facilities to
14 ensure that the proposed project continues to meet CESA Section 2081(b) standards.

15 **Natural Community Conservation Planning Act**

16 Where the alternative includes preparation of an HCP, compliance with the Fish and Game Code
17 Section 86 take prohibition for construction and operation of water intakes in the north Delta and
18 associated conveyance facilities would be achieved through NCCPA. The NCCPA requires
19 preparation of an NCCP that identifies and provides for the regional or area wide protection of
20 covered plants, animals, and their habitats, while allowing compatible and appropriate economic
21 activity.

22 Under this alternative compliance strategy, DWR and certain federal and state water contractors
23 would request NCCP approval from CDFW for authorization, over a 50-year permit term, to take
24 endangered or threatened species and non-listed "covered species" related to a broad range of
25 conservation measures, including construction and operation of water intakes in the north Delta and
26 associated conveyance facilities, and would also request certain assurances over the 50 year permit
27 term related to the proposed covered species. For this alternative compliance strategy, CDFW would
28 be a Responsible Agency, and Trustee Agency, for CEQA compliance purposes.

29 **California Fish and Game Code Section 1600 *et seq.***

30 California has adopted regulations to address impacts to many of the resources subject to Section
31 404 of the CWA. Although not entirely overlapping, these programs intersect frequently. Project
32 proponents are required to obtain separate authorizations from USACE and CDFW.

33 Section 1602 of the Fish and Game Code requires any person, state, or local government agency to
34 provide advance written notification to CDFW prior to initiating any activity that would cause the
35 following actions.

- 36 • Divert or obstruct the natural flow of, or substantially change or remove material from the bed,
37 channel, or bank of any river, stream, or lake.
- 38 • Result in the disposal or deposition of debris, waste, or other material into any river, stream, or
39 lake (Fish and Game Code Section 1602).

1 Certain actions that will be implemented under the proposed project or any of the action
 2 alternatives under either compliance strategy will require a Lake and Streambed Alteration
 3 Agreement under Section 1602. As part of that process, CDFW will review notifications of actions to
 4 determine if the proposed action would substantially adversely affect existing fish and wildlife
 5 resources that are directly dependent on a lake, river, or stream. If CDFW determines that the
 6 proposed activity would not substantially adversely affect an existing fish and wildlife resource, it
 7 will notify DWR that no Lake and Streambed Alteration Agreement is required and the project may
 8 proceed (Fish and Game Code Section 1602(a)(4)(A)(i)). If CDFW determines that the project may
 9 substantially adversely affect an existing fish and wildlife resource, it will require, as part of a Lake
 10 and Streambed Alteration Agreement, reasonable measures necessary to protect the fish and
 11 wildlife resource (Fish and Game Code Section 1603(a)). As the issuance of a Lake and Streambed
 12 Alteration Agreement is subject to CEQA, CDFW would be a Responsible Agency, and Trustee
 13 Agency, for CEQA compliance purposes.

14 **1.6.2.5 State Water Resources Control Board**

15 **Change Point of Diversion**

16 DWR and Reclamation hold appropriate water rights permits, issued by the State Water Board, to
 17 divert water for the SWP and CVP, respectively. The water right permits identify specific points
 18 where water may be diverted from the stream system. The locations of the north Delta intake
 19 facilities that would be constructed as a part of the proposed project or any of the action alternatives
 20 are not currently identified as points of diversion in DWR's and Reclamation's water right permits.
 21 Thus, DWR and Reclamation must file petitions with the State Water Board, seeking State Water
 22 Board approval to add to the points of diversion in the relevant water right permits.

23 The change petition process is described in Chapter 10 of Division 2, Part 2 of the California Water
 24 Code (Sections 1700–1707) and Title 23 of the California Code of Regulations Article 15 (Sections
 25 791–799). On August 25, 2015,¹² DWR and Reclamation provided notice of the proposed changes as
 26 the State Water Board requires, including written notice to CDFW. On October 30, 2015, the SWRCB
 27 issued a Notice of Petition and Notice of Public Hearing and Pre-Hearing Conference to Consider the
 28 Petition. A pre-hearing conference was held by the SWRCB on January 28, 2016. The SWRCB's
 29 hearing on the change petition started on July 26, 2016 and is scheduled to continue into 2017.
 30 Other water right holders and the public have been participating in this hearing to provide comment
 31 and for some parties to object to the proposed changes by filing a protest with the State Water
 32 Board. At the end of the hearing process and based on their administrative record, the State Water
 33 Board must find that there is a reasonable likelihood the proposed changes will not injure any legal
 34 user of the water and reasonably protect fish and wildlife, as identified in the San Francisco
 35 Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta WQCP) if they are
 36 to approve DWR and Reclamation's change petition request.

37 In addition, the Delta Reform Act states that an order by the State Water Board approving the
 38 change petitions shall include appropriate Delta flow criteria and shall be informed by the analysis
 39 conducted pursuant to Section 85086 of the Water Code:

40 Any order approving a change in the point of diversion of the State Water Project or the federal
 41 Central Valley Project from the southern Delta to a point on the Sacramento River shall include
 42 appropriate Delta flow criteria and shall be informed by the analysis conducted pursuant to this

¹² DWR and Reclamation filed an addendum and errata to the Change Petition notice on September 16, 2015.

1 section. The flow criteria shall be subject to modification over time based and monitoring results,
2 including the contribution of habitat and other conservation measures, into ongoing Delta water
3 management. (Water Code Section 85086[c][2]).

4 Many of the existing State Water Board requirements for operation of the SWP and CVP are
5 contained within Water Rights Decision 1641 (D-1641). This decision places the responsibility upon
6 the SWP and CVP to provide water to meet current Delta flow standards. Under the flow
7 requirements to be established pursuant to the Delta Reform Act; however, it is anticipated that
8 many parties, including the SWP and CVP, will share in the requirement to meet Delta flow
9 standards. Thus, appropriate flow standards, as required through the process described in Section
10 85086 of the California Water Code, would likely contribute only a portion of the total flow
11 standards adopted by the State Water Board consistent with the Bay-Delta WQCP update.

12 The State Water Board is in the process of developing and implementing updates to the Bay-Delta
13 WQCP that protect beneficial uses in the Bay-Delta watershed. The Bay-Delta WQCP ultimately sets
14 the Delta flow standards for all water users in the Delta. This update is broken into four phases,
15 some of which are proceeding concurrently. Phase 1 of this work, currently in progress, involves
16 updating San Joaquin River flow and southern Delta water quality requirements for inclusion in the
17 Bay-Delta WQCP. Phase 2 will involve comprehensive changes to the Bay-Delta WQCP to protect
18 beneficial uses not addressed in Phase 1, focusing on Sacramento River driven standards. Phase 3
19 will involve implementation of Phases 1 and 2 through changes to water rights and other measures;
20 this phase requires a hearing to determine the appropriate allocation of responsibility between
21 water rights holders within the scope of the Phase 1 and Phase 2 plans. It is expected that in setting
22 appropriate allocation of flow responsibilities in Phase 3, the State Water Board will consider the
23 flow standards set in the SWP/CVP change petition process, as required in Section 85086 of the
24 California Water Code. Phase 4 will involve developing and implementing flow objectives for
25 priority Delta tributaries outside of the Bay-Delta Plan updates.

26 **Section 401 of the Clean Water Act – Water Quality Certification**

27 Pursuant to Section 401, states can certify or deny federal permits or licenses that might result in a
28 discharge to state waters, including wetlands (33 USC 1341). Section 404 permit applicants must
29 obtain a “water quality certification” from the state water quality agency indicating that the
30 proposed activity complies with all applicable state water quality standards, limitations, and
31 restrictions. In California, typically the Regional Water Quality Control Boards (Regional Water
32 Boards) issue water quality certifications within their jurisdictions. Appeals to the decisions of the
33 Regional Water Boards are heard by the State Water Board. The State Water Board will issue the
34 Section 401 certification, however, in certain cases, for example where projects cross multiple
35 Regional Water Boards’ jurisdiction or where issuance of water right authorization is required.

36 Because the proposed project and any of the action alternatives in either compliance strategy will
37 require a permit under Section 404, they will necessarily require obtaining a water quality
38 certification under Section 401 from the State Water Board. On September 25, 2015, DWR submitted
39 a request for water quality certification for the project to the State Water Board at the same time it
40 submitted an application for a permit under Section 404. As part of this request to the State Water
41 Board, DWR provided a completed application form, a plan that describes how unavoidable effects
42 to waters of the State will be minimized or mitigated, copies of CWA Section 404 permit application
43 materials that are pertinent to the CWA Section 401 certification, and the appropriate permit fee.
44 The State Water Board accepted the application as complete on October 23, 2015 and has set a
45 schedule to issue certification consistent with the change petition process described above. The

1 State's 401 water quality certification is subject to CEQA, and the State Water Board is a Responsible
2 Agency under CEQA compliance purposes.

3 **Porter-Cologne Water Quality Control Act**

4 The Porter-Cologne Water Quality Control Act (California Water Code 13000 et seq.) sets out a
5 comprehensive regulatory, planning, and management program to protect water quality and
6 beneficial uses of the State's water. The act established the State Water Board's authority to
7 preserve and enhance the quality of California's water resources, and to ensure proper allocation
8 and efficient use of water.

9 Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the State Water Board is
10 required to prepare a water quality control plan for the Bay-Delta. Although the Regional Water
11 Boards have primary responsibility for formulating and adopting water quality control plans for
12 their respective regions, the State Water Board also is authorized to develop and adopt water
13 quality control plans. In such instances, the water quality control plan adopted by the State Water
14 Board supersedes regional plans developed for the same waters, to the extent that they conflict.

15 Beneficial uses include uses such as domestic, agricultural, and industrial supply; power generation;
16 recreation and aesthetic use; navigation; and preservation and enhancement of fish, aquatic, and
17 wildlife resources. Water quality objectives or standards reflect the levels of water quality
18 constituents that have been determined to be necessary to protect beneficial uses. Implementation
19 plans describe actions to be taken to achieve the objectives and set out programs for monitoring,
20 management, and enforcement.

21 The State Water Board is vested with primary regulatory authority over flows, water quality, and
22 other water rights issues outlined in the Bay-Delta WQCP. As stated above, the actions described in
23 the proposed project or any of the action alternatives include modifications to the water conveyance
24 system and will require the approval of the State Water Board, consistent with its authority under
25 Porter-Cologne.

26 These discharges to waters of the State must meet the State's water quality requirements as
27 prescribed in the WQCPs under Porter-Cologne. As described above, DWR has submitted a request
28 for water quality certification for the project to the State Water Board and requested authorization
29 for discharges to state waters under Porter-Cologne are included within this request.

30 **1.6.2.6 Delta Stewardship Council**

31 The Delta Reform Act gave the Delta Stewardship Council (Council) direction and authority to serve
32 two primary governance roles: 1) set a comprehensive, legally enforceable direction for how the
33 State manages important water and environmental resources in the Delta through the adoption of a
34 Delta Plan,¹³ and 2) ensure coherent and integrated implementation of that direction through

¹³ The Delta Plan is currently the subject of litigation. The ongoing litigation could affect the legal requirements and/or implementation of the Delta Plan and/or interpretation of the Delta Reform Act. On June 24, 2016, Sacramento Superior Court Judge Michael P. Kenny invalidated the Delta Plan (*Delta Stewardship Council Cases*, JCCP 4758), pending the Council's remedying certain deficiencies identified in his ruling. Subsequently, the Delta Stewardship Council filed notices of appeal in the four coordinated cases where petitioners prevailed, in part. Those notices automatically stay the effect of Judge Kenny's ruling, thus leaving the Delta Plan in place pending the outcome of the appeals in the coordinated cases.

1 coordination and oversight of State and local agencies proposing to fund, carry out, and approve
2 Delta-related activities.

3 **Delta Plan Covered Action Requirements**

4 The Delta Reform Act requires state and local actions determined to be covered actions within the
5 meaning of the Delta Reform Act to be consistent with the policies and requirements included in the
6 Delta Plan. In contrast to how many other governmental plans are implemented, the Council does
7 not exercise direct review and approval authority over covered actions to determine their
8 consistency with the regulatory policies in the Delta Plan. Instead, State or local agencies self-certify
9 Delta Plan consistency, and the Council serves as an appellate body for those determinations.

10 For a state or local agency to determine whether its proposed plans, programs, or projects are
11 covered actions under the Delta Plan and, therefore, subject to the regulatory provisions in the plan,
12 it must start with the Delta Reform Act, which defines a covered action as (Water Code Section
13 85057.5(a)):

14 ...a plan, program, or project as defined pursuant to Section 21065 of the Public Resources Code that
15 meets all of the following conditions:

- 16 • Will occur, in whole or in part, within the boundaries of the Delta or Suisun Marsh;
- 17 • Will be carried out, approved, or funded by the state or a local public agency;
- 18 • Is covered by one or more provisions of the Delta Plan;
- 19 • Will have a significant impact on the achievement of one or both of the coequal goals or the
20 implementation of government-sponsored flood control programs to reduce risks to people,
21 property, and state interests in the Delta.

22 A State or local agency that proposes to carry out, approve, or fund a plan, program, or project is the
23 entity that must determine whether that plan, program, or project is a covered action. That
24 determination must be reasonable, made in good faith, and consistent with the Delta Reform Act and
25 relevant provisions of the Delta Plan. If requested, Council staff will meet with an agency's staff
26 during early consultation to review consistency with the Delta Plan and to offer advice as to whether
27 the proposed plan, program, or project appears to be a covered action, provided that the ultimate
28 determination in this regard must be made by the agency.

29 Once a state or local agency has determined that its plan, program, or project is a covered action
30 under the Delta Plan, it is required to submit a written certification to the Council, with detailed
31 findings, demonstrating that the covered action is consistent with the Delta Plan (Water Code
32 Sections 85225 et seq.). The Council has developed a discretionary checklist that agencies may use
33 to facilitate the process, as well as certification forms and related materials, available on the Council
34 website.

35 If an agency determines that a proposed plan, program, or project is not a covered action that
36 determination is not subject to Council review, but is subject to judicial review. Any person who
37 claims that a proposed covered action is inconsistent with the Delta Plan and, as a result of that
38 inconsistency, the action will have a significant adverse impact on the achievement of one or both of
39 the coequal goals or implementation of government-sponsored flood control programs to reduce
40 risks to people and property in the Delta, may file an administrative appeal with regard to a
41 certification of consistency submitted to the Council.

1 **Delta Plan Appeals Process**

2 The process for an appeal to the Delta Stewardship Council includes submittal of an appeal that
3 clearly and specifically sets forth the basis for the claim, including specific factual allegations, that
4 the covered action is inconsistent with the Delta Plan. The appeal must be filed no later than 30 days
5 after the submission of the certification of consistency and if no person appeals the certification of
6 consistency, the state or local public agency may proceed to implement the covered action.

7 The appeal must be heard by the Council within 60 days of the date of the filing of the appeal, unless
8 the Council, or by delegation the executive officer, determines that the issue raised on appeal is not
9 within the Council's jurisdiction or does not raise an appealable issue. The Council shall make its
10 decision on the appeal within 60 days of hearing the appeal. The Council, or by delegation the
11 executive officer, may also dismiss the appeal for failure of the appellant to provide information
12 requested by the Council within the period provided, if the information requested is in the
13 possession or under the control of the appellant.

14 After a hearing on an appealed action, the Council must make specific written findings either
15 denying the appeal or remanding the matter to the state or local public agency for reconsideration of
16 the covered action based on the finding that the certification of consistency is not supported by
17 substantial evidence in the record. Upon remand, the state or local agency may determine whether
18 to proceed with the covered action. If the agency decides to proceed with the action or with the
19 action as modified, the agency must file a revised certification of consistency that addresses each of
20 the Council's findings prior to proceeding with the action.

21 **Delta Plan BDCP Requirements**

22 Where the alternative involves preparation of an HCP, such as the BDCP, Delta Reform Act
23 compliance for all elements of the conservation plan would likely be achieved through the process
24 set forth in Water Code Section 85320, which sets out the conditions under which the Council is
25 required to incorporate the BDCP directly into the Delta Plan. To be considered for inclusion in the
26 Delta Plan, the BDCP must have been approved as an HCP under Section 10 of ESA, and CDFW must
27 find that the BDCP complies with specified requirements, including compliance with NCCPA and
28 CEQA, and review and analysis of certain flow scenarios and EIR alternatives. Upon CDFW's findings
29 and approval of the BDCP as an NCCP (and as an HCP under the ESA), the Council is required to
30 incorporate the BDCP into the Delta Plan. However, the determination by the CDFW that the BDCP
31 meets the requirements of the Delta Reform Act may be appealed to the Council.

32 If the Council decides that CDFW incorrectly determined that the BDCP meets all of the
33 requirements of Water Code Section 85320 for inclusion in the Delta Plan, and the Council
34 consequently grants the appeal, CDFW's determination may be revised to address the issues raised
35 by the Council, or CDFW may respond in detail to the Council's findings, setting forth reasons why
36 the BDCP meets all of the requirements of Section 85320 for inclusion in the Delta Plan. Unless the
37 Council on appeal decides that the BDCP meets all of the requirements of Section 85320 for
38 inclusion in the Delta Plan, the BDCP shall not be incorporated in the Delta Plan and the public
39 benefits associated with the BDCP shall not be eligible for State funding.

1 **Table 1-1. 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 ^a
Federal	
Bureau of Reclamation (NEPA lead agency)	<u>Permits or Consultations</u> ESA Section 7 consultation Section 106 of the National Historic Preservation Act <u>Other considerations</u> 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 Federal Water Project Recreation Act (16 USC 460[L] 12-21)
U.S. Fish and Wildlife Service (NEPA lead or cooperating agency ¹⁴)	<u>Permits or Consultations</u> All provisions of the Endangered Species Act, including: Biological Opinion (Section 7 of ESA) Incidental Take Permit (Section 10 [a][1][B] of ESA) for BDCP alternatives <u>Other considerations</u> 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 or cooperating agency ¹⁵)	<u>Permits or Consultations</u> All provisions of the Endangered Species Act, including: Biological Opinion (Section 7 of ESA) Incidental take permit (Section 10 [a][1][B] of ESA) for BDCP alternatives <u>Other Considerations</u> 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)	<u>Permits or Consultations</u> Clean Water Act Section 404 Rivers and Harbors Act Section 10 Rivers and Harbors Act Section 14, 33 USC 408 ESA Section 7 consultation Section 106 of the National Historic Preservation Act

¹⁴ NEPA lead agency for actions involving BDCP alternatives. NEPA cooperating agency for actions involving Alternative 4A or other non-HCP alternatives.

¹⁵ NEPA lead agency for actions involving BDCP alternatives. NEPA cooperating agency for actions involving Alternative 4A or other non-HCP alternatives.

Agency	Permit, Decision, Approval, or Other Action ^a
	<u>Other Considerations</u> 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) Floodplain Management (EO 11988) Fish and Wildlife Coordination Act, 16 USC 661-667e
U.S. Environmental Protection Agency (NEPA cooperating agency)	NEPA Review (Clean Air Act, Section 309) Clean Water Act Review; and Clean Water Act Section 404 permitting oversight
State Historic Preservation Officer	<u>Permits or Consultations</u> Consultation under National Historic Preservation Act, Section 106; California State Projects (Public Resources Code Sections 5024, 5024.5)
U.S. Coast Guard (Potential NEPA cooperating agency)	<u>Permits</u> Rivers and Harbors Act Section 9 Bridge Permits Construction in Navigable Waters Navigational Aids – Private Aids to Navigation
Natural Resources Conservation Service	Farmland Protection Policy Act
State	
California Department of Water Resources (CEQA lead agency)	<u>Other considerations</u> Water Code Sections 11100 et seq. (Central Valley Project Act) Water Code Sections 12930 et seq. (California Resources Development Bond Act) Water Code 11451 (Control of Project) Approval of SWP water supply contract amendment and funding agreements
California Department of Fish and Wildlife (CEQA responsible agency, trustee agency)	<u>Permits or Consultations</u> NCCP Findings and Approval, Fish and Game Code Sections 2800 et seq. for BDCP alternatives California Endangered Species Act, Incidental Take Permit – Section 2081(b) for Alternative 4A or other non-HCP alternatives Streambed Alteration Master Agreement (Fish and Game Code Section 1602) Scientific Collection permits under Fish and Game Code State wildlife areas Encroachment Permit <u>Other considerations</u> Instream Flow – Public Resources Code Section 10000 et seq. Fish and Game Code Section 5650 – water pollution Fish and Game Code Section 1790 – wetlands Fish and Game Code Section 3503 – Nests and Eggs Fish and Wildlife Coordination Act, 16 USC 661-667e Migratory Birds, Fish and Game Code Section 3513 Raptors, Fish and Game Code Section 3503.5 Code Section 1002 and California Code of Regulations Title 14 Sections 650 and 670.7 (Plan implementation)

Agency	Permit, Decision, Approval, or Other Action ^a
State Water Resources Control Board (CEQA responsible agency)	<p><u>Permits or Consultations</u></p> <p>Section 401 Water Quality Certification and Waste Discharge Requirements, Porter-Cologne Act</p> <p>Water Right Change Petitions</p> <p>Clean Water Act Section 402 National Pollutant Discharge Elimination System Permit Compliance and NPDES Construction Stormwater General Permit</p> <p>Petitions for Extension of Time for Existing Water Right Permits</p> <p>Water Quality Order 99-08-DWQ: General Permit for Storm Water Discharges Associated with Construction Activity (33 USC 1342)</p> <p>Water Right for Long-term Transfer Petitions</p> <p><u>Other considerations</u></p> <p>Water Quality Control Plan for San Francisco Bay/Sacramento-San Joaquin Delta Estuary</p> <p>Basin Plan Amendment (33 USC 13240)</p> <p>General Certification Order for Dredging for Restoration Projects</p> <p>Groundwater Quality Monitoring Act, Water Code Sec 10780-10782.3</p> <p>Porter-Cologne Act, California Water Code Sec 13000 et seq.</p> <p>Surface Water Rights, California Code of Regulations Section 303</p> <p>State Water Board Decision 1641 (Water Quality)</p>
Central Valley Regional Water Quality Control Board (potential CEQA responsible agency)	<p><u>Permits or Consultations</u></p> <p>Discharges Associated with Construction Activity (33 USC 1342)</p> <p>Regional General Permits</p> <p>Waste Discharge Requirements for Dredging Projects or Fill-Related Activities</p> <p><u>Other considerations</u></p> <p>Basin Plan Amendment (33 USC 13240)</p>
San Francisco Bay Regional Water Quality Control Board (potential CEQA responsible agency)	<p><u>Permits or Consultations</u></p> <p>National Pollutant Discharge Elimination System (316[b] Permit)</p> <p>Stormwater Permit</p> <p>Waste Discharge Requirements for Dredging Projects or Fill-Related Activities</p> <p><u>Other considerations</u></p> <p>Basin Plan</p>
Delta Stewardship Council (CEQA responsible agency)	<p><u>Other considerations</u></p> <p>Determining, on appeal, whether a BDCP alternative meets statutory criteria in the Delta Reform Act for inclusion in the Delta Plan (Water Code Section 85320)</p> <p>Determining, on appeal, whether Alternative 4A or other non-HCP alternative is consistent with the Delta Plan (Water Code Section 85225 et seq.)</p>
State Lands Commission (CEQA responsible agency, trustee agency)	<p><u>Other considerations</u></p> <p>Possible lease involving granted tide and submerged lands</p>

Agency	Permit, Decision, Approval, or Other Action ^a
California Department of Parks and Recreation (potential CEQA responsible agency, trustee agency)	<u>Permits or Consultations</u> Encroachment Permit
California Department of Boating and Waterways (potential ^b CEQA responsible agency)	<u>Other considerations</u> Coordination on construction and placement of gates, signage, and use of gates
California Department of Transportation (CEQA responsible agency)	<u>Permits or Consultations</u> Encroachment Permit for realignment of State Route 160
Central Valley Flood Protection Board	<u>Permits or Consultations</u> Coordination consistent with local sponsor requirements under USACE Section 408 requirements
Regional Air Pollution Control Districts, California Air Resources Board (potential CEQA responsible agencies)	<u>Permits or Consultations</u> Permit to Operate an Internal Combustion Engine Stationary Source Permit Use of Portable Equipment During Construction <u>Other considerations</u> Clean Air Act
California Department of Public Health (potential CEQA responsible agency)	<u>Permits or Consultations</u> Water Supply Permits for Operations of Public Drinking Water Systems <u>Other considerations</u> State Drinking Water Program
San Francisco Bay Area Conservation and Development Commission (potential CEQA responsible agency)	<u>Other considerations</u> California Coastal Act/McAteer-Petris Act
Division of Safety of Dams (potential CEQA responsible agency)	<u>Permits or Consultations</u> California Code of Regulations Title 23, Section 310
California Public Utilities Commission	<u>Permits or Consultations</u> Right of way; potential relocation of utilities
Local and Other	
State and Federal Contractors Water Agency (NEPA cooperating agency)	Joint Powers Authority created for purposes of pursuing BDCP research and study
Western Area Power Administration (potential NEPA cooperating agency)	System Impact Study Facilities Studies Provide transmission service ¹⁶

¹⁶ If requested, to support Reclamation's pending decision, Western Area Power Administration may perform the necessary construction, upgrades, relocations, or modifications of facilities and structures necessary, and provide transmission service.

Agency	Permit, Decision, Approval, or Other Action ^a
Port of Stockton	<u>Permits or Consultations</u> Coordination consistent with local sponsor requirements under USACE Section 408 requirements
Contra Costa County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act
Sacramento County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act
Solano County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act
Yolo County (NEPA cooperating agency)	Floodplain development regulations (required by National Flood Insurance Program) Williamson Act cancellations Surface Mining and Reclamation Act
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)	Interest in resource issues
<i>Individual SWP Contractors</i>	
Alameda County Flood Control and Water Conservation District, Zone 7 (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives
Santa Clara Valley Water District (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives
Kern County Water Agency (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives
Metropolitan Water District of Southern California (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives

Agency	Permit, Decision, Approval, or Other Action ^a
Individual CVP Contractors^c	
San Luis & Delta-Mendota Water Authority (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives
The Westlands Water District (potential CEQA responsible agency)	Possible actions related to the BDCP alternatives

^a This list is not all inclusive and the agencies may use the EIR/EIS for other requirements not identified in this table.

^b The term *potential* is used in this table generally. Whether particular entities are responsible agencies will be determined when a final BDCP is approved.

^c To be determined when financing agreements are identified.

1

2 1.7 Public Scoping and Issues of Known Controversy

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

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

- 27 • **Range of Alternatives.** The range and adequacy of alternatives is an issue of concern to the
28 public as well as to governmental agencies. In response to concerns raised on this topic in
29 comments on the Draft EIR/EIS, the RDEIR/SDEIS provided three new alternatives (4A
30 [preferred alternative], 2D, and 5A) that have been included in the Final EIR/EIS along with the
31 alternatives evaluated in the Draft EIR/EIS. The alternatives development and screening process

1 is discussed in Appendix 3A, *Identification of Water Conveyance Alternatives, Conservation*
2 *Measure 1*, Attachments 1 through 7, which provide additional details on the information that
3 was used in developing the alternatives.

- 4 ● **Biological Resources.** The complexity of the project raises many concerns over environmental
5 consequences for the aquatic ecosystem and fish species, and for the terrestrial ecosystem and
6 plant and wildlife species. Identifying an alternative implementation strategy that separated the
7 water conveyance plan from the broader habitat restoration elements of the BDCP alternatives
8 and accelerating environmental restoration through EcoRestore may alleviate some of these
9 concerns. The approach of separating water conveyance from broad environmental restoration
10 is reflected in Alternatives 4A, 2D, and 5A. These alternatives are described in Chapter 3,
11 *Description of Alternatives*.
- 12 ● **Biological Goals and Objectives.** Controversy exists between the BDCP alternatives'
13 conservation goals and the reasonable use of natural resources and lands for economic
14 development. This issue is somewhat reduced under Alternatives 4A, 2D, and 5A because of the
15 revised approach that limits habitat improvements to those needed to offset conveyance facility
16 effects. Generally, land-based impacts would be reduced under Alternatives 4A, 2D, and 5A
17 when compared with the BDCP alternatives. These comparative changes are provided in the
18 land-use based analysis in Chapters 9, 10, 12 through 20, and 24 through 27. These chapters
19 address terrestrial biological resources, land use, agricultural resources, recreation, cultural
20 resources, mineral resources, paleontological resources, and other resources.
- 21 ● **Climate Change.** The likely effects of climate changes on water supplies and the Delta
22 ecosystem during the 50-year life of the BDCP alternatives prompted many comments during
23 the formal public review process for the Draft EIR/EIS. Comments on the Draft EIR/EIS reflected
24 widespread concerns that the anticipated effects of climate change and habitat restoration are
25 too speculative and that there is too much uncertainty about such effects to allow for a 50-year
26 permit period. These comments are among the reasons the lead agencies, in issuing the
27 RDEIR/SDEIS, introduced Alternatives 4A, 2D, and 5A, which do not include an HCP/NCCP and
28 do not seek 50-year incidental take permits. The effects of climate change are factored into the
29 analysis of each alternative in each resource chapter, and are addressed in Chapter 29, *Climate*
30 *Change*, and associated appendices.
- 31 ● **Water Supply, Surface Water Resources, and Water Quality.** Water supply and surface water
32 resources—key drivers for development of the proposed project and its alternatives—remain
33 controversial issues for a wide array of stakeholders (e.g., agricultural interests, hunting and
34 fishing interests, water agencies, local jurisdictions) because of the potential changes in Delta
35 hydrologic conditions attributable to changes in the SWP and CVP points of diversion in the
36 Delta. Water quality is an issue of concern because of uncertainties regarding activities
37 associated with conveyance facilities and their operations and restored habitat that could
38 change flow regimes, which could lead to discharge of sediment, possible changes in salinity
39 patterns, and potential water quality changes. The DWR and Reclamation will seek to obtain
40 authorization from the State Water Board for new SWP points of diversion, which would likely
41 include State Water Board conditions on DWR and Reclamation water rights to protect
42 beneficial uses in the Delta. Such changes would not include changes in water rights; however,
43 there are concerns that the proposed project could result in the potential for increased exports
44 and redistribution of Delta water. These issues are addressed in Chapter 5 *Water Supply*,
45 Chapter 6, *Surface Water*, and Chapter 8, *Water Quality*.

- 1 ● **Flood Management.** Flood management is a potentially controversial issue because
2 implementation of the proposed project would entail modification of some existing levees as
3 well as changes in flow regimes and other changes, including habitat restoration in the Yolo
4 Bypass and within restoration opportunity areas in the Delta under the BDCP alternatives.
5 These issues are addressed in Appendix 6A, *BDCP/California WaterFix Coordination with Flood*
6 *Management Requirements*.
- 7 ● **Agricultural Resources.** Because the Plan Area is largely devoted to agricultural uses, concern
8 about the effects of the proposed project on existing agricultural activities are controversial, as
9 expressed in comments on the Draft EIR/EIS. In addition to conversion of agricultural lands to
10 other uses (i.e., water conveyance facilities and restored/enhanced natural habitat areas), there
11 are concerns that conflicts could arise between continuing agricultural operations and
12 management requirements in areas targeted for conservation actions (e.g., changes in
13 cultivation or pest management practices). Although Alternatives 4A, 2D, and 5A partially
14 address these concerns because each alternative would require much less conversion of
15 agricultural land to habitat than the alternatives that include an HCP/NCCP, implementation of
16 any action alternative would adversely affect agricultural activities. The impacts on agricultural
17 resources are addressed in Chapter 14, *Agricultural Resources*.
- 18 ● **Socioeconomics.** The key socioeconomic concerns involve the impacts of construction activities
19 on local Delta communities, the potential for loss of revenue and employment associated with
20 the decrease in agricultural production associated with conversion of agricultural land to other
21 uses, as well as the potential decrease in tax revenues due to such a decline in agricultural
22 activities. Alternatives 4A, 2D, and 5A would have lesser socioeconomic effects associated with
23 agricultural land conversions than the BDCP alternatives would have because less land would be
24 converted from agriculture to restored habitat. A comparative discussion of the socioeconomic
25 impacts that would result under each alternative is provided in Chapter 16, *Socioeconomics*.
- 26 ● **Recreation.** Concerns relating to recreation include potential conflicts between construction
27 and operation of new conveyance facilities and ongoing Delta recreational activities (e.g.,
28 boating, fishing, hunting, enjoyment of marinas). In addition, there are concerns about possible
29 conflicts between operable barriers and gates in Delta waterways and recreational boating
30 corridors. Alternatives 4A, 2D, and 5A would have fewer effects on recreation than the BDCP
31 alternatives would have because HCP/NCCP conservation measures that would disrupt
32 recreation activities would not be implemented under Alternatives 4A, 2D, and 5A. However,
33 impacts resulting from constructing the water conveyance facilities under the non-HCP
34 alternatives would be similar to impacts of the BDCP alternatives. The impacts are discussed in
35 Chapter 15, *Recreation*.
- 36 ● **Aesthetics/Visual Resources.** Potential effects of new facilities on aesthetics and visual
37 resources are controversial to local Delta residents as well as others who utilize the Delta where
38 construction of the facilities would be located; these concerns focus largely on the proposed
39 intake facilities and the power transmission facilities necessary to support them and, to a lesser
40 degree, on new canals that are proposed under some of the alternatives. Although aesthetic
41 impacts are difficult to quantify and in many instances are difficult to mitigate, impacts related
42 to the intake facilities would be reduced by changes reflected in Alternatives 4, 4A, 2D, and 5A to
43 reduce the originally proposed size of the conveyance facilities. Changes in the visual character
44 of the areas that would be restored as a result of implementing HCP/NCCP conservation
45 measures would be avoided under Alternatives 4A, 2D, and 5A because the conservation

1 measures would not be implemented. These differences are discussed in Chapter 17, *Aesthetics*
2 *and Visual Resources*.

- 3 ● **Growth.** One of the project objectives is to increase water supply reliability to SWP and CVP
4 contractors south of the Delta. Increasing the reliability of water could be considered as removal
5 of one of the obstacles related to growth south of the Delta or in export service areas. Concerns
6 regarding the growth-inducing consequences of the BDCP generally focus on the potential
7 effects of a stabilized water supply to the southern part of the state. The potential for growth
8 resulting under each alternative is discussed in Chapter 30, *Growth Inducement and Other*
9 *Indirect Effects*.
- 10 ● **Community Issues.** Community issues, such as construction noise, air quality, and traffic
11 circulation effects; conversion of existing land uses; access to private lands; and changes in the
12 character of Delta communities are areas of concern for Delta residents. Plans by DWR to
13 conduct geotechnical drilling surveys were opposed by the local Farm Bureaus because of
14 concerns over confidentiality of the survey results, and the eminent domain process is currently
15 underway to allow acquisition of temporary entry rights on private land for survey work.
16 Although population densities in the Plan Area are relatively low, existing farms and agricultural
17 enterprises could be permanently divided, jeopardizing the ability of that land to continue
18 serving productive agricultural uses. Residences, schools, religious institutions, and other
19 sensitive community land uses could be disrupted by the proposed project during the
20 construction period. These issues have been addressed through evaluation of a wide range of
21 resource impacts addressed in Chapter 23 *Noise*, Chapter 22, *Air Quality and Greenhouse Gases*,
22 Chapter 19, *Transportation*, Chapter 13 *Land Use*, and Chapter 16, *Socioeconomics*.

23 No additional scoping is necessary under CEQA for a Recirculated Draft EIR or under NEPA for a
24 Supplemental Draft EIS. Yet during the public review period for the Draft EIR/EIS, additional
25 sources of controversy were raised. For example, several commenters expressed concerns regarding
26 the anticipated efficacy of certain habitat restoration measures, and suggested that the water
27 conveyance facilities and the habitat restoration measures should not be treated as a single project.
28 Another common theme was that DWR should pursue shorter-term permits because of the levels of
29 uncertainty regarding both the effectiveness of habitat restoration in recovering fish populations
30 and the future effects of climate change on the Delta and the Sacramento River watershed.

31 As urged by these commenters, DWR developed three new alternatives that separate proposed
32 conveyance facilities (CM1) from the originally proposed habitat restoration measures and related
33 conservation measures (i.e., CM2 through CM21). As described and analyzed in the RDEIR/SDEIS,
34 the new CEQA preferred alternative (4A) and new Alternatives 2D and 5A include only the
35 conveyance facilities and operations that constitute CM1 under the BDCP alternatives; Alternatives
36 4A, 2D, and 5A do not include habitat restoration measures beyond those needed to provide full
37 mitigation under CEQA and NEPA. Other conservation measures related to habitat restoration would
38 be excluded. In addition, Alternatives 4A, 2D, and 5A are not intended to serve as NCCPs/HCPs, and
39 DWR would not seek 50-year permits under those alternatives. DWR instead would seek from
40 CDFW an incidental take permit of much shorter duration under Fish and Game Code Section 2081
41 of CESA, and would participate with Reclamation in consultations with USFWS and NMFS under
42 Section 7 of ESA.

1.7.1 Purpose of Recirculated/Supplemental Documents

As explained above, the Draft EIR/EIS was partially revised and was recirculated in a Partially Recirculated Draft EIR/Supplement to the Draft EIS (RDEIR/SDEIS) for additional public review to address and evaluate the critical changes to Alternative 4 and the addition of Alternatives 4A, 2D, and 5A.

With respect to Alternative 4, the RDEIR/SDEIS described and analyzed the following: changes to conveyance facility design; revisions to proposed operations; changes to the proposed conservation strategy and habitat mitigation approach; and revisions and corrections to the analyses of certain impacts. Alternative 4A would entail the same conveyance facility design changes, but it does not include the same kinds of changes to Alternative 4 related to CM2–CM21 because Alternative 4A has no HCP component.

To provide the public with the information necessary to understand revisions to the various documents and to limit extraneous information, the lead agencies chose not to republish complete revisions to the original Draft EIR/EIS, but rather to prepare materials focusing on new contents of the Draft EIR/EIS. The lead agencies' primary reason for undertaking additional public review of the RDEIR/SDEIS is to further the purposes of both CEQA and NEPA. Because the RDEIR/SDEIS addresses a project of interest and importance to the people, economy, and environment of the State of California, the lead agencies determined that additional formal public input was both desirable and appropriate.

1.7.2 Substantive Draft EIR/EIS Revisions

The RDEIR/SDEIS presented revisions to the Draft EIR/EIS which were made based on public and technical review of the draft documents. The analysis in a number of resource topics were revised for the RDEIR/SDEIS to respond to issues that were raised during the review period for the Draft EIR/EIS by members of the public and reviewing agencies. Some of the revisions presented in the RDEIR/SDEIS are highlighted below.

- Chapter 11, *Fish and Aquatic Resources*, was revised to address design changes associated with the proposed project, to incorporate the latest engineering assumptions and modeling procedures, and to respond to comments raised by the public. Several commenters requested elaboration on the methods used to arrive at CEQA conclusions and NEPA effects determinations and on the effects of contaminants. Additionally, commenters requested analyses of the effects on downstream bays (i.e., San Francisco Bay), and that all analyses include a NEPA conclusion. Since release of the Draft EIR/EIS, additional information has been developed pertaining to the following: the use of reusable tunnel material for restoration efforts; the construction effects of the modification to Clifton Court Forebay; and the construction of an operable barrier at Head of Old River.
- Chapter 8, *Water Quality* was revised to address design changes associated with the proposed project, to include additional analysis, to make clarifications and correct errors, to update analyses based on more recent water quality data and/or criteria, and to respond to comments raised by local, state, and federal agencies and the public. Water quality constituent sections that received the most updating were electrical conductivity, chloride, selenium, bromide, and *Microcystis*. Additionally, an assessment of constituent effects downstream of the Plan Area (i.e., in San Francisco Bay) was added. Several other modifications and additions were made to the assessments for mercury, nutrients, trace metals, and dissolved oxygen.

- 1 • Chapter 22, *Air Quality and Greenhouse Gases*, and Appendix 22C, *Bay Delta Conservation*
2 *Plan/California WaterFix Health Risk Assessment for Construction Emissions*, were both revised.
3 The chapter was revised to address design changes associated with the proposed project, to
4 incorporate the latest engineering assumptions and modeling procedures resulting in revised
5 emissions calculations, and to respond to issues and concerns raised by the public regarding the
6 health risk assessment. Where these design and engineering assumptions could result in
7 substantive changes in other impact analyses, such revisions in other impact analyses were
8 made.
- 9 • Chapter 19, *Transportation*, was revised to incorporate the latest engineering assumptions
10 which could result in substantive changes in other impact analyses.
- 11 • Chapter 23, *Noise*, was revised to incorporate the latest engineering assumptions.

12 **1.7.3 Public Review of Recirculated/Supplemental** 13 **Documents**

14 Pursuant to the directives of CEQA, where a lead agency recirculates only revised portions of an EIR,
15 the lead agency may require commenters to limit their new comments to the new material in the
16 recirculated portions of the prior document and may preclude the commenters from commenting
17 anew on topics or text not subject to a partial recirculation. NEPA and the CEQ NEPA Regulations are
18 silent on these issues, but the concept of a “supplement” to a Draft EIS strongly suggests that
19 comments should be limited to material found within the bounds of that new document, and should
20 not address matters already subjected to public review as part of the original Draft EIS.

21 After the additional round of public review, the CEQA lead agency “need only respond to (i)
22 comments received during the initial circulation period that relate to chapters or portions of the
23 document that were not revised and recirculated, and (ii) comments received during the
24 recirculation period that relate to the chapters or portions of the earlier EIR that were revised and
25 recirculated” (State CEQA Guidelines Section 15088.5[f][2]).

26 **1.8 CEQA/NEPA Terminology**

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

37 Many concepts are common to NEPA and CEQA, including their intent and the review process that
38 they dictate. Importantly, both statutes encourage a joint Federal and state review where a project
39 requires both Federal and state approvals. Both processes require an initial review resulting in a
40 notice to the public, scoping, development of alternatives, development of an environmental

document analyzing the alternatives, and consideration of public and agency input. These steps are followed by the preparation of a final environmental document and agency decisions (Executive Office of the President of the U.S. and State of California, Governor’s Office of Planning and Research 2013). The laws sometimes use differing terminology for common concepts, as illustrated in Table 1-2. Application of similar concepts may not be exactly analogous under NEPA and CEQA.

Table 1-2. 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

1.9 Related Actions, Programs, and Planning Efforts

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

Due to the geographic area covered by the proposed project, a large number of activities and studies that are currently ongoing or planned for the near future could affect or be affected by the proposed project actions. Besides the CVP and SWP, additional activities in and around the Plan Area (such as actions part of California EcoRestore), including groundwater storage, conservation, water use

1 efficiencies, hydropower, project and system re-operation, desalination, recycling, and reuse have
 2 either been proposed or are possible related to water supply development and management in
 3 California. These related studies and projects that have been conducted are summarized in
 4 Appendix 1A, *Primer on California Water Delivery Systems and the Delta*; Appendix 1B, *Water*
 5 *Storage*; Appendix 1C, *Demand Management Measures*; and Appendix 1E, *Water Transfers in*
 6 *California: Types, Recent History, and General Regulatory Setting*. These actions are not directly or
 7 indirectly related to the project. Where an action is directly or indirectly related to the BDCP, the
 8 effects of these actions are included in this EIR/EIS. The actions described in the appendices listed
 9 above should give the reader and decision makers a general understanding of ongoing water
 10 resource issues in the State of California. If appropriate, these actions are also identified and
 11 analyzed in the cumulative impact analysis in the relevant resource chapter.

12 1.10 Final EIR/EIS Organization

13 This Final EIR/EIS is organized as shown below.

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

17 **Chapter 2: Project Objectives and Purpose and Need.** Describes the project objectives and the
 18 purpose of and need for the project.

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

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

24 **Chapters 5 through 28:** Each of these chapters includes a discussion of the environmental
 25 setting/affected environment, analysis methods, environmental consequences, and mitigation
 26 measures and environmental commitments for the action alternatives, and the cumulative effects
 27 for each of the individual resource topics.

- 28 ● Chapter 5: Water Supply
- 29 ● Chapter 6: Surface Water
- 30 ● Chapter 7: Groundwater
- 31 ● Chapter 8: Water Quality
- 32 ● Chapter 9: Geology and Seismicity
- 33 ● Chapter 10: Soils
- 34 ● Chapter 11: Fish and Aquatic Resources
- 35 ● Chapter 12: Terrestrial Biological Resources
- 36 ● Chapter 13: Land Use
- 37 ● Chapter 14: Agricultural Resources
- 38 ● Chapter 15: Recreation

- 1 • Chapter 16: Socioeconomics
- 2 • Chapter 17: Aesthetics and Visual Resources
- 3 • Chapter 18: Cultural Resources
- 4 • Chapter 19: Transportation
- 5 • Chapter 20: Public Services and Utilities
- 6 • Chapter 21: Energy
- 7 • Chapter 22: Air Quality and Greenhouse Gases
- 8 • Chapter 23: Noise
- 9 • Chapter 24: Hazards and Hazardous Materials
- 10 • Chapter 25: Public Health
- 11 • Chapter 26: Mineral Resources
- 12 • Chapter 27: Paleontological Resources
- 13 • Chapter 28: Environmental Justice (NEPA only)
- 14 **Chapter 29: Climate Change.** Discusses climate change conditions associated with the action
- 15 alternatives.
- 16 **Chapter 30: Growth Inducement and Other Indirect Effects.** Describes the potential for the
- 17 action alternatives to either promote or remove an obstacle related to growth in the project area
- 18 and the possible impacts of such growth.
- 19 **Chapter 31: Other CEQA/NEPA Required Sections, including Mitigation and Environmental**
- 20 **Commitment Impacts, Environmentally Superior Alternative and Public Trust**
- 21 **Considerations.** Discusses the relationship between short-term uses of the environment,
- 22 maintenance, and enhancement of long-term productivity, the irreversible and irretrievable
- 23 commitment of resources, and potential environmental effects associated with environmental
- 24 commitments and recommended mitigation measures.
- 25 **Chapter 32: Public Involvement, Consultation, and Coordination.** Describes the consultation
- 26 and outreach activities that occurred during the document preparation process.
- 27 **Chapter 33: List of Preparers.** Identifies the individuals who prepared this document.
- 28 **Chapter 34: References Cited.** Lists all sources cited in the text. References are also included at the
- 29 end of each chapter.
- 30 **Chapter 35: Glossary.** Provides definitions for specialized terms related to the project and effects
- 31 analyses.
- 32 This EIR/EIS contains reference to numerous appendices prepared to support the various chapters.
- 33 The appendices are organized as shown below.¹⁷
- 34 • 1A: Primer on California Water Delivery Systems and the Delta.
- 35 • 1B: Water Storage.

¹⁷ See Footnote 3 at the beginning of this chapter for a description of other documents that should be understood to be part of this EIR/EIS.

- 1 ● 1C: Demand Management Measures.
- 2 ● 1D: Final Scoping Report.
- 3 ● 1E: Water Transfers in California: Types, Recent History, and General Regulatory Setting.
- 4 ● 1F: Supplemental Information for USACE Permitting Requirements.
- 5 ● 3A: Identification of Water Conveyance Alternatives, Conservation Measure 1.
- 6 ● 3B: Environmental Commitments, AMMs, and CMs.
- 7 ● 3C: Construction Assumptions for Water Conveyance Facilities.
- 8 ● 3D: Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative
- 9 Impact Conditions.
- 10 ● 3E: Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies.
- 11 ● 3F: Intake Location Analysis.
- 12 ● 3G: Background on the Process of Developing the BDCP Conservation Measures.
- 13 ● 3H: Intermediate Forebay Location Analysis.
- 14 ● 3I: BDCP Compliance with the 2009 Delta Reform Act.
- 15 ● 3J: Alternative 4A (Proposed Project) Compliance with the 2009 Delta Reform Act.
- 16 ● 4A: Summary of Survey Data Collection Efforts by Department of Water Resources to Obtain
- 17 Information Regarding Baseline Conditions in Areas That Could Be Affected by BDCP.
- 18 ● 5A: BDCP/California WaterFix FEIR/FEIS Modeling Technical Appendix.
- 19 ● 5B: Responses to Reduced South of Delta Water Supplies.
- 20 ● 5C: Historical Background of Cross-Delta Water Transfers and Potential Source Regions.
- 21 ● 5D: Water Transfer Analysis Methodology and Results.
- 22 ● 5E: Supplemental Modeling Related to the State Water Resources Control Board.
- 23 ● 5F: Comparison of FEIRS Alternatives 2D, 4A, and 5A Modeling Results to RDEIR/SDEIS
- 24 Modeling Results.
- 25 ● 5G: Comparison of FEIRS Alternative 4A Modeling Results to the California WaterFix Section BA
- 26 Proposed Action Modeling Results.
- 27 ● 6A: BDCP/California WaterFix Coordination with Flood Management Requirements.
- 28 ● 7A: Groundwater Model Documentation.
- 29 ● 8A: Water Quality Criteria and Objectives.
- 30 ● 8B: Summary of Data Availability Used in Environmental Setting.
- 31 ● 8C: Screen Analysis.
- 32 ● 8D: Source Water Fingerprinting Results.
- 33 ● 8E: Bromide.
- 34 ● 8F: Boron.

- 1 • 8G: Chloride.
- 2 • 8H: Electrical Conductivity.
- 3 • 8I: Mercury.
- 4 • 8J: Nitrate.
- 5 • 8K: Organic Carbon.
- 6 • 8L: Pesticides.
- 7 • 8M: Selenium.
- 8 • 8N: Trace Metals.
- 9 • 8O: San Francisco Bay Analysis.
- 10 • 8P: Velocity Probability of Exceedance Curves
- 11 • 10A: Soil Associations.
- 12 • 10B: Natural Resources Conservation Service Soil Suitability Ratings.
- 13 • 10C: Soil Chemical and Physical Properties and Land Use Suitability.
- 14 • 11A: Covered Fish Species Descriptions.
- 15 • 11B: Non-Covered Fish and Aquatic Species Descriptions.
- 16 • 11C: CALSIM II Model Results Utilized in the Fish Analysis.
- 17 • 11D: Sacramento River Water Quality Model and Reclamation Temperature Model Results
18 Utilized in the Fish Analysis.
- 19 • 11E: Sensitivity Analysis to Confirm RDEIR/SDEIS Determinations for Fish and Aquatic Species
20 Using Updated Model Outputs for Alternatives 2D, 4A, and 5A.
- 21 • 11F: Substantive BDCP Revisions.
- 22 • 11G: Supplemental Modeling Results at ELT for Alternative 4 at H1 and H2.
- 23 • 12A: Special-Status Species with Potential to Occur in the Study Area.
- 24 • 12B: Common and Scientific Names of Terrestrial Species.
- 25 • 12C: 2009 to 2011 Bay Delta Conservation Plan EIR/EIS Environmental Data Report.
- 26 • 12D: Feasibility Assessment of Conservation Measures Offsetting Water Conveyance Facilities
27 Construction Impacts on Terrestrial Biological Resources.
- 28 • 12E: Detailed Accounting of Direct Effects of Alternatives on Natural Communities and Covered
29 Species.
- 30 • 14A: Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction.
- 31 • 14B: Delta Agricultural Stewardship Strategies.
- 32 • 15A: Privately Owned Recreation Facilities, by County.
- 33 • 15B: Delta Recreation.
- 34 • 15C: Additional Recreation Figures.

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- 2 • 16B: Community Characterization Photographs.
- 3 • 17A: Candidate KOP Sensitivity Matrix Ratings.
- 4 • 17B: Photo Simulation Data Sources and Assumptions.
- 5 • 17C: Scenic Quality Rating Summaries.
- 6 • 17D: Permanent Impacts after Construction is Complete.
- 7 • 17E: Permanent Features.
- 8 • 17F: Surge Tower Shadow Data Sources and Assumptions.
- 9 • 18A: Archaeological Resources Sensitivity Assessment.
- 10 • 18B: Identified Resources Potentially Affected by the BDCP Alternatives.
- 11 • 19A: Bay Delta Conservation Plan Construction Traffic Impact Analysis.
- 12 • 20A: Details of Public Services and Utilities Supporting the Plan Area.
- 13 • 22A: Air Quality Analysis Methodology.
- 14 • 22B: Air Quality Assumptions.
- 15 • 22C: Health Risk Assessment.
- 16 • 22D: DWR Climate Action Plan.
- 17 • 22E: General Conformity Determination.
- 18 • 23A: Noise Contours—Construction.
- 19 • 23B: Noise Contours—Operations.
- 20 • 24A: Draft Phase 1 Initial Site Assessment.
- 21 • 24B: 2010 Initial Site Assessment.
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- 23 • 28A: Census Data.
- 24 • 29A: Effects of Sea-Level Rise on Delta Tidal Flows and Salinity.
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- 26 • 29C: Climate Change and the Effects of Reservoir Operations on Water Temperatures in the
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- 28 • 29D: Climate Change Analysis and Discussion of Future Uncertainty
- 29 • 30A: Population Density in Hydrologic Regions.
- 30 • 30B: Water Contractor Profiles.
- 31 • 30C: Summary of Secondary Effects of Growth.
- 32 • 31A: BDCP Later CM Activity Environmental Checklist.
- 33 • 31B: Mitigation Measure WQ-7e. CCWD Settlement Agreement

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- 2 • 32B: Draft EIR/EIS Public Review Summary Report.
- 3 • 32C: RDEIR/SDEIS Public Review Summary Report.

4 The Final EIR/EIS also includes responses to comments on the Draft EIR/EIS and RDEIR/SDEIS in
5 Volume II. This portion of the document consists of the following materials.

- 6 • Part 1: Master Responses.
- 7 • Part 2: Response to Comments.
- 8 • Part 3: References.
- 9 • Appendix A: Copies of Comment Letters Received on the Draft EIR/EIS and RDEIR/SDEIS.

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