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# 1 Acronyms and Abbreviations

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BA	biological assessment
Bay-Delta Plan	Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary
BDCP or Plan	Bay Delta Conservation Plan
BiOp	biological opinion
CALFED	California Bay-Delta Authority
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
Council	Delta Stewardship Council
CVP	Central Valley Project
CWA	Clean Water Act
Delta	Sacramento–San Joaquin River Delta
DPS	distinct population segment
DRERIP	Delta Regional Ecosystem Restoration Implementation Plan
DWR	California Department of Water Resources
EFH	essential fish habitat
EIR	environmental impact report
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	evolutionarily significant unit
Fish & Game Code	California Fish and Game Code
FR	Federal Register
HCP	habitat conservation plan
IEP	Interagency Ecological Program
MOA	memorandum of agreement
NCCP	natural community conservation plan
NCCPA	Natural Community Conservation Planning Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
Plan	Bay Delta Conservation Plan
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
State Water Board	State Water Resources Control Board
SWP	State Water Project
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

## 1.1 Background

The Bay Delta Conservation Plan (BDCP or Plan) sets out a comprehensive conservation strategy for the Sacramento–San Joaquin Rivers Delta (Delta) designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear collaboration between public water agencies, fish and wildlife agencies, nongovernment organizations, agricultural interests, and the public.

The BDCP is intended to result in a permit decision concerning long-term regulatory authorizations under state and federal endangered species laws for the operations of the State Water Project (SWP) and the Central Valley Project (CVP). The Plan will further provide the basis for durable regulatory assurances. Specifically, the BDCP serves as a natural community conservation plan (NCCP) under the state’s Natural Community Conservation Planning Act (NCCPA), and a habitat conservation plan (HCP) under Section 10 of the federal Endangered Species Act (ESA). The BDCP is a joint HCP/NCCP, which will support the issuance of permits from the California Department of Fish and Wildlife (CDFW) under Section 2835 of the NCCPA, and permits from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) pursuant to Section 10 of the ESA. CDFW, USFWS, and NMFS are collectively referred to as the *fish and wildlife agencies*.

The Plan will also provide the basis for a biological assessment (BA) that supports new ESA Section 7 consultations between the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), USFWS, and NMFS. The parties that receive take authorizations pursuant to the BDCP and the associated BAs are referred to as the *Authorized Entities*. The Authorized Entities include the California Department of Water Resources (DWR), Reclamation, and may include the following federal and state water contractors.

- 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
- Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency)

See Chapter 7, *Implementation Structure*, for more details on Authorized Entities and related entities.

Consistent with the goals of the NCCPA, the BDCP has been designed to minimize and mitigate for the effects of the activities proposed in this Plan, and to provide for the conservation and management of the covered species. The Plan also provides substantial public benefits, including forestalling further decline of certain Delta species, enhancing ecosystem health, increasing the

1 reliability of water supplies, improving Delta water quality, and reducing future risks to the Delta  
2 from earthquakes, levee failure, and climate change. Funding to achieve these important goals will  
3 come from a variety of sources. The Authorized Entities will pay for the construction and operation  
4 of the new water facilities, as well as associated mitigation. Funding from a variety of state and  
5 federal sources will be available to pay for the majority of the conservation measures that will  
6 provide the substantial public benefits of the BDCP.

7 The BDCP is further intended to meet the standards set out in the Sacramento–San Joaquin Delta  
8 Reform Act of 2009, which provides for the incorporation of the BDCP in a comprehensive  
9 management plan for the Delta (known as the Delta Plan, discussed in Section 1.5.1, *The Delta Plan*)  
10 (California Water Code 35). BDCP development began more than 3 years before the Delta Plan.  
11 Although the BDCP is a separate plan, it will be consistent with, and included in, the Delta Plan,  
12 which serves similar goals.

13 Unlike past regulatory approaches, which have relied almost exclusively on iterative adjustments to  
14 the operations of the SWP and CVP, the BDCP prescribes actions that will produce fundamental,  
15 systemic, and long-term physical changes to the Delta. These changes will occur within a more stable  
16 regulatory framework and involve substantial alterations to water conveyance infrastructure and  
17 water management regimes in combination with extensive restoration of habitat and actions to  
18 reduce the impacts of various biological stressors. To further advance this holistic approach and  
19 enhance opportunities for success, the BDCP has been designed to accommodate and respond over  
20 time to new information and greater scientific understanding of the Delta.

21 The BDCP provides a comprehensive conservation strategy to meet a series of broad planning goals  
22 (Section 1.2, *Planning Goals and Conservation Objectives*) and a range of specific biological goals and  
23 objectives (Section 3.3, *Biological Goals and Objectives*). The BDCP includes a description of each  
24 element of the conservation strategy and the rationale for its inclusion. The BDCP further describes  
25 the expected contribution of each Plan element toward advancing both the overall planning goals  
26 and specific biological goals and objectives. The conservation strategy was informed by the  
27 collective experiences of professionals working in the Delta over the course of several decades,  
28 monitoring results and conceptual models developed over time through prior scientific efforts (e.g.,  
29 those conducted by the California Bay-Delta Authority [CALFED] Science Program), and  
30 supplemented by data and analysis developed through the BDCP process. The conservation strategy  
31 is based on the best available science and was built upon the following broad conservation goals  
32 (see Chapter 3, *Conservation Strategy*, for a discussion of how these goals are met and why they are  
33 important).

- 34 ● Increase the value, availability, spatial diversity, and complexity of aquatic habitat in the Delta.
- 35 ● Create new opportunities to restore the ecological health of the Delta by modifying the water  
36 conveyance infrastructure.
- 37 ● Directly address key ecosystem drivers in addition to freshwater flow patterns rather than  
38 manipulation of Delta flow patterns alone.
- 39 ● Improve connectivity among aquatic habitats, facilitate migration and movement of covered fish  
40 among habitats, and provide transport flows for the dispersal of planktonic material (organic  
41 carbon), phytoplankton, zooplankton, macroinvertebrates, fish eggs, and larvae.
- 42 ● Improve synchrony between environmental cues and conditions and the life history of sensitive  
43 fish species and their food resources in the upstream rivers, Delta, and Suisun Bay, including

1 seasonal water temperature gradients, salinity gradients, turbidity, and other environmental  
2 cues.

- 3 • Reduce sources of mortality, and other stressors, on the covered fish and the aquatic ecosystem  
4 in the Delta.
- 5 • Improve habitat conditions for covered fish in the Delta and downstream in the low-salinity  
6 zone of the estuary in Suisun Bay through the integration of water operations with physical  
7 habitat enhancement and restoration.
- 8 • Avoid, minimize, and mitigate adverse effects on terrestrial wildlife and plants resulting from  
9 implementation of measures to benefit aquatic species.
- 10 • Expand the extent and enhance the functions of existing natural communities and habitat of  
11 covered wildlife and plants that is permanently protected.
- 12 • Restore habitat to expand the populations and distributions of covered wildlife and plant species.
- 13 • Emphasize natural physical habitat and biological processes to support and maintain species  
14 covered by the Plan (i.e., covered species) and their habitat.

15 The Plan Area covers the Sacramento–San Joaquin Delta, as defined by California Water Code  
16 Section 12220 (statutory Delta), as well as certain areas in which conservation measures will be  
17 implemented such as Suisun Marsh and the Yolo Bypass (Section 1.4.1, *Geographic Scope of the*  
18 *BDCP*) (Figure 1-1).

19 The infrastructure of the state and federal water projects form an integrated system that extends  
20 beyond the boundaries of the Delta; as such, the BDCP will affect water operations, species, and  
21 habitat both inside and outside of the Delta. While the Plan Area generally does not include areas  
22 upstream and downstream of the Delta, the Plan addresses the upstream and downstream effects of  
23 covered activities (Chapter 5, *Effects Analysis*).

### 24 **1.1.1 Policy Foundation**

25 In January 2006, a number of stakeholders with diverse interests in the Delta, including public water  
26 agencies, environmental and conservation organizations, and other parties, agreed to a Statement of  
27 Principles that called for the development of a comprehensive conservation plan for the Delta. The  
28 parties to that agreement envisioned a plan that would advance the conservation of fish and wildlife  
29 species affected by certain water supply-related activities and provide long-term assurances  
30 regarding the operation of existing and future water-related facilities and other activities associated  
31 with the SWP.

32 In July 2006, several of these parties entered into a memorandum of agreement (MOA)<sup>1</sup> that set out  
33 the financial commitments of the parties to carry out actions to satisfy existing regulatory  
34 requirements related to operation of the SWP and the CVP, and to develop a conservation plan for  
35 the Delta that would support new regulatory authorizations under state and federal endangered  
36 species laws for current and future activities related to the SWP and CVP.

37 At the same time, the California Resources Agency (now the California Natural Resources Agency)  
38 convened a diverse group of stakeholders and regulatory agencies to help guide the development of a

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<sup>1</sup> This and all other public documents related to the BDCP are available on the BDCP website:  
<[www.baydeltaconservationplan.org](http://www.baydeltaconservationplan.org)>.

1 comprehensive conservation plan for the Delta, which became known as the BDCP. The resulting  
 2 BDCP Steering Committee (Table 1-1) consisted of parties to the Statement of Principles and MOA as  
 3 well as other interested groups and additional state and federal agencies. All participants indicated  
 4 their commitment to engage in a process to advance the goals to restore and protect ecosystem health,  
 5 water supply, and water quality within a stable regulatory framework. In December 2006, the original  
 6 members of the Steering Committee entered into a formal Planning Agreement, consistent with  
 7 requirements of the NCCPA, for the development of the BDCP. The Planning Agreement, among other  
 8 things, defined the goals, commitments, and expectations of the parties regarding the BDCP planning  
 9 process. It also reiterated the goal to develop a conservation plan that would meet the requirements of  
 10 the ESA and the NCCPA.

11 **Table 1-1. BDCP Steering Committee Members**

<b>Entities</b>
<b>State and Federal Agencies</b>
<ul style="list-style-type: none"> <li>• Bureau of Reclamation</li> <li>• California Department of Fish and Wildlife</li> <li>• California Department of Water Resources</li> <li>• California Natural Resources Agency</li> <li>• National Marine Fisheries Service (<i>ex officio</i>)</li> <li>• State Water Resources Control Board (<i>ex officio</i>)</li> <li>• U.S. Army Corps of Engineers (<i>ex officio</i>)</li> <li>• U.S. Fish and Wildlife Service (<i>ex officio</i>)</li> </ul>
<b>Public Water Agencies</b>
<ul style="list-style-type: none"> <li>• Kern County Water Agency</li> <li>• Metropolitan Water District of Southern California</li> <li>• San Luis &amp; Delta-Mendota Water Authority</li> <li>• Santa Clara Valley Water District</li> <li>• Westlands Water District</li> <li>• Zone 7 Water Agency</li> </ul>
<b>Environmental Organizations</b>
<ul style="list-style-type: none"> <li>• American Rivers</li> <li>• Defenders of Wildlife</li> <li>• Environmental Defense Fund</li> <li>• Natural Heritage Institute</li> <li>• The Nature Conservancy</li> <li>• The Bay Institute</li> </ul>
<b>Other Member Agencies</b>
<ul style="list-style-type: none"> <li>• California Farm Bureau Federation</li> <li>• Contra Costa Water District</li> <li>• Friant Water Authority</li> <li>• North Delta Water Agency</li> </ul>
<b>Other <i>ex officio</i> Member Agencies</b>
<ul style="list-style-type: none"> <li>• Delta Stewardship Council (formerly the California Bay-Delta Authority)</li> </ul>
<p>Notes:            The State Water Resources Control Board and U.S. Army Corps of Engineers are not signatories of the Planning Agreement.  <i>ex officio</i> represents nonvoting agencies that provide guidance.</p>



1 At the end of 2010, meetings of the Steering Committee were suspended and the state and federal  
2 water agencies and the fish and wildlife agencies focused on the resolution of outstanding issues and  
3 on completing the Plan and the related environmental documents. Steering Committee members,  
4 other public agencies, and stakeholders continued to participate in the development of the Plan  
5 through a series of focused working group meetings (Section 1.6.1, *Public Participation*).

## 6 **1.2 Planning Goals and Conservation Objectives**

7 The overarching goals of the BDCP are to advance the restoration of the ecological functions and  
8 productivity in the Delta and restore and protect water supplies provided by the SWP and CVP, as  
9 first stated in the Statement of Principles, and reaffirmed in the BDCP Planning Agreement. The  
10 Planning Agreement further articulated specific planning goals to guide the development of the  
11 BDCP and further ensure its consistency with the broader goals of the Plan. The planning goals for  
12 the BDCP are as follows.

- 13 ● Provide for the conservation and management of covered species within the Plan Area.
- 14 ● Preserve, restore, and enhance aquatic, riparian, and associated terrestrial natural communities  
15 and ecosystems that support covered species within the Plan Area through conservation  
16 partnerships.
- 17 ● Allow projects to proceed that restore and protect water supply, water quality, and ecosystem  
18 health within a stable regulatory framework.
- 19 ● Provide a means to implement covered activities in a manner that complies with applicable state  
20 and federal fish and wildlife protection laws, including the California Endangered Species Act  
21 (CESA) and ESA, and other environmental laws, including the California Environmental Quality  
22 Act (CEQA) and National Environmental Policy Act (NEPA).
- 23 ● Provide a basis for permits necessary to lawfully take covered species.
- 24 ● Provide a comprehensive means to coordinate and standardize mitigation and compensation  
25 requirements for covered activities within the Plan Area.
- 26 ● Provide a less costly, more efficient project review process that results in greater conservation  
27 values than project-by-project, species-by-species review.
- 28 ● Provide clear expectations and regulatory assurances regarding covered activities occurring  
29 within the Plan Area.

30 Throughout the planning process, the Steering Committee worked to develop a plan consistent with  
31 these planning goals. The BDCP reflects these goals and provides the basis for conservation and  
32 regulatory outcomes identified in the Planning Agreement. The BDCP process was also guided by a  
33 set of conservation objectives that were first expressed in the Planning Agreement. These  
34 preliminary conservation objectives included the following.

- 35 ● Provide for the protection of covered species and associated natural communities and  
36 ecosystems in the Plan Area.
- 37 ● Preserve the diversity of native fish, wildlife, plants, and natural communities in the Plan Area.
- 38 ● Minimize and mitigate, as appropriate, the take of proposed covered species.
- 39 ● Preserve and restore habitat and conserve covered species in the Plan Area.

- 1 • Reduce the need to list additional species.
- 2 • Set forth species-specific goals and objectives.
- 3 • Set forth specific habitat-based goals and objectives.
- 4 • Implement an adaptive management and monitoring program to respond to changing ecological
- 5 conditions.
- 6 • Avoid actions that are likely to jeopardize the continued existence of covered species or result in
- 7 the destruction or adverse modification of critical habitat.

8 These planning goals and preliminary conservation objectives set the initial direction for the BDCP  
9 planning process. As the planning process progressed, the preliminary conservation objectives  
10 evolved into specific biological goals and objectives that the BDCP would be expected to meet during  
11 its implementation. These specific biological goals and objectives are described in Section 3.3,  
12 *Biological Goals and Objectives*, and are set out in a hierarchical framework that distinguishes  
13 between landscape-level goals and objectives, natural community goals and objectives, and species-  
14 specific goals and objectives. The biological goals reflect broad principles while the biological  
15 objectives identify specific targets that the BDCP should meet to achieve its overall biological goals.  
16 These objectives include measurable metrics or criteria to enable ongoing assessment of BDCP  
17 effectiveness throughout its implementation.

## 18 **1.3 Regulatory Context**

### 19 **1.3.1 Regulatory Purpose**

20 The BDCP provides the basis for regulatory compliance with the ESA and the NCCPA for a range of  
21 activities related to the operation of the SWP and CVP, including the diversion and export of water  
22 from the Delta and its tributaries. The BDCP advances a comprehensive approach to overcome the  
23 persistent regulatory challenges that have faced the SWP and CVP. This comprehensive approach  
24 involves systemic changes to water conveyance infrastructure, broad-scale habitat restoration, and  
25 actions to address other ecological stressors. This approach is intended to result in long-term  
26 regulatory stability for the state and federal water projects, while furthering the goals of the BDCP to  
27 restore and protect ecosystem health, water supply, and water quality.

28 The BDCP is a joint HCP/NCCP, which will support the issuance of incidental take authorizations  
29 from USFWS and NMFS pursuant to Section 10 of the ESA, and take authorizations from CDFW  
30 under Section 2835 of the NCCPA to the nonfederal applicants (16 United States Code [USC] 1539;  
31 California Fish and Game Code [Fish & Game Code] 2835 *et seq.*). The BDCP has also been designed  
32 to meet the standards of Section 2081 of the CESA. The BDCP will further provide the basis for a BA  
33 to support the issuance of incidental take authorizations from USFWS and NMFS to Reclamation,  
34 pursuant to Section 7 of the ESA, for its actions in the Delta.

35 To meet these regulatory objectives, the BDCP sets out a comprehensive conservation strategy  
36 addressing the adverse effects of SWP and CVP actions on aquatic and terrestrial species in the  
37 Plan Area, most of which are currently listed under the ESA or CESA as threatened, endangered, or  
38 as candidates for listing. The conservation strategy also addresses designated critical habitat, if  
39 any, that has been designated for these species pursuant to the ESA (Chapter 3, *Conservation*  
40 *Strategy*). The BA for CVP-related activities in the Delta will incorporate the conservation strategy

1 as it relates to those federal actions. It should be noted that the BDCP does not attempt to  
2 distinguish precisely between the effects on covered species attributable to the CVP-related  
3 activities and those of the SWP. Rather, the BDCP includes a comprehensive analysis of the effects  
4 associated with the SWP and CVP within the Plan Area and is intended to provide a conservation  
5 strategy that adequately addresses the totality of those effects. On the basis of the BDCP, USFWS  
6 and NMFS are expected to issue Section 10 permits.

### 7 **1.3.2 Federal Endangered Species Act**

8 The United States Congress passed the ESA in 1973 to provide a means for conserving endangered  
9 and threatened species and the ecosystems on which they depend. The ESA has three major  
10 components relevant to the BDCP.

- 11 • Section 7 requires that federal agencies, in consultation with the federal fish and wildlife  
12 agencies, ensure that their actions are not likely to jeopardize the continued existence of species  
13 or result in modification or destruction of critical habitat.
- 14 • Section 9 prohibits the taking of listed species.
- 15 • Section 10 allows permits to be issued that authorize the incidental take of threatened and  
16 endangered species.

17 Section 7 of the ESA provides that each federal agency must ensure, in consultation with the  
18 Secretary of the Interior or Commerce, that any actions authorized, funded, or carried out by the  
19 agency are not likely to jeopardize the continued existence of any endangered or threatened  
20 species or result in the destruction or adverse modification of areas determined to be critical  
21 habitat (16 USC 1536(a)(2)). Section 7 requires federal agencies to engage in formal consultation  
22 with USFWS and/or NMFS for any proposed actions that are likely to adversely affect listed  
23 species. A biological opinion (BiOp) is issued by USFWS or NMFS at the completion of formal  
24 consultation. The BiOp can conclude that the project as proposed is either likely or not likely to  
25 jeopardize the continued existence of the species or destroy or adversely modify designated  
26 critical habitat. If the BiOp concludes *no jeopardy*, the action can proceed as proposed consistent  
27 with the incidental take statement, which authorizes a specified level of take. The incidental take  
28 statement contains “reasonable and prudent measures” that are designed to minimize the level of  
29 incidental take and that must be implemented as a condition of the take authorization (50 Code of  
30 Federal Regulations [CFR] 402.14(i)(5)). If the BiOp concludes *jeopardy*, USFWS or NMFS will  
31 identify “reasonable and prudent alternatives” to the proposed action that would avoid  
32 jeopardizing the species.

33 Section 9(a)(1)(B) of the ESA prohibits the take by any person of any endangered fish or wildlife  
34 species; take of threatened fish or wildlife species is prohibited by regulation. The ESA prohibits the  
35 take of any listed threatened fish or wildlife species in violation of any regulation promulgated by  
36 USFWS or NMFS. *Take* under ESA is defined broadly to mean harass, harm, hunt, shoot, wound, kill,  
37 trap, capture, or collect, or attempt to engage in any such conduct (16 USC 1532 [1988]). *Harm* is  
38 defined by regulation to mean an act that actually kills or injures wildlife, including those activities  
39 that cause significant habitat modification or degradation resulting in the killing or injuring of  
40 wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or

1       sheltering (50 CFR 17.3).<sup>2</sup> The take prohibitions of the ESA apply unless take is otherwise  
2       specifically authorized or permitted pursuant to the provisions of Section 7 or Section 10 of the ESA.  
3       The protections for listed plant species under the ESA are more limited than for fish and wildlife.<sup>3</sup>

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

10       Under Section 10(a)(1)(B) of the ESA, USFWS and NMFS may permit the incidental take of listed  
11       species that may occur as a result of an otherwise lawful activity. To obtain a Section 10(a)(1)(B)  
12       permit, an applicant must prepare an HCP that meets the following five issuance criteria.

- 13       • The taking will be incidental to an otherwise lawful activity.
- 14       • The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of  
15       such taking.
- 16       • The applicant will ensure that adequate funding for the Plan will be provided.
- 17       • The taking will not appreciably reduce the likelihood of the survival and recovery of the species  
18       in the wild.
- 19       • Other measures, if any, which USFWS and NMFS require as being necessary or appropriate for  
20       purposes of the Plan will be met (16 USC 1539(a)(2)(A)).

### 21   **1.3.2.1           Biological Opinion for BDCP**

22       The BDCP is intended to meet the regulatory requirements necessary for the issuance of Section 10  
23       permits by USFWS and NMFS to allow for the incidental take of the species covered by the Plan  
24       resulting from the implementation of covered activities by DWR and certain SWP and CVP  
25       contractors (i.e., the Authorized Entities). The BDCP is also intended to support the issuance of a  
26       joint BiOp under Section 7 by USFWS and NMFS authorizing the incidental take associated with  
27       BDCP actions undertaken by Reclamation and CVP contractors within the Plan Area. That joint BiOp  
28       will also address the decision by USFWS and NMFS to issue Section 10 permits to the Authorized  
29       Entities (i.e., the issuance of Section 10 permits is a federal action subject to Section 7).

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<sup>2</sup> NMFS has a similar definition that adds the concepts of spawning and migrating to examples of injury. NMFS defines *harm* as “an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering” (50 CFR 222.102).

<sup>3</sup> Section 9(a)(2)(B) of the ESA prohibits removal, possession, or malicious damage or destruction of endangered plants in areas under federal jurisdiction, as well as actions that remove, cut, dig up, damage, or destroy endangered plants in areas outside of federal jurisdiction in violation of any state law or regulation, including state criminal trespass law. Protection for threatened plant species is limited to areas under federal jurisdiction (50 CFR 17.71(a)). The ESA Section 7(a)(2) prohibition against jeopardy applies to plants, wildlife, and fish equally, and USFWS and NMFS may not issue a Section 10(a)(1)(B) permit if the issuance of that permit would result in jeopardy to any listed species.

1 A BA is typically prepared to support formal Section 7 consultations. A biological assessment  
2 describes relevant existing conditions, the proposed action, the effects of the proposed action on  
3 listed species, and measures that will be adopted to minimize those effects. Because HCPs include  
4 the same information, they are generally sufficient to serve as biological assessments. BDCP  
5 provides much of the information needed by the federal agencies to support the Section 7  
6 consultation. However, additional information may be prepared to support the BDCP Section 7  
7 consultation.

### 8 **1.3.2.2 Relationship of BDCP to Existing Biological Opinions**

9 The coordinated long-term operation of the SWP and CVP is currently subject to the terms and  
10 conditions of BiOps issued by USFWS (2008) and NMFS (2009) pursuant to Section 7. In 2011, these  
11 BiOps were remanded by court order to the federal fish and wildlife agencies for revision. The  
12 revised BiOps are to be issued by December 1, 2014 (USFWS) and February 1, 2017 (NMFS) with the  
13 possibility of two one-year extensions if satisfactory progress is demonstrated to the court.

14 With respect to Reclamation's operation of the CVP, the joint BiOp for the BDCP will cover only those  
15 operations that occur after the new water conveyance facilities are operational, which is expected to  
16 be in 2026. At that time, the joint BDCP BiOp is expected to supersede the existing BiOps (as revised)  
17 for the coordinated long-term operation of the SWP and CVP, but only for those operations that  
18 occur within the Plan Area. The BiOps on the coordinated long-term operation of the SWP and CVP  
19 are expected to continue to provide Section 7 authorization for operations of the SWP and CVP that  
20 occur outside of the BDCP Plan Area. Alternatively, Reclamation may seek revised BiOps for the  
21 coordinated long-term operations of the SWP and CVP that incorporates the new operations of  
22 BDCP. The joint BiOp for the BDCP is expected to provide Section 7 authorization for Reclamation's  
23 restoration and monitoring actions carried out pursuant to the BDCP, consistent with regulatory  
24 requirements, other programs, authorizations, and appropriations.

### 25 **1.3.2.3 Compliance with the Federal Fish and Wildlife Services' Five- 26 Point Policy Guidance**

27 In 2000, USFWS and NMFS adopted a five-point policy designed to clarify elements of the habitat  
28 conservation planning program as they relate to biological goals, adaptive management, monitoring,  
29 permit duration, and public participation. The Final Addendum to the *Handbook for Habitat  
30 Conservation Planning and Incidental Take Permitting* (65 *Federal Register* [FR] 106) (hereafter  
31 referred to as the five-point policy) directs that the following elements be addressed in the  
32 development of HCPs.

#### 33 **1. Biological Goals and Objectives**

34 HCPs are required to define biological goals and objectives that the conservation measures are  
35 intended to achieve. Biological goals and objectives clarify the purpose and direction of the  
36 plan's conservation program. The BDCP sets out extensive biological goals and objectives,  
37 including specific measurable targets that the Plan is designed to meet. These targets were  
38 developed based on the best available scientific information and have been used as parameters  
39 and benchmarks to guide the conservation strategies for the species and natural communities  
40 covered by the Plan (Section 3.3, *Biological Goals and Objectives*).

## 1        2. Adaptive Management

2        The five-point policy encourages the inclusion of adaptive management strategies in HCPs in  
3        appropriate circumstances to address uncertainty related to species covered by a plan. The  
4        agencies describe adaptive management as a “method for examining alternative strategies for  
5        meeting measurable biological goals and objectives, and then if necessary, adjusting future  
6        conservation management actions according to what is learned” (65 FR 106). The BDCP  
7        incorporates an adaptive management process that is designed to facilitate and improve  
8        decision-making during the implementation of the Plan and identify adjustments and  
9        modifications, as defined in the Plan, to the conservation strategy as new information becomes  
10       available. The framework for the BDCP adaptive management program is set out in Section 3.6,  
11       *Adaptive Management and Monitoring Program*.

## 12       3. Monitoring

13       HCPs are required to include provisions for monitoring to gauge the effectiveness of the Plan in  
14       meeting the biological goals and objectives and to verify that the terms and conditions of the  
15       Plan are being properly implemented. The biological and compliance monitoring provisions of  
16       the BDCP are found in Section 3.6, *Adaptive Management and Monitoring Program*, and in  
17       Appendix 3.D, *Monitoring and Research Actions*.

## 18       4. Permit Duration

19       Consistent with the five-point policy, USFWS and NMFS consider several factors in determining  
20       the term of an incidental take permit. The agencies, for instance, take into account the expected  
21       duration of the activities proposed for coverage and the anticipated positive and negative effects  
22       on covered species that will likely occur during the course of the Plan. The agencies also factor in  
23       the level of scientific and commercial data underlying the proposed operating conservation  
24       program, the length of time necessary to implement and achieve the benefits of the operating  
25       conservation program, and the extent to which the program incorporates adaptive management  
26       strategies. The duration of the permits to be issued pursuant to the BDCP is anticipated to be  
27       50 years and is discussed below in Section 1.4.5, *Permit Duration*.

## 28       5. Public Participation

29       Under the five-point policy, USFWS and NMFS have sought to increase public participation in the  
30       HCP process, including greater opportunity for the public to assess, review, and analyze HCPs  
31       and associated NEPA documentation. As part of this effort, the agencies have encouraged greater  
32       engagement of the public for most HCPs, particularly those with regional scopes. As described in  
33       Section 1.6.1, *Public Participation*, the BDCP process afforded extensive opportunities for public  
34       involvement and input throughout the development of the Plan.

## 35       1.3.3       Natural Community Conservation Planning Act

36       The NCCPA provides a mechanism for compliance with state endangered species regulatory  
37       requirements through the development of comprehensive, broad-scale conservation plans that  
38       focus on the needs of natural communities and the range of species that inhabit them (Fish & Game  
39       Code 2800 *et seq.*) The NCCP program has provided the basis for successful collaborations  
40       throughout California between state and federal agencies, local governments, community groups,  
41       and private interests that have resulted in long-term, habitat-based protections for regional  
42       biodiversity and related ecosystems. It has also proved to be an effective tool in achieving these

1 protections while reducing conflicts between conservation goals and the reasonable use of natural  
2 resources and lands for economic development. The BDCP adopts the approaches set out in the  
3 NCCPA and incorporates those elements necessary to meet regulatory requirements of the act.

4 Specifically, the BDCP has been developed in a manner consistent with the process identified in its  
5 Planning Agreement, including processes to ensure ample public participation and engagement  
6 throughout Plan development and review, extensive input from independent scientists, and  
7 coordination with federal fish and wildlife agencies with respect to ESA requirements. Consistent  
8 with the requirements of the NCCPA, the Plan further provides a multifaceted approach to advance  
9 the conservation and management of covered species and their habitats, incorporating a  
10 conservation strategy that provides for the protection of habitat, natural communities, and species  
11 diversity on an ecosystem level; establishes conservation measures, including measures sufficient to  
12 mitigate the effects of covered activities; integrates adaptive management strategies that can be  
13 modified based on new information developed through monitoring; and sets out a detailed  
14 implementation program, including provisions that ensure adequate funding to carry out the Plan.

15 The BDCP addresses all of the requirements of the NCCPA for aquatic, wetland, and terrestrial  
16 covered species of fish, wildlife, and plants and Delta natural communities affected by covered  
17 activities. As such, DWR and certain water contractors are seeking permits from CDFW that  
18 authorize the take of species covered under the Plan (Fish & Game Code 2835). Such permits issued  
19 pursuant to the NCCPA may include authorization for the take of state-designated fully protected  
20 species that are covered by an NCCP.

21 The specific requirements of the NCCPA and the corresponding sections in this document that  
22 address those requirements are identified in Table 1-2.

### 23 **1.3.4 California Endangered Species Act**

24 The CESA prohibits the take of wildlife or plant species designated as threatened or endangered by  
25 the California Fish and Game Commission (Fish & Game Code 2080). *Take* under CESA is defined as  
26 any action or attempt “to hunt, pursue, catch, capture, or kill” (Fish & Game Code 86). Like the ESA,  
27 the CESA allows for exceptions to the take prohibitions for otherwise lawful activities. The  
28 requirements of an application for incidental take under the CESA are described in Section 2081 of  
29 the Fish & Game Code. Incidental take of endangered, threatened, or candidate species may be  
30 authorized if an applicant demonstrates, among other things, that the effects of the proposed take  
31 will be minimized and fully mitigated (Fish & Game Code 2081(b)(2)).

32 Although the BDCP has been designed to comply with the NCCPA, and take authorizations are being  
33 sought under Section 2835 of the Fish & Game Code, the Plan’s provisions have also been developed  
34 to be consistent with the regulatory standards of the CESA. Specifically, the conservation strategy  
35 incorporates measures that adequately minimize and fully mitigate the effects of covered activities  
36 on state-listed species and includes other such measures as required by the CESA. As such, the  
37 actions set out in the BDCP are expected to be sufficient to allow findings to be made by CDFW to  
38 support the issuance of incidental take authorizations under the CESA.

1 **Table 1-2. Checklist for Natural Community Conservation Planning Act Requirements**

<b>Requirement (California Fish and Game Code Section)</b>	<b>Applicable BDCP Sections<sup>a</sup></b>
The plan was developed in accordance with the process identified in the planning agreement per Section 2810. (2820(a)(1))	Chapter 1, Section 1.1.1, <i>Policy Foundation</i> , Section 1.2, <i>Planning Goals and Conservation Objectives</i> , and Section 1.3.3, <i>Natural Community Conservation Planning Act</i>
The plan integrates adaptive management strategies that are periodically evaluated and modified based on information from monitoring programs and other sources; these strategies assist conservation of covered species and ecosystems within the plan area. (2820(a)(2))	Chapter 3, Section 3.4, <i>Conservation Measures (Adaptive Management and Monitoring</i> subheadings for each conservation measure) and Section 3.6, <i>Adaptive Management and Monitoring Program</i> Chapter 6, Section 6.3, <i>Planning, Compliance and Progress Reporting</i> and Section 6.4, <i>Regulatory Assurances, Changed Circumstances, and Unforeseen Circumstances</i> Chapter 7 Section 7.3.5 <i>Management of the Adaptive Management Program</i>
The plan protects habitat, natural communities, and species diversity on a landscape or ecosystem basis through the creation and long-term management of habitat reserves or other measures that provide equivalent conservation of covered species appropriate for land, aquatic, and marine habitats within the plan area. (2820(a)(3))	Chapter 3, Section 3.3.5.1, <i>Reserve System</i> and Section 3.4, <i>Conservation Measures</i>
The plan conserves, restores, and manages representative natural and semi-natural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity. (2820(a)(4)(A))	Chapter 2, Section 2.3.2, <i>Ecosystem Processes</i> , Section 2.3.4, <i>Natural Communities</i> , and Section 2.4, <i>Biological Diversity</i> Chapter 3, Section 3.3.5.1, <i>Reserve System</i> and Section 3.4, <i>Conservation Measures</i>
The plan establishes one or more reserves or proposes other measures that provide equivalent conservation of covered species within the plan area and linkages between them and adjacent habitat areas outside of the plan area. (2820(a)(4)(B))	Chapter 3, Section 3.3.5.1, <i>Reserve System</i> , Section 3.3.6, <i>Natural Community Biological Goals and Objectives</i> , and Section 3.4, <i>Conservation Measures</i>
The plan protects and maintains habitat areas that are large enough to support sustainable populations of covered species. (2820(a)(4)(C))	Chapter 3, Section 3.3.6, <i>Natural Community Biological Goals and Objectives</i> , Section 3.3.7, <i>Species Biological Goals and Objectives</i> , and Section 3.4, <i>Conservation Measures</i>
The plan sustains the effective movement and interchange of organisms between habitat areas to maintain ecological integrity of habitat within the plan area. (2820(a)(4)(E))	Chapter 3, Section 3.3.5.1, <i>Reserve System</i> and Section 3.4, <i>Conservation Measures</i> (CM1, CM2, CM3, CM4, CM5, CM6, CM7, CM11, CM13, CM14, CM15, and CM16)
The plan incorporates a range of environmental gradients (such as slope, elevation, aspect, and coastal or inland characteristics) and high habitat diversity; this provides for shifting distributions of species due to changed circumstances. (2820(a)(4)(D))	Chapter 3, Section 3.4, <i>Conservation Measures</i> (CM2, CM3, CM4, CM5, CM6, CM7, CM8, CM9, CM10, CM11)



Requirement (California Fish and Game Code Section)	Applicable BDCP Sections <sup>a</sup>
The plan identifies allowable activities and restrictions within reserve areas compatible with conservation of species, habitats, natural communities, and associated ecological functions. (2820(a)(5))	Section 3.4, <i>Conservation Measures</i> (CM11 and CM22)
The plan contains specific conservation measures that meet the biological needs of covered species and that are based on the best available scientific information about the status of covered species and the impacts of permitted activities on those species. (2820(a)(6))	Chapter 3, Section 3.3.7, <i>Species Biological Goals and Objectives</i> and Section 3.4, <i>Conservation Measures</i> (species-specific subheadings of each conservation measure) Chapter 5, Section 5.5, <i>Effects on Covered Fish</i> and Section 5.6, <i>Effects on Covered Wildlife and Plant Species</i> Appendix 2.A, <i>Covered Species Accounts</i> (for best available scientific information on the covered species)
The plan contains a monitoring program. (2820(a)(7))	Chapter 3, Section 3.6, <i>Adaptive Management and Monitoring Program</i>
The plan contains an adaptive management program. (2820(a)(8))	Chapter 3, Section 3.6, <i>Adaptive Management and Monitoring Program</i>
The plan includes an estimated timeframe and process for implementing reserves or other conservation measures, including obligations of landowners and plan signatories and consequences for failure to acquire lands in a timely manner. (2820(a)(9))	Chapter 3, Section 3.4, <i>Conservation Measures</i> (Implementation subheading of each conservation measure) Chapter 6, Section 6.1, <i>Implementation Schedule</i> ; Table 6-1, <i>Implementation Schedule for Water Facilities and Other Stressors Conservation Measures</i> , and Table 6-2, <i>Implementation Schedule for Natural Community Protection and Restoration Conservation Measures</i> Chapter 7, <i>Implementation Structure</i> Chapter 8, Section 8.2.2.2, <i>Cost Contingency</i>
The plan ensures that mitigation and conservation measures are roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan. These provisions identify (a) the conservation measures—including assembly of reserves where appropriate and implementation of monitoring and management activities—that the landowner will maintain or carry out in rough proportion to the impact on habitat or covered species and (b) the measurements that will be used to determine if this occurs. (2820(b)(3)(D)(9))	Chapter 3, Section 3.3, <i>Biological Goals and Objectives</i> , and Section 3.4, <i>Conservation Measures</i> (Implementation subheading of each conservation measure) Chapter 5, Section 5.5, <i>Effects on Covered Fish</i> , net effects discussions for each species Chapter 5, Section 5.6, <i>Effects on Covered Wildlife and Plant Species</i> , net effects discussions for each species
The plan ensures adequate funding to carry out the conservation measures identified in the plan. (2820(a)(10))	Chapter 8, Section 8.3, <i>Funding Sources</i> and Section 8.4, <i>Funding Assurances</i>
The plan defines species coverage, including any conditions of coverage (2820(b)(1)). The plan establishes long-term protection of habitat reserves or provides equivalent conservation of covered species (2820(b)(2)).	Chapter 1, Section 1.4.3, <i>Covered Species</i> Chapter 3, Section 3.3.5.1, <i>Reserve System</i> , Section 3.3.7, <i>Species Biological Goals and Objectives</i> , and Section 3.4, <i>Conservation Measures</i>

Requirement (California Fish and Game Code Section)	Applicable BDCP Sections <sup>a</sup>
	Appendix 1.A, <i>Evaluation of Species Considered for Coverage</i>
<p>The plan defines specific terms and conditions, which, if violated, would result in the suspension or revocation of the permit, in whole or in part. CDFW will include a provision requiring notification to the plan participant of a specified period of time to cure any default prior to suspension or revocation of the permit in whole or in part. These terms and conditions will address, but are not limited to, provisions specifying the actions CDFW will take under all of the following circumstances (2820(b)(3)):</p> <ul style="list-style-type: none"> <li>• The plan participant fails to provide adequate funding.</li> <li>• The plan participant fails to maintain the rough proportionality between impacts on habitat or covered species and conservation measures.</li> <li>• The plan participant adopts, amends, or approves any plan or project without the concurrence of the wildlife agencies that is inconsistent with the objectives and requirements of the approved plan.</li> <li>• The level of take exceeds that authorized by the permit.</li> </ul>	<p>Chapter 6, Section 6.5, <i>Changes to the Plan or Permits</i>  Chapter 7, Section 7.4.1, <i>Maintaining Permits and Authorizations and Obtaining Amendments</i>  Chapter 8, Section 8.3, <i>Funding Sources</i>, Section 8.4, <i>Funding Assurances</i>, and Section 8.2.2.2, <i>Cost Contingency</i></p>
The plan specifies procedures for amendment of the plan and the implementation agreement (2820(b)(4)).	Chapter 6, Section 6.5.3, <i>Formal Amendment</i>
The plan ensures implementation of a monitoring program and adaptive management program. (2820(b)(5)).	Chapter 3, Section 3.6, <i>Adaptive Management and Monitoring Program</i>
The plan provides for oversight of plan implementation to assess mitigation performance, funding, and habitat protection measures. (2820(b)(6))	Chapter 7, <i>Implementation Structure</i>
The plan provides for periodic reporting to the wildlife agencies and the public for purposes of information and evaluation of plan progress. (2820(b)(7))	Chapter 6, Section 6.3, <i>Planning, Compliance, and Progress Reporting</i>
The plan provides mechanisms to ensure adequate funding to carry out the conservation actions identified in the plan. (2820(b)(8))	Chapter 8, Section 8.3, <i>Funding Sources</i> and Section 8.4, <i>Funding Assurances</i>
The plan stipulates that if a participant does not maintain proportionality between <i>take</i> and conservation measures specified in the implementation agreement and does not either (a) cure the default within 45 days or (b) enter into an agreement with CDFW within 45 days to expeditiously cure the default, CDFW will suspend or revoke the permit, in whole or in part. (2820(c))	Chapter 6, Section 6.5.7, <i>Suspension or Revocation of the State Permit</i>
The plan requires that data and reports associated with monitoring programs be available for public review; the landowner must also conduct public workshops on an annual basis to provide information and evaluate progress toward attaining the conservation objectives of the plan. (2820(d))	<p>Chapter 3, Section 3.6, <i>Adaptive Management and Monitoring Program</i>  Chapter 6, Section 6.3, <i>Planning, Compliance, and Progress Reporting</i>  Chapter 7, Section 7.1.11, <i>General Public</i>, and Section 7.5, <i>Public Outreach</i></p>
<sup>a</sup> Only the primary applicable sections of the Plan are listed. Other sections may apply or be cross-referenced by the sections listed in this table.	

### 1 **1.3.5 National Environmental Policy Act**

2 The purpose of NEPA is to ensure that federal agencies consider the environmental impacts of their  
3 actions and decisions prior to approving the action (42 USC 4371 *et seq.*). NEPA requires that the  
4 federal government use all practicable means and measures to protect environmental values and  
5 makes environmental protection a part of the mandate of every federal agency and department. To  
6 accomplish this goal, NEPA establishes a process and approach to analysis to determine the  
7 environmental impacts associated with proposed federal discretionary actions that significantly  
8 affect the quality of the human environment.

9 The permitting and implementation of the BDCP involves several federal actions and decisions that  
10 are subject to the requirements of NEPA. Reclamation's proposed actions could include coordinating  
11 CVP operations with the new SWP conveyance facilities, the federally related actions included in  
12 Chapter 4, *Covered Activities and Associated Federal Actions*, an expected agreement with DWR to  
13 provide for wheeling of CVP water through a new conveyance facility, and the implementation of  
14 certain conservation measures through the Implementation Office. USFWS and NMFS will make  
15 decisions regarding the issuance of incidental take permits under Section 10(a)(1)(B) of the ESA.  
16 Reclamation, USFWS, and NMFS have been designated as lead agencies for the purpose of preparing  
17 the BDCP environmental impact statement (EIS), which is being developed jointly with DWR's  
18 environmental impact report (EIR) in compliance with CEQA. The U.S. Army Corps of Engineers  
19 (USACE) and the U.S. Environmental Protection Agency (EPA) are participating in the NEPA process  
20 as federal cooperating agencies. The following are participating as nonfederal cooperating agencies:  
21 the State and Federal Contractors Water Agency, Contra Costa County, Sacramento County, Solano  
22 County, Yolo County, Reclamation District 3, Reclamation District 150, Reclamation District 551,  
23 Reclamation District 999, and the North Delta Water Agency.

### 24 **1.3.6 California Environmental Quality Act**

25 CEQA serves as the state counterpart to NEPA, and applies to all discretionary activities proposed to  
26 be carried out or approved by California public agencies. CEQA requires state and local agencies to  
27 identify potential significant environmental impacts of their actions and to take all feasible steps to  
28 avoid or mitigate those impacts. CEQA sets forth both procedural and substantive requirements and  
29 its procedures are intended to ensure adequate public participation and input into the decision-  
30 making process (California Public Resources Code Section 21000 *et seq.* and CEQA Guidelines 14,  
31 California Code of Regulations [CCR] 15000 *et seq.*).

32 The BDCP is a project subject to CEQA, as are numerous BDCP-related actions that will be  
33 implemented over the term of the Plan. DWR serves as the CEQA lead agency for the preparation of  
34 the EIR, which will include analyses of DWR's proposed adoption of the Plan, as well as its  
35 implementation of certain projects covered by the BDCP. Among the BDCP-related projects that will  
36 undergo review are the construction of new conveyance facilities and several identifiable habitat  
37 restoration actions. The water contractors participating in this Plan also serve as responsible  
38 agencies under CEQA, and intend to rely on the EIR to support certain discretionary actions related  
39 to the BDCP. CDFW is participating in the preparation of the EIR as both a responsible and trustee  
40 agency. The State Water Resources Control Board (State Water Board) is also participating in the  
41 preparation of the EIR as a responsible agency. The EIR will also serve as the CEQA document for the  
42 purpose of regulatory permits issued by CDFW pursuant to the BDCP. The EIR is being prepared  
43 jointly with the EIS.

## 1.3.7 Relationship to Other Federal and State Laws and Regulations

The BDCP has been developed as a conservation plan that complies with state and federal endangered species laws. However, the Plan and the actions described herein will need to conform to the requirements of various other state and federal laws and regulations not specifically addressed by the Plan. Prior to the implementation of many of the actions set out in the BDCP, regulatory authorizations and approvals will need to be obtained from state and federal authorities under applicable laws. Such authorizations will likely involve some or all of the following statutes.

- Section 404 of the Clean Water Act (placement of dredge and fill).
- Section 401 of the Clean Water Act (water quality certification).
- Section 10 of the Rivers and Harbors Act (navigation).
- Section 408 of the Rivers and Harbors Act (work on levees).
- California Fish and Game Code Sections 1600 *et seq.* and 5900 *et seq.* (channel modification, fish screens).
- Migratory Bird Treaty Act (migratory birds).
- Fish and Wildlife Coordination Act (modification of a water body).
- California Water Code Sections 1000 *et seq.* (water rights).
- Porter-Cologne Water Quality Control Act.

### 1.3.7.1 Section 404 of the Clean Water Act

In 1972, Congress passed the federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), with the goal of “restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation’s waters” (33 USC 1251(a)). In furtherance of this goal, the CWA prohibits the discharge of any pollutants into navigable waters, except as allowed by permit issued under certain sections of the CWA (33 USC 1311, 1342, and 1344). Specifically, Section 404 authorizes USACE to issue permits for and regulate the discharge of dredged or fill materials into wetlands or other waters of the United States. Under the CWA and its implementing regulations, *waters of the United States* are broadly defined to consist of rivers, creeks, streams, and lakes extending to their headwaters, including adjacent wetlands (33 CFR 328.3(a)(3)).

Responsibility for the implementation of Section 404 of the CWA is shared by EPA and USACE. EPA is generally responsible for establishing policy and guidance regarding the implementation of the program. For instance, EPA developed the guidelines that are used to evaluate the sufficiency of Section 404 permit applications, and has played the lead role in determining the scope of the federal government’s jurisdiction over aquatic resources, including the reach of the term *waters of the United States*. EPA also determines the eligibility of a state to assume

1 responsibility for portions of the Section 404 program.<sup>4</sup> On the other hand, USACE is responsible  
2 for the day-to-day administration of the Section 404 permit program.

3 Many of the actions that will be implemented under the BDCP will result in the discharge of dredged  
4 or fill materials into waters of the United States and will need to be authorized by USACE. These  
5 covered activities will receive such authorizations through both general permits and individual  
6 permits. Typically, general permits apply to specific classes of activities that have been determined  
7 to cause no more than minimal adverse effects on the aquatic environment (e.g., construction of  
8 road crossings, installation of utility lines, and operations and maintenance activities) (33 CFR  
9 325.5(c)). Individual permits are designed for activities that have the potential to have more than a  
10 minimal effect on jurisdictional waters or that otherwise do not qualify under the conditions of a  
11 general permit. Substantively, USACE must evaluate applications for individual permits to determine  
12 their consistency with the requirements of the Section 404(b)(1) Guidelines (40 CFR 230) and  
13 USACE regulations (33 CFR 325).

### 14 **1.3.7.2 Section 401 of the Clean Water Act**

15 Pursuant to Section 401, states can certify or deny federal permits or licenses that might result in a  
16 discharge to state waters, including wetlands (33 USC 1341). Section 404 permit applicants must  
17 obtain a “water quality certification” from the state water quality agency indicating that the  
18 proposed activity complies with all applicable state water quality standards, limitations, and  
19 restrictions. In California, the Regional Water Quality Control Boards (RWQCBs) issue water quality  
20 certifications within their jurisdictions. Appeals to the decisions of the RWQCBs are heard by the  
21 State Water Board.

### 22 **1.3.7.3 Section 10 of the Rivers and Harbors Act**

23 Certain covered activities will require authorizations under Section 10 of the Rivers and Harbors Act  
24 of 1899 (33 USC 403), which requires authorization from the Secretary of the Army for the  
25 construction of any structure in or over any navigable water of the United States or the construction  
26 of structures or alteration of capacity in any port, canal, navigable river, or other water of the United  
27 States (33 CFR 401 *et seq.*). *Navigable waters* under Section 10 of the Rivers and Harbors Act are  
28 defined as “those waters of the United States that are subject to the ebb and flow of the tide  
29 shoreward to the mean high water mark and/or are presently used, or have been used in the past, or  
30 may be susceptible to use to transport interstate or foreign commerce” (33 CFR 329.4).

### 31 **1.3.7.4 Section 14 of the Rivers and Harbors Act (Section 408)**

32 Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408; commonly referred to as Section 408)  
33 provides protection for federal projects in waterways such as sea walls, dikes, levees, and piers from  
34 being moved, altered, or destroyed, in a manner that impairs the usefulness of the structure. Under  
35 Section 408, the Chief of Engineers may grant permission to alter an existing federal project if it is  
36 not injurious to the public interest and does not impair the usefulness of the project. Certain covered

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<sup>4</sup> The 1977 amendments to the CWA provided that states can assume the federal 404 program provided that the state has a “comparable” program. State program assumption of 404 is only available for nonnavigable waters so that even in states where the program has been assumed, the federal government retains control over activities in navigable waters. Only two states, Michigan and New Jersey, have assumed the 404 program to date. In states with assumed 404 programs, the state authorization is the only one required.

1 activities, such as those that affect federal project levees and weirs, will require authorizations  
2 under Section 408.

### 3 **1.3.7.5 Magnuson-Stevens Fishery Conservation and Management Act**

4 Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act as amended by  
5 the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies to consult  
6 with NMFS on activities that may affect essential fish habitat (EFH) for species that are managed  
7 under federal fishery management plans in United States waters. The statutory definition of EFH  
8 includes *those waters and substrate necessary to fish for spawning, breeding, feeding or growth to*  
9 *maturity*, which encompasses all physical, chemical, and biological habitat features necessary to  
10 support the entire life cycle of the species in question. Waters potentially affected by the BDCP  
11 include EFH for Pacific salmon, groundfish, and coastal pelagic fishes.

### 12 **1.3.7.6 California Fish and Game Code Section 1600 et seq.**

13 California has adopted regulations to address impacts to many of the resources subject to Section  
14 404 of the CWA. Although not entirely overlapping, these programs intersect frequently. Project  
15 proponents are required to obtain separate authorizations from USACE and CDFW.

16 Section 1602 of the Fish & Game Code requires any person, state, or local government agency to  
17 provide advance written notification to CDFW prior to initiating any activity that would cause the  
18 following actions.

- 19 • Divert or obstruct the natural flow of, or substantially change or remove material from the bed,  
20 channel, or bank of any river, stream, or lake.
- 21 • Result in the disposal or deposition of debris, waste, or other material into any river, stream, or  
22 lake (Fish & Game Code 1602).

23 The state definition of *lake, rivers, and streams* includes all rivers or streams that flow at least  
24 periodically or permanently through a bed or channel with banks that support fish or other aquatic  
25 life, and watercourses with surface or subsurface flows that support or have supported riparian  
26 vegetation (14 CCR 1.72.).

27 Certain actions that will be implemented under the BDCP will require a Lake and Streambed  
28 Alteration Agreement under Section 1602. As part of that process, CDFW will review notifications of  
29 actions implemented under the BDCP to determine if the proposed action would substantially  
30 adversely affect existing fish and wildlife resources that are directly dependent on a lake, river, or  
31 stream. If CDFW determines that the proposed activity would not substantially adversely affect an  
32 existing fish and wildlife resource, it will notify the Implementation Office that no Lake and  
33 Streambed Alteration Agreement is required and the project may proceed (Fish & Game Code  
34 1602(a)(4)(A)(i)). If CDFW determines that the project may substantially adversely affect an  
35 existing fish and wildlife resource, it will require, as part of a Lake and Streambed Alteration  
36 Agreement, reasonable measures necessary to protect the fish and wildlife resource (Fish & Game  
37 Code 1603(a)).

### 38 **1.3.7.7 Migratory Bird Treaty Act**

39 The Migratory Bird Treaty Act of 1918 implements four international treaties for the conservation  
40 and management of bird species that may migrate through more than one country (16 USC 703 et

1        *seq.*). The act makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird  
2        listed in 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by  
3        implementing regulations (50 CFR 21). For federally listed migratory bird species covered under the  
4        BDCP for which an ESA Section 10(a) permit has been issued, the Implementation Office may also  
5        obtain a Migratory Bird Treaty Act permit for those species.

### 6        **1.3.7.8                    Fish and Wildlife Coordination Act**

7        The Fish and Wildlife Coordination Act of 1936 provides a basic procedural framework for the  
8        orderly consideration of fish and wildlife conservation and enhancement measures in federally  
9        constructed, permitted, or licensed water development projects (16 USC 661–667e *et seq.*). The act  
10       provides that, whenever any water body is proposed to be controlled or modified “for any purpose  
11       whatever” by a federal agency or by any public or private agency under a federal permit or license,  
12       the action agency is required first to consult with the wildlife agencies, “with a view to the  
13       conservation of fish and wildlife resources in connection with that project.” The act authorizes  
14       preparation of reports and recommendations by the Secretary of the Interior and/or Commerce and  
15       the head of the state agency responsible for the administration of fish and wildlife resources, to be  
16       submitted to the action agency. That report, if prepared, must be made available to the Congress or  
17       other authorizing agents when decisions are made to authorize (or not to authorize, or authorize  
18       with modifications) a project. Other provisions of the act relate to the acquisition and use of project  
19       lands and waters for fish and wildlife purposes, the evaluation of project effects including benefits  
20       and costs, and related matters. The BDCP will support the Fish and Wildlife Coordination Act  
21       consultation between Reclamation and USFWS and NMFS.

### 22       **1.3.7.9                    Water Rights under the California Water Code**

23       The California Water Code (Division 2, Section 1000 *et seq.*) prescribes detailed procedures that  
24       govern the appropriation of water from a lake, river, stream, or creek. After the enactment of the  
25       State Water Commission Act in 1914, the state required any person or agency seeking to use surface  
26       water, without an existing riparian right, to apply for and receive approval for such use from the  
27       State Water Board. Water rights permits granted by the State Water Board include detailed  
28       descriptions of the amounts, conditions, and construction timetables under which the proposed  
29       water project must comply. Prior to permit issuance, the State Water Board must take into account  
30       all prior rights and the availability of water in the basin. The State Water Board must also consider  
31       the flows needed to preserve instream uses such as recreation and fish and wildlife habitat. The  
32       State Water Board may impose additional conditions to ensure that these criteria are satisfied and it  
33       may use its continuing authority to enforce and revise the conditions of water right permits over  
34       time. The State Water Board is also empowered to revoke a permit or issue cease and desist orders  
35       if conditions of the permit are not being met.

36       The implementation of the BDCP will require a change in points of diversion specified in the DWR  
37       and Reclamation water right permits. As such, DWR and Reclamation will need to petition the State  
38       Water Board to change the point of diversion. Prior to approving these petitions, the State Water  
39       Board must find that the change will not cause injury to any legal user of the water involved or  
40       result in harm to fish or wildlife. Other water right holders and the public will have an opportunity  
41       to object to the proposed change by filing a protest with the State Water Board. If a protest is filed,  
42       the State Water Board must hold a hearing on the petition and will either grant or refuse permission  
43       to make the change. Because the State Water Board has discretion to approve the requested petition,  
44       it must comply with CEQA.

### 1 1.3.7.10 Porter-Cologne Water Quality Control Act

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

7 Under the Porter-Cologne Water Quality Control Act, the State Water Board is required to prepare a  
8 water quality control plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-  
9 Delta Plan). While the RWQCBs have primary responsibility for formulating and adopting water  
10 quality control plans for their respective regions, the State Water Board also is authorized to  
11 develop and adopt water quality control plans. In such instances, the water quality control plan  
12 adopted by the State Water Board supersedes regional plans developed for the same waters, to the  
13 extent that they conflict.

14 The Bay-Delta Plan consists of three primary components.

- 15 ● The beneficial uses (of water) to be protected.
- 16 ● The water quality objectives for the estuary.
- 17 ● The implementation programs to meet the water quality objectives.

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

24 The State Water Board is vested with primary regulatory authority over flows, water quality, and  
25 other water rights issues outlined in the Bay-Delta Plan. As such, many of the actions described in  
26 the BDCP, including modifications to the water conveyance system, will require the approval of the  
27 State Water Board. The State Water Board's participation in the development of the BDCP and in the  
28 environmental review process is intended to ensure consistency between the actions described in  
29 the BDCP and those required by the State Water Board as part of its water quality control planning  
30 and implementation activities.

## 31 1.4 Scope

32 This section describes the geographic scope of the BDCP, natural communities and covered species,  
33 covered activities, and the duration sought for the regulatory permits that are issued by the fish and  
34 wildlife agencies pursuant to the Plan.

### 35 1.4.1 Geographic Scope of the BDCP

36 The Plan Area encompasses the Sacramento–San Joaquin River Delta and additional areas in which  
37 certain conservation measures will be implemented pursuant to the Plan. Take authorizations



1 issued under the BDCP will cover those covered activities in the Plan Area that are identified in  
2 Chapter 4, *Covered Activities and Associated Federal Actions*.

3 The conservation strategy is primarily focused on the statutory Delta, as defined in California Water  
4 Code Section 12220. However, certain areas outside the statutory Delta contain desirable locations  
5 for actions that advance the goals and objectives of the Plan (Figure 1-1).<sup>5</sup> Suisun Marsh, Suisun Bay,  
6 and the Yolo Bypass have been included in the Plan Area to provide important sites for habitat  
7 restoration that directly supports goals and objectives for natural communities and covered species  
8 (Figure 1-1). In addition, the conservation strategy includes measures that will be implemented  
9 outside of the statutory Delta to support or complement regional conservation planning efforts  
10 underway in Yolo, Solano, Contra Costa, San Joaquin, and Sacramento Counties (Section 1.5,  
11 *Relationship to Other Plans in the Delta*). As such, the Plan Area will also encompass habitat lands  
12 that are conserved through covered activities taken in conjunction with these other regional  
13 conservation programs. To the extent appropriate, these actions will be implemented through  
14 cooperative agreements, or similar mechanisms with local agencies, interested nongovernment  
15 organizations, landowners, or other parties.

16 Because the SWP and CVP water infrastructure is operated as an integrated system, the effects of  
17 implementing the BDCP may extend to aquatic systems beyond the Delta, both upstream and  
18 downstream, and will implicate water operations parameters as well as species and their habitats  
19 located in those areas. As such, the BDCP effects analysis (Chapter 5, *Effects Analysis*) takes into  
20 account these upstream and downstream aquatic effects, both positive and negative, and describes,  
21 analyzes, and addresses the overall effects of the BDCP. Areas potentially affected by the  
22 implementation of the BDCP located outside of the Plan Area, have been included in the analysis of  
23 effects to ensure that all of the potential effects within the *action area* (all areas to be affected  
24 directly or indirectly by the federal action and not merely the immediate area involved in the  
25 action), as defined by Section 7 of the ESA, have been adequately assessed.

## 26 1.4.2 Natural Communities

27 Natural communities are distinct and reoccurring assemblages of plants and animals associated  
28 with specific physical environmental conditions and ecological processes. A natural community  
29 occurs across a landscape where similar ecological conditions exist. The Wildlife and Natural Areas  
30 Conservation Act defines natural community as “a distinct, identifiable, and recurring association of  
31 plants and animals that are ecological interrelated” (Fish & Game Code 2702[d]). Individual species  
32 occur within the context of natural communities and it is within these communities that species  
33 interact with other species and the physical environment. The NCCPA states that the purpose of  
34 natural community conservation planning is “to sustain and restore those species and their habitat  
35 ...that are necessary to maintain the continued viability of those biological communities impacted by  
36 human changes to the landscape” (Fish & Game Code 2801(h)(i)).

37 To adequately address the natural communities in the Delta that support covered species and native  
38 biodiversity, the BDCP includes measures that sustain and enhance ecological processes and provide  
39 for the protection and restoration of a broad range of natural communities. Conservation measures  
40 have been designed to improve ecological functions and restore species habitat in the following

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<sup>5</sup> The BDCP Planning Agreement recognized the likelihood that the conservation strategy would include actions that would be implemented outside of the statutory Delta to further advance the goals and objectives of the Plan.

1 natural communities, each of which is defined and described in Chapter 2, *Existing Ecological*  
 2 *Conditions*.

- 3 • Tidal perennial aquatic
- 4 • Tidal mudflat
- 5 • Tidal brackish emergent wetland
- 6 • Tidal freshwater emergent wetland
- 7 • Valley/foothill riparian
- 8 • Nontidal perennial aquatic
- 9 • Nontidal freshwater perennial emergent wetland
- 10 • Alkali seasonal wetland complex
- 11 • Vernal pool complex
- 12 • Managed wetland
- 13 • Other natural seasonal wetland
- 14 • Grassland
- 15 • Inland dune scrub

16 Although not considered a natural community, cultivated lands are also taken into account in the  
 17 conservation strategy because, in certain instances, they provide value as habitat for covered  
 18 species. Cultivated lands addressed by the BDCP have been divided into subtypes, each of which  
 19 provides varying benefits to different covered species or groups of covered species.

20 Collectively, the covered natural communities encompass the habitat used by covered species within  
 21 the Plan Area.

### 22 **1.4.3 Covered Species**

23 The ESA and the NCCPA set forth specific criteria that must be satisfied to support the issuance of  
 24 regulatory authorizations that provide for the take of species. The term *covered species* refers to  
 25 those species for which take authorizations may be issued under the BDCP pursuant to state and  
 26 federal endangered species laws. The proposed covered species are identified in Table 1-3.

27 The BDCP seeks regulatory coverage for those species that could be adversely affected by those  
 28 activities covered by the Plan. As such, the list of species proposed for coverage is limited to those  
 29 species currently protected under state or federal wildlife laws, and those species that are likely to  
 30 receive the protection of those laws in the future. The list of covered species is not intended to  
 31 include all species that occur in the Plan Area or all species and habitats that will directly or  
 32 indirectly affected by implementation of the BDCP. Rather, the covered species list reflects the range  
 33 of species for which regulatory authorizations are needed under state and/or federal law for any  
 34 take associated with the activities covered by the BDCP. Many species not covered under the BDCP  
 35 will benefit from the measures that provide for the conservation of natural communities that  
 36 encompass both common and rare species.

### 1 1.4.3.1 Species Evaluated for Coverage

2 The species evaluated for potential coverage under the BDCP include a broad range of fish, wildlife,  
3 and plant species that are likely to occur within the Plan Area and are currently considered to be  
4 rare, sensitive, threatened or imperiled, or likely to be so in the future (Appendix 1.A, *Evaluation of*  
5 *Species Considered for Coverage*). Many of the species on the list have been granted protected or  
6 special status, including those that have been listed under the ESA or the CESA or other laws or  
7 regulations. This list further included species that have been recognized by the scientific community  
8 as warranting concern due to their rarity or ecological importance. Among the species included on  
9 the list are those with the following special status.

- 10 • Listed as threatened or endangered under the ESA.
- 11 • Proposed or candidates for listing under the ESA.
- 12 • Listed as threatened or endangered under the CESA.
- 13 • Candidates for listing under the CESA.
- 14 • California species of special concern identified by CDFW.
- 15 • California fully protected species under Fish & Game Code Sections 3511 (birds),  
16 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish).
- 17 • USFWS birds of conservation concern.
- 18 • NMFS species of concern.
- 19 • Plants listed as rare under the California Native Plant Protection Act (NPPA).
- 20 • Plants included in the California Native Plant Society (CNPS) List 1A, 1B, or 2.

### 21 1.4.3.2 Evaluation and Selection Criteria

22 The evaluation process relied primarily on four criteria to determine which special-status species  
23 would be included on the list of species proposed for coverage under the BDCP. The selection  
24 criteria, which are discussed in detail in Appendix 1.A, *Evaluation of Species Considered for Coverage*,  
25 are as follows.

- 26 • Listing status of the species, including whether the species is likely to become listed during the  
27 proposed permit duration.
- 28 • Likelihood that the species is present in the Plan Area or other areas within the geographic  
29 scope.
- 30 • Potential for the species to be adversely affected by covered activities, including the  
31 implementation of conservation measures.
- 32 • Level of information available to determine potential impacts on species and to identify effective  
33 conservation measures.

34 Those species that met all four of these criteria are proposed for coverage under the BDCP (Table  
35 1-3). The results of the evaluations conducted for each species are set out in Appendix 1.A,  
36 *Evaluation of Species Considered for Coverage*.

1 **Table 1-3. Covered Species**

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

No.	Common Name	Scientific Name	Status (Federal/State/CNPS) <sup>a</sup>		
<b>Invertebrates (7 species)</b>					
32	California linderiella	<i>Linderiella occidentalis</i>	-/-/-		
33	Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E/-/-		
34	Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	E/-/-		
35	Midvalley fairy shrimp	<i>Branchinecta mesovallensis</i>	-/-/-		
36	Valley elderberry longhorn beetle <sup>1</sup>	<i>Desmocerus californicus dimorphus</i>	T/-/-		
37	Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T/-/-		
38	Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	E/-/-		
<b>Plants (18 species)</b>					
39	Alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	-/-/1B		
40	Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	-/E/1B		
41	Brittlescale	<i>Atriplex depressa</i>	-/-/1B		
42	Carquinez goldenbush	<i>Isocoma arguta</i>	-/-/1B		
43	Delta button celery	<i>Eryngium racemosum</i>	-/E/1B		
44	Delta mudwort	<i>Limosella subulata</i>	-/-/2		
45	Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	-/-/1B		
46	Dwarf downingia	<i>Downingia pusilla</i>	-/-/2		
47	Heartscale	<i>Atriplex cordulata</i>	-/-/1B		
48	Heckard's peppergrass	<i>Lepidium latipes</i> var. <i>heckardii</i>	-/-/1B		
49	Legenere	<i>Legenere limosa</i>	-/-/1B		
50	Mason's lilaepsis	<i>Lilaeopsis masonii</i>	-/R/1B		
51	San Joaquin spearscale	<i>Atriplex joaquiniana</i>	-/-/1B		
52	Side-flowering skullcap	<i>Scutellaria lateriflora</i>	-/-/2		
53	Slough thistle	<i>Cirsium crassicaule</i>	-/-/1B		
54	Soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	E/R/IB		
55	Suisun Marsh aster	<i>Symphotrichum lentum</i>	-/-/1B		
56	Suisun thistle	<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>	E/-/1B		
<p>DPS = distinct population segment  ESU = evolutionary significant unit  <sup>1</sup> Delisting of this species has been proposed (77 FR 60238). If this occurs, the species will be removed from the list of covered species.</p> <p><sup>a</sup> Status:</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><b>Federal</b>  E = listed as endangered under the ESA  T = listed as threatened under the ESA  C = candidate for listing under the ESA</p> <p><b>State</b>  E = listed as endangered under the CESA.  T = listed as threatened under CESA.  R = listed as rare under the California Native Plant Protection Act.  SSC = California species of special concern.  FP = fully protected under the California Fish and Game Code.</p> </td> <td style="vertical-align: top; padding-left: 20px;"> <p><b>California Native Plant Society (CNPS)</b>  1B = rare or endangered in California and elsewhere.  2 = rare and endangered in California, more common elsewhere.</p> </td> </tr> </table>				<p><b>Federal</b>  E = listed as endangered under the ESA  T = listed as threatened under the ESA  C = candidate for listing under the ESA</p> <p><b>State</b>  E = listed as endangered under the CESA.  T = listed as threatened under CESA.  R = listed as rare under the California Native Plant Protection Act.  SSC = California species of special concern.  FP = fully protected under the California Fish and Game Code.</p>	<p><b>California Native Plant Society (CNPS)</b>  1B = rare or endangered in California and elsewhere.  2 = rare and endangered in California, more common elsewhere.</p>
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## 1 1.4.4 Covered Activities and Associated Federal Actions

2 The BDCP is intended to provide the basis for the issuance of regulatory authorizations under the  
3 ESA and the NCCPA for a broad range of ongoing and anticipated activities in the Plan Area that are  
4 associated with the operations of the SWP and CVP. Covered activities and associated federal actions  
5 encompass all actions that are proposed for coverage under take authorizations that are expected to  
6 be issued by the fish and wildlife agencies based on the BDCP.

7 These actions have been designated as either *covered activities*, which encompass those actions that  
8 will be undertaken by nonfederal parties, or *associated federal actions*, which refer to those actions  
9 that are authorized, funded, or carried out by Reclamation. The covered activities and associated  
10 federal actions are described in Chapter 4, *Covered Activities and Associated Federal Actions*.

### 11 1.4.4.1 Covered Activities

12 The covered activities consist of all Plan activities related to the construction, operation, and  
13 maintenance of water conveyance infrastructure; the protection, restoration, and enhancement of  
14 natural communities; and all other conservation measures (Chapter 3, *Conservation Strategy*). These  
15 actions are covered by the BDCP because they may potentially affect species protected under the  
16 ESA and the CESA.

### 17 1.4.4.2 Associated Federal Actions

18 The BDCP-associated federal actions comprise those activities that are authorized, funded, or  
19 carried out by Reclamation within the Plan Area and relate to the operation of the CVP's Delta  
20 facilities and implementation of a portion of the Plan. These include the operation of existing CVP  
21 Delta facilities to convey and export water to meet project purposes and associated maintenance  
22 and monitoring activities. While the SWP and CVP are separate systems, the projects function in an  
23 integrated and coordinated manner pursuant to the Coordinated Operations Agreement. As such,  
24 Reclamation and/or the CVP water contractors will use a portion of the conveyance capacity of the  
25 new water conveyance facility.

## 26 1.4.5 Permit Duration

27 DWR is seeking take permits from the fish and wildlife agencies that remain in effect for a term of 50  
28 years. The proposed 50-year permit duration is necessary to allow sufficient time for the proper  
29 implementation of the actions set out in the Plan and to realize the overall BDCP goals of water  
30 supply reliability and ecosystem restoration.

31 Many of the key elements of the BDCP, including the development of substantial new water  
32 conveyance infrastructure, restoration of tidal and estuarine habitats, restoration of seasonal  
33 floodplain habitat, and establishment and maturation of riparian forest habitat, will require  
34 substantial funding to implement. Such funding is expected to occur over an extended period of time  
35 (see Chapter 6, *Plan Implementation*, for the schedule of implementation actions). The duration of  
36 the permits must be sufficient to justify such expenditures of funds, allow for proper sequencing and  
37 effective implementation of the actions contemplated by the Plan, and afford regulatory stability  
38 with respect to the operation of the primary water delivery systems for the State of California. The  
39 proposed permit duration is also necessary to allow sufficient time to secure the funding required  
40 for Plan implementation. As described in Chapter 8, *Implementation Costs and Funding Sources*, for

1 instance, an endowment will need to accrue to a level sufficient to generate funding to support  
2 certain types of management activities *in perpetuity*.

3 The proposed duration of the permits is also necessary to accommodate the proper and systematic  
4 assembly and management of the reserve system. The acquisition of land at levels contemplated by  
5 the BDCP will require several decades to complete. A single transaction, for instance, may take  
6 several years to finalize; to assemble the BDCP reserve system, several hundred such transactions  
7 will likely be required. In addition, a permit duration of 50 years will allow the monitoring and  
8 adaptive management programs to become well established and viable. In summary, a permit  
9 duration of 50 years provides a practicable period in which to carry out the activities that will be  
10 authorized under the Plan, including adaptive management strategies, and maximize the benefits of  
11 these activities to species and their habitats.

## 12 **1.5 Relationship to Other Plans in the Delta**

13 This section describes the relationship of the BDCP to other related conservation plans in the Delta,  
14 including the Delta Plan. The Plan Area adjoins or overlaps with six other regional conservation  
15 plans that are in implementation or development (Figure 1-2). Four are HCPs, of which two are also  
16 NCCPs, and two address conservation priorities in other ways. The following sections summarize  
17 these plans. Figure 1-2 also shows three other plans that do not overlap the Plan Area but are  
18 adjacent to the Plan Area; these are the *Natomas Basin Habitat Conservation Plan* (currently being  
19 implemented; Natomas Basin Conservancy 2003), the *Placer County Conservation Plan* (currently in  
20 development; Placer County 2011), and the *Yuba-Sutter Natural Community Conservation*  
21 *Plan/Habitat Conservation Plan* (currently in development; Sutter County and Yuba County 2011).

22 The planning process for the BDCP included extensive coordination and collaboration with  
23 representatives of these overlapping HCPs and NCCPs and the fish and wildlife agency staff  
24 supporting these plans. The purpose of this coordination was twofold:

- 25 ● To ensure that the BDCP conservation strategy complements the conservation strategy of these  
26 other plans.
- 27 ● To ensure that BDCP implementation does not preclude the successful implementation of these  
28 plans.

29 The BDCP conservation strategy was designed to account for this overlap and to ensure that  
30 approved plans can complete implementation. For overlapping plans still in development, the BDCP  
31 conservation strategy was designed so that these plans are likely to be able to meet their draft  
32 requirements. A thorough analysis of this potential overlap in requirements between the BDCP and  
33 these plans is presented at the end of Chapter 12 of the environmental impact report/environmental  
34 impact statement (EIR/EIS) for the BDCP (California Department of Water Resources et al. 2012).  
35 Issues evaluated include overlapping requirements for natural community acquisition (e.g.,  
36 grassland, riparian woodland, cultivated land) and natural community restoration (e.g., tidal  
37 wetlands, riparian woodlands, vernal pools).

### 38 **1.5.1 The Delta Plan**

39 In November 2009, over 3 years after BDCP planning began, the State of California enacted  
40 comprehensive legislation to address the range of challenges facing the Delta, including those

1 involving water supply reliability and ecosystem health. Although the Delta Plan was enacted  
2 following an extended period of BDCP development, the BDCP, when finalized, will be consistent  
3 with and included in, the Delta Plan. The legislation enacting the Delta Plan advances several broad  
4 goals of the state with regard to the Delta and specifies a range of actions to be implemented to meet  
5 those goals. Among the several goals stated in the legislation is the following:

6 Achieve the two co-equal goals of providing for a more reliable water supply for California and  
7 protecting, restoring, and enhancing the Delta ecosystem. The co-equal goals shall be achieved in a  
8 manner that protects and enhances the unique cultural, recreational, natural resource, and  
9 agricultural values of the Delta as an evolving place.

10 The codification of these goals has served to reinforce the similar BDCP planning goals that were  
11 used throughout the planning process to help guide the development of the Plan (Section 1.2,  
12 *Planning Goals and Conservation Objectives*).

13 The Delta legislation includes the Sacramento–San Joaquin Delta Reform Act of 2009 (California  
14 Water Code 35), which provides for the establishment of an independent state agency, the Delta  
15 Stewardship Council, to further the goals of ecosystem restoration and a reliable water supply. The  
16 council, which became operational on February 3, 2010, is charged with the development and  
17 implementation of the comprehensive Delta Plan, and is vested with the authority to review actions  
18 of state and local agencies and advise on their consistency with the Delta Plan.

19 The Delta Stewardship Council is also required to consider the inclusion of the BDCP in the Delta  
20 Plan. The Sacramento–San Joaquin Delta Reform Act sets out the conditions under which the council  
21 is to incorporate the BDCP into the Delta Plan. To be considered for inclusion in the Delta Plan, the  
22 BDCP must comply with the requirements of the NCCPA and CEQA, which includes a review and  
23 analysis of alternatives to the proposed Plan. Upon approval of the BDCP as an NCCP and as an HCP  
24 under the ESA, the council is required to incorporate the BDCP into the Delta Plan. However, the  
25 determination by the CDFW that the BDCP meets the requirements of the NCCPA may be appealed  
26 to the council.

## 27 **1.5.2 East Contra Costa County Habitat Conservation** 28 **Plan/Natural Community Conservation Plan**

29 The *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* was  
30 adopted in 2006 by Contra Costa County; the Cities of Brentwood, Clayton, Pittsburg, and Oakley;  
31 and the East Contra Costa County Habitat Conservancy, which now implements the Plan with the  
32 East Bay Regional Park District (East Contra Costa County Habitat Conservancy 2006). Permits were  
33 issued in 2007 and plan implementation began in January 2008 for the 30-year permit term. The  
34 HCP/NCCP provides regional conservation and development guidelines to protect natural resources  
35 while improving and streamlining the permit process for endangered species and wetland  
36 regulations. Within the 174,018-acre inventory area, the HCP/NCCP provides permits for between  
37 8,670 and 11,853 acres of development and will permit impacts on an additional 1,126 acres from  
38 rural infrastructure projects. The HCP/NCCP will encompass a preserve system covering 23,800 to  
39 30,300 acres of land that will be managed for the benefit of 28 species and the natural communities  
40 that they depend upon.

41 The Plan Area overlaps the East Contra Costa County HCP/NCCP in the central western portion of  
42 the Plan Area (Figure 1-2). Both plans also have 14 covered species in common, including San  
43 Joaquin kit fox, western burrowing owl, and Swainson's hawk (Table 1-4).



### 1.5.3 San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan* (San Joaquin Council of Governments 2000) was permitted in 2000 and administered by the San Joaquin Council of Governments. This 50-year plan addresses 97 special-status plant, fish and wildlife species in 52 vegetative communities scattered throughout almost all of San Joaquin County (over 900,000 acres), which include a substantial fraction of the Sacramento–San Joaquin Delta. The plan participants are San Joaquin County and all seven cities in the county: Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. Activities covered under the plan include urban development, mining, expansion of existing urban boundaries, nonagricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, nonfederal flood control projects, new parks and trails, maintenance of existing facilities for nonfederal irrigation district projects, utility installation, maintenance activities, managing preserves, and similar public agency projects.

The Plan Area overlaps a substantial portion of the San Joaquin County HCP, and this plan overlaps approximately half of the legal Delta (Figure 1-2). Both plans have 36 covered species in common, including San Joaquin kit fox, western burrowing owl, and Swainson’s hawk (Table 1-4). The San Joaquin County HCP is currently seeking a plan amendment to add riparian brush rabbit, also a BDCP covered species.

### 1.5.4 South Sacramento Habitat Conservation Plan

The proposed *South Sacramento Habitat Conservation Plan* addresses issues related to species conservation, agricultural protection, and urban development in 341,000 acres of south Sacramento County (Sacramento County 2010). The plan is being prepared by Sacramento County; the Cities of Sacramento, Elk Grove, Galt, and Rancho Cordova; Sacramento Regional County Sanitation District; and the Capital Southeast Connector Joint Powers Authority. The HCP will cover 40 species of plants and wildlife, including 10 that are state- or federally listed as threatened or endangered. The southwest corner of the South Sacramento HCP Plan Area overlaps the Plan Area (Figure 1-2) and 15 species are shared by the two plans (Table 1-4).

### 1.5.5 Yolo Natural Heritage Program

The Yolo County Habitat Joint Powers Authority, consisting of five local public agencies, launched the *Yolo Natural Heritage Program*, an HCP/NCCP, in March 2007 (Yolo County Habitat Conservation Plan/Natural Community Conservation Plan Joint Powers Agency 2011). Member agencies include Yolo County and the Cities of Davis, Woodland, West Sacramento, and Winters. The HCP/NCCP will describe the measures that local agencies will implement to conserve biological resources, obtain permits for urban growth and public infrastructure projects, and continue to maintain the agricultural heritage and productivity of the county. The 653,820-acre planning area provides habitat for 32 sensitive species in five principal natural communities. Interim conservation activities include acquiring permanent conservation easements for sensitive species habitat in the plan area. The program overlaps the Plan Area in the Yolo Bypass area (Figure 1-2) and has 20 species in common with the BDCP (Table 1-4).

## 1 1.5.6 Solano Multispecies Habitat Conservation Plan

2 The Solano County Water Agency is developing the *Solano Multispecies Habitat Conservation Plan* to  
3 support the issuance of an incidental take permit under the federal ESA for a period of 30 years for  
4 the Solano Project Contract Renewal BiOp between USFWS and Reclamation (Solano County Water  
5 Agency 2009). Coverage is proposed for 36 species. The minimum geographical area to be covered is  
6 the Solano County Water Agency's contract service area, including the Cities of Fairfield, Vacaville,  
7 Vallejo, Suisun City, the Solano Irrigation District, and the Maine Prairie Water District. The plan  
8 area also includes all of Solano County and a small portion of Yolo County. The HCP includes a  
9 coastal marsh natural community conservation strategy designed to maintain the water and  
10 sediment quality standards, hydrology, and ecological functions of this natural community;  
11 contribute to the restoration of tidally influenced coastal marsh habitat; contribute to the  
12 conservation and recovery of associated covered species; and promote habitat connectivity.

13 Primary implementation actions include preservation (primarily through avoidance), restoration,  
14 invasive species control, and improvement of water quality. The plan area covers 580,000 acres,  
15 which includes 12,000 acres of proposed development and 30,000 acres that will be preserved. The  
16 Solano HCP overlaps substantially with the Plan Area in Suisun Marsh and Cache Slough (Figure 1-  
17 2). The two plans share 29 covered species (Table 1-4), including Swainson's hawk, California  
18 clapper rail, and salt marsh harvest mouse.

## 19 1.5.7 East Alameda County Conservation Strategy

20 The *East Alameda County Conservation Strategy* was approved in early 2011 and is now being  
21 implemented (East Alameda County 2009). This plan is not an HCP or NCCP but is designed to  
22 provide a regional conservation blueprint for individual projects to utilize in their permitting  
23 process. Agencies that prepared the plan and have pledged to help implement it are Alameda  
24 County; the cities of Dublin, Livermore, and Pleasanton; Alameda County Waste Management  
25 Authority; and the Alameda County Congestion Management Agency. Partners in the plan included  
26 USFWS, CDFW, and the San Francisco RWQCB. In 2012, USFWS issued a programmatic Section 7  
27 BiOp to USACE allowing project applicants for CWA Section 404 permits to use the conservation  
28 strategy for their endangered species compliance.

29 The Plan Area overlaps with the planning area of the *East Alameda County Conservation Strategy* in  
30 its northeastern corner (Figure 1-2). BDCP shares 31 covered species with the strategy (Table 1-4).

## 31 1.5.8 Suisun Marsh Habitat Management, Preservation, and 32 Restoration Plan

33 Suisun Marsh is the largest contiguous brackish water wetland in the western United States. It is an  
34 important wetland on the Pacific Flyway, providing food and habitat for migratory birds. The marsh  
35 also supports a wide variety of plants, fish, and wildlife that depend on this ecosystem for their  
36 survival. Suisun Marsh is located in the Bay-Delta estuary, which encompasses the San Francisco Bay  
37 and the Sacramento-San Joaquin Delta. The water quality of Suisun Marsh affects, and is affected by,  
38 California's two largest water supply systems, the SWP and the CVP, and other upstream diversions.

1 **Table 1-4. Overlapping Regional Conservation Plans that Address Some BDCP Covered Species**

No.	Common Name/ <i>Scientific Name</i>	East Contra Costa County HCP/NCCP <sup>a</sup>	San Joaquin County MSHCP and Open Space Plan <sup>a</sup>	South Sacramento HCP <sup>b</sup>	Yolo Natural Heritage Program <sup>b</sup>	Solano County MSHCP <sup>b</sup>	East Alameda County Conservation Strategy <sup>a</sup>	Natomas Basin HCP <sup>a</sup>	Placer County Conservation Plan <sup>b</sup>	Yuba- Sutter HCP/NCCP <sup>b</sup>
1	Delta smelt <i>Hypomesus transpacificus</i>		X			X				
2	Longfin smelt <i>Spirinchus thaleichthys</i>		X			X				
3	Chinook salmon, Sacramento River winter-run ESU <i>Oncorhynchus tshawytscha</i>					X				
4	Chinook salmon, Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i>					X				
5	Chinook salmon, Central Valley fall- and late fall-run ESU <i>Oncorhynchus tshawytscha</i>					X			X	
6	Steelhead, Central Valley DPS <i>Oncorhynchus mykiss</i>					X	X		X	
7	Sacramento splittail <i>Pogonichthys macrolepidotus</i>		X			X				
8	Green sturgeon, southern DPS <i>Acipenser medirostris</i>		X			X				
9	White sturgeon <i>Acipenser transmontanus</i>									
10	Pacific lamprey <i>Entosphenus tridentatus</i>									
11	River lamprey <i>Lampetra ayresii</i>									
12	Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>		X							

No.	Common Name/ <i>Scientific Name</i>	East Contra Costa County HCP/NCCP <sup>a</sup>	San Joaquin County MSHCP and Open Space Plan <sup>a</sup>	South Sacramento HCP <sup>b</sup>	Yolo Natural Heritage Program <sup>b</sup>	Solano County MSHCP <sup>b</sup>	East Alameda County Conservation Strategy <sup>a</sup>	Natomas Basin HCP <sup>a</sup>	Placer County Conservation Plan <sup>b</sup>	Yuba- Sutter HCP/NCCP <sup>b</sup>
13	Riparian woodrat (San Joaquin Valley) <i>Neotoma fuscipes riparia</i>		X							
14	Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>					X				
15	San Joaquin kit fox <i>Vulpes macrotis mutica</i>	X	X				X			
16	Suisun shrew <i>Sorex ornatus sinuosus</i>									
17	California black rail <i>Laterallus jamaicensis coturniculus</i>		X			X			X	X
18	California clapper rail <i>Rallus longirostris obsoletus</i>					X				
19	Greater sandhill crane <i>Grus canadensis tabida</i>		X	X						X
20	Least Bell's vireo <i>Vireo bellii pusillus</i>				X					
21	Suisun song sparrow <i>Melospiza melodia maxillaris</i>					X				
22	Swainson's hawk <i>Buteo swainsoni</i>	X	X	X	X	X		X	X	X
23	Tricolored blackbird <i>Agelaius tricolor</i>	X	X	X	X	X	X	X	X	X
24	Western burrowing owl <i>Athene cunicularia hypugaea</i>	X	X	X	X	X	X	X	X	X
25	Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>		X		X					X
26	White-tailed kite <i>Elanus leucurus</i>		X	X	X					

No.	Common Name/ <i>Scientific Name</i>	East Contra Costa County HCP/NCCP <sup>a</sup>	San Joaquin County MSHCP and Open Space Plan <sup>a</sup>	South Sacramento HCP <sup>b</sup>	Yolo Natural Heritage Program <sup>b</sup>	Solano County MSHCP <sup>b</sup>	East Alameda County Conservation Strategy <sup>a</sup>	Natomas Basin HCP <sup>a</sup>	Placer County Conservation Plan <sup>b</sup>	Yuba- Sutter HCP/NCCP <sup>b</sup>
27	Yellow-breasted chat <i>Icteria virens</i>		X		X				X	
28	Giant garter snake <i>Thamnophis gigas</i>	X	X	X	X	X		X	X	X
29	Western pond turtle <i>Actinemys marmorata</i>	X	X	X	X			X <sup>c</sup>	X <sup>c</sup>	X
30	California red-legged frog <i>Rana draytonii</i>	X	X			X	X		X	
31	California tiger salamander, Central Valley DPS <i>Ambystoma californiense</i>	X	X	X	X	X	X	X		
32	California linderiella <i>Linderiella occidentalis</i>				X					
33	Conservancy fairy shrimp <i>Branchinecta conservatio</i>		X		X	X			X	
34	Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	X	X				X			
35	Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	X	X	X	X	X		X		
36	Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>		X	X	X	X		X	X	X
37	Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	X	X	X	X	X	X	X	X	X
38	Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	X	X	X	X	X		X	X	X
39	Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>		X		X	X				
40	Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>		X	X		X		X	X	X

No.	Common Name/ Scientific Name	East Contra Costa County HCP/NCCP <sup>a</sup>	San Joaquin County MSHCP and Open Space Plan <sup>a</sup>	South Sacramento HCP <sup>b</sup>	Yolo Natural Heritage Program <sup>b</sup>	Solano County MSHCP <sup>b</sup>	East Alameda County Conservation Strategy <sup>a</sup>	Natomas Basin HCP <sup>a</sup>	Placer County Conservation Plan <sup>b</sup>	Yuba- Sutter HCP/NCCP <sup>b</sup>
41	Brittlescale <i>Atriplex depressa</i>	X	X		X					
42	Carquinez goldenbush <i>Isocoma arguta</i>									
43	Delta button celery <i>Eryngium racemosum</i>		X							
44	Delta mudwort <i>Limosella subulata</i>		X							
45	Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>		X					X		
46	Dwarf downingia <i>Downingia pusilla</i>			X					X	X
47	Heartscale <i>Atriplex cordulata</i>		X							
48	Heckard's peppergrass <i>Lepidium latipes</i> var. <i>heckardii</i>				X					
49	Legenere <i>Legenere limosa</i>		X	X		X		X	X	X
50	Mason's lilaeopsis <i>Lilaeopsis masonii</i>		X			X				
51	San Joaquin spearscale <i>Atriplex joaquiniana</i>	X			X		X			
52	Side-flowering skullcap <i>Scutellaria lateriflora</i>									
53	Slough thistle <i>Cirsium crassicaule</i>		X							
54	Soft bird's-beak <i>Cordylanthus mollis</i> ssp. <i>mollis</i>					X				

No.	Common Name/ <i>Scientific Name</i>	East Contra Costa County HCP/NCCP <sup>a</sup>	San Joaquin County MSHCP and Open Space Plan <sup>a</sup>	South Sacramento HCP <sup>b</sup>	Yolo Natural Heritage Program <sup>b</sup>	Solano County MSHCP <sup>b</sup>	East Alameda County Conservation Strategy <sup>a</sup>	Natomas Basin HCP <sup>a</sup>	Placer County Conservation Plan <sup>b</sup>	Yuba- Sutter HCP/NCCP <sup>b</sup>
55	Suisun Marsh aster <i>Symphotrichum lentum</i>		X							
56	Suisun thistle <i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>					X				
<p>Notes:</p> <p><sup>a</sup> Plan is approved.</p> <p><sup>b</sup> Plan is in development. For Solano HCP, this list excludes species designated as Special Management Species in that plan, which are not covered.</p> <p><sup>c</sup> Northwestern pond turtle (<i>Clemmys marmorata marmorata</i>) listed under the plan.</p> <p>BDCP = Bay Delta Conservation Plan;  HCP = habitat conservation plan;  NCCP = natural community conservation plan  MSHCP = multispecies habitat conservation plan</p> <p>Sources:  East Alameda County 2009; East Contra Costa County Habitat Conservancy 2006; Natomas Basin Conservancy 2003; Placer County 2011; Sacramento County 2010; San Joaquin Council of Governments 2000; Solano County Water Agency 2009, updated with Foreman, pers. comm. 2012; Sutter County and Yuba County 2011; Yolo County Habitat Conservation Plan/Natural Community Conservation Plan Joint Powers Agency 2011.</p>										

1 The *Suisun Marsh Habitat Management, Preservation, and Restoration Plan* (Bureau of Reclamation  
2 et al. 2011) is being implemented by the Suisun Principal Agencies<sup>6</sup>, a group of agencies with  
3 primary responsibility for Suisun Marsh management. The 30-year plan is intended to balance the  
4 benefits of tidal wetland restoration with other habitat uses in Suisun Marsh by achieving certain  
5 specific changes in marsh-wide land uses affecting values such as salt marsh harvest mouse habitat,  
6 managed wetlands, public use, and upland habitat. This involves implementing a broad array of  
7 activities covering ESA and CESA compliance, managed wetland activities, restoration activities, and  
8 maintenance activities related to certain SWP and CVP mitigation commitments. The central  
9 component of the plan is the restoration of 7,000 acres of tidal salt marsh.

## 10 **1.6 Overview of the Planning Process**

### 11 **1.6.1 Public Participation**

12 The challenges of maintaining a reliable water supply and sustaining the ecological health of the  
13 Delta have been widely recognized at least since the 1980s, with roots going back much farther. The  
14 BDCP is a comprehensive plan intended to address these challenges over the long-term. The BDCP  
15 owes much to earlier efforts, such as the CALFED process, a collaboration among 25 state and  
16 federal agencies that came together with a mission to improve California's water supply and the  
17 ecological health of the Delta. The BDCP, CALFED, and earlier planning efforts were initiated, led,  
18 and coordinated by public agencies, with the participation of a broad range of interested parties,  
19 including nongovernment organizations, communities, individuals, and independent scientists. The  
20 following discussion focuses on the participation and contributions of these stakeholders during the  
21 development of the BDCP.

22 The NCCPA requires the establishment of a process for public participation and outreach throughout  
23 the development of a plan (Fish & Game Code 2815). Similarly, policies governing the ESA  
24 emphasize the importance of public involvement in the development of large-scale HCPs and  
25 encourage plan participants to facilitate the engagement of the public (65 FR 106). At the initial  
26 stage of the BDCP planning process, an outreach program was developed to provide the public a  
27 wide range of opportunities to learn about the various elements of the Plan and provide input  
28 during the course of its development.

29 Early in the BDCP development process, the BDCP Steering Committee formed a number of standing  
30 working groups and technical teams, as well as *ad hoc* groups, to focus on approaches and solutions  
31 to specific issues related to Plan development. The working groups dealt primarily with broad topics  
32 related to such matters as biological goals and objectives, conservation strategies, water  
33 conveyance, other stressors, and governance. The groups developed recommendations that were  
34 presented to the Steering Committee for consideration. Technical teams were tasked with  
35 responsibility for developing proposed approaches to technical and scientific issues. These teams  
36 were co-chaired by subject-matter experts who often represented Steering Committee members,  
37 and were staffed by appropriate technical experts. All of these subgroups were composed of or were  
38 informed by technical experts representing a broad range of disciplines relevant to various aspects

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<sup>6</sup> The Suisun Principal Agencies include USFWS, Reclamation, DFG, DWR, NMFS, and Suisun Resource Conservation District.



1 of plan development. Meetings of the working groups and technical teams were noticed on the BDCP  
2 website<sup>7</sup> and open to the public.

3 The working groups and technical teams included the following representatives.

- 4 ● Conservation Strategy Working Group
- 5 ● Biological Goals and Objectives Working Group
- 6 ● Conveyance Working Group
- 7 ● Other Stressors Working Group
- 8 ● Implementation Structure/Governance Working Group
- 9 ● Analytical Tools Technical Team
- 10 ● Fish Facilities Technical Team
- 11 ● Habitat and Operations Technical Team
- 12 ● Habitat Restoration Program Technical Team
- 13 ● Terrestrial Resources Subgroup
- 14 ● Synthesis Team
- 15 ● Integration Team
- 16 ● Logic Chain and Metrics Technical Group

17 All meetings of the Steering Committee, as well as working groups and technical teams, were open to  
18 the public. Such meetings could also be attended by teleconference, with live or archived access to  
19 presentations provided through the internet. Initially, a group email list was compiled and used to  
20 provide interested parties with Steering Committee meeting dates, times, and handouts. Later, an  
21 electronic listserv was developed and maintained to ensure that interested members of the public  
22 were notified of upcoming meetings and that draft documents pertaining to the planning process  
23 were distributed as they became available. All documents discussed by the Steering Committee,  
24 working groups, and technical teams were made available to the public on the BDCP website. At  
25 BDCP meetings, both oral and written public comments were taken, and those comments received in  
26 writing were posted to the website. Meeting notes also reflected comments and input offered by the  
27 public.

28 In 2008, DWR, Reclamation, NMFS, and USFWS, the lead agencies in the CEQA and NEPA  
29 environmental review processes, hosted 10 public scoping meetings throughout California. On  
30 January 24, 2008, USFWS and NMFS published a *Notice of Intent to Conduct Public Scoping and*  
31 *Prepare an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Regarding the*  
32 *Bay Delta Conservation Plan (BDCP) for the Sacramento–San Joaquin Delta, California* (17 FR 4178).  
33 On April 15, 2008 NMFS published a second *Notice of Intent to Prepare An Environmental Impact*  
34 *Statement/Environmental Impact Report And Notice Of Public Scoping Meetings* (73 FR 20326). These  
35 meetings occurred at locations in the Sacramento Valley, the primary watershed through which  
36 stored water supplies are conveyed to and through the Delta to project pumping facilities; other  
37 Delta communities; the San Francisco Bay Area; the San Joaquin Valley; and southern California.  
38 Within the same year, DWR held eight landowner workshops in various Delta communities that

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<sup>7</sup> [www.baydeltaconservationplan.com](http://www.baydeltaconservationplan.com)

1 focused on the temporary entry permit process and on updating these communities on the status of  
2 the BDCP planning process and the environmental review process associated with the Plan.

3 As part of CEQA requirements, a Notice of Preparation was published by DWR on March 17, 2008.  
4 The notice informed the public of DWR's intent to prepare a joint EIR/EIS for the BDCP that included  
5 an analysis of improved water conveyance infrastructure and other habitat conservation measures.  
6 In addition, the California Natural Resources Agency convened town hall meetings in Sacramento,  
7 Stockton, and Walnut Grove to further inform Delta communities about the BDCP and to respond to  
8 questions about the broader array of public agency efforts underway in the Delta, including the  
9 BDCP, pertaining to land use, flood protection, ecosystem restoration, and governance.

10 In spring 2009, the Steering Committee produced and distributed a summary update about the  
11 development of the Plan to interested members of the public, including details of individual  
12 conservation measures that were being considered as part of the conservation strategy. NEPA and  
13 CEQA lead agencies conducted 12 additional public scoping meetings throughout California, seeking  
14 input about the scope of covered activities and potential alternatives to the proposed action. Six of  
15 these scoping meetings were held in communities in or in close proximity to the Plan Area, including  
16 Brentwood, Clarksburg, Davis, Fairfield, Sacramento, and Stockton. A webinar was hosted in  
17 advance of these meetings to provide more in depth information about the BDCP process and to  
18 afford individuals unable to attend the workshops in person an opportunity to access this  
19 information and interact with the BDCP representatives.

20 During fall 2009, after the release of a draft of a partial conservation strategy, four technical  
21 workshops were held in the Delta communities of Brentwood, Stockton, Walnut Grove, and West  
22 Sacramento to solicit input about the planning assumptions, biological rationale, and feasibility of  
23 draft conservation measures, as well as to seek recommendations for additional or different  
24 conservation measures. Input from the workshops was compiled and conveyed to the BDCP Steering  
25 Committee for its consideration and posted on the BDCP website. Three fact sheets were distributed  
26 that described the status of the Plan's development, the draft conservation strategy generally, and  
27 proposed water conveyance and flow and habitat restoration conservation measures more  
28 specifically.

29 Throughout 2010, BDCP representatives continued to conduct community briefings throughout the  
30 state, but primarily with organizations and local jurisdictions located within the Delta. In addition,  
31 informational materials about the BDCP, including fact sheets and issue summaries, evolved over  
32 time to ensure that the public was kept current with BDCP developments. In December 2010, the  
33 California Natural Resources Agency disseminated a summary of the Plan and its status, and a list of  
34 outstanding issues to keep the public informed during the transition to a new state administration.

35 As the planning process moved forward in the beginning of 2011 under a new state administration,  
36 the BDCP effort remained heavily focused on incorporating public input from varying interest  
37 groups. In April 2011, a public meeting was convened by California Natural Resources Secretary,  
38 John Laird, and Deputy Secretary for the U.S. Department of the Interior, David J. Hayes, to announce  
39 a new, more inclusive process for stakeholder engagement and issues resolution. The opportunity  
40 for input and participation through issue-specific working groups and public meetings began in June  
41 and continued through the remainder of the draft Plan's development.

42 The working groups formed in 2011 focused on solutions to outstanding issues that need to be  
43 resolved to complete the Draft BDCP. The working groups were made up of stakeholders with a key  
44 interest in the working groups' charge. Their input at working group meetings contributed to

1 elements of the Draft BDCP. The working groups were open to the public, and each working group  
2 meeting included an opportunity for public comment. The working groups convened starting in  
3 2011 focused on the following topics:

- 4 • Biological Goals and Objectives for Covered Fish Species
- 5 • Yolo Bypass Fishery Enhancement Plan
- 6 • Governance
- 7 • South Delta Habitat
- 8 • Financing
- 9 • Impacts on the Stone Lakes National Wildlife Refuge

10 Meetings were held in 2011 with stakeholders on the topics of Delta agriculture and its  
11 compatibility with BDCP, Delta water quality, and adaptive limits of water operations criteria.  
12 Working groups were not convened on these topics, pending further development of basic concepts.

13 In addition to the working groups, a series of public meetings were held throughout 2011 to discuss  
14 the progress of the working groups and overall Plan development, and provide an opportunity for  
15 public comment and questions. Meetings were held in June, August, and September in West  
16 Sacramento and November; and in December in downtown Sacramento. Topics of the meetings  
17 focused on plan development, schedule updates, alternatives for analysis, conveyance facility  
18 characterization and siting, demand management, and updates from other agencies on Delta-related  
19 issues.

20 In 2012, public meetings continued in Sacramento to update stakeholders and the public on  
21 elements of the administrative draft BDCP and EIR/EIS. Six meetings in 2012 focused on the BDCP  
22 effects analysis, decision tree analysis related to the preliminary proposal, biological goals and  
23 objectives, and funding. Additionally, the Yolo Bypass Fishery Enhancement Plan, Governance, South  
24 Delta Habitat and Financing work groups convened in 2012 to discuss outstanding issues.

25 The project website continued to be updated on a weekly basis with information about upcoming  
26 working groups meetings, documents of interest pertaining to plan agreements, and schedule  
27 information. An email list was used regularly to notify stakeholders about upcoming meetings and  
28 issues of importance. In fall 2012, a project blog was launched to provide information on topics of  
29 interest.

30 Over the course of the planning process, representatives of the BDCP conducted more than 400  
31 briefings for community organizations, local jurisdictions within and adjacent to the Plan Area,  
32 environmental organizations, urban and agricultural water users groups, and recreational and  
33 commercial fishing organizations. Public presentations were made throughout the state, and  
34 information about the BDCP was regularly distributed, including updated fact sheets explaining the  
35 purpose of the Plan and describing its various components. To further facilitate the dissemination of  
36 information, project documents were posted regularly on the BDCP website. Additional public  
37 outreach and involvement activities were conducted around major milestones in the planning  
38 process, and in compliance with NEPA and CEQA environmental review processes.

## 1 1.6.2 Integration of Science

2 The BDCP is built on and reflects the extensive body of scientific investigation, study, and analysis of  
3 the Delta compiled over several decades, including the results and findings of numerous studies  
4 initiated under the CALFED Bay-Delta Science Program and the Ecosystem Restoration Program, the  
5 long-term monitoring programs conducted by the Interagency Ecological Program (IEP), research  
6 and monitoring conducted by state and federal resource agencies, water contractor scientists, and  
7 research contributions of academic investigators.

8 In addition, the BDCP Steering Committee considered a number of other recent reports on the Delta,  
9 including reports of the Governor's Delta Vision Blue Ribbon Task Force (January and October 2008)  
10 and several recent reports of the Public Policy Institute of California (2008). Many elements of the  
11 conservation strategy parallel the recommendations of these other reports.

### 12 1.6.2.1 Independent Science Advisory Process

13 To ensure that the BDCP would be based on the best scientific and commercial data available, the  
14 Plan participants sought input and advice from independent scientists on the key elements of the  
15 Plan. Consistent with the requirements of the NCCPA and the policy directives of the five-point  
16 policy (65 FR 35242), the BDCP Steering Committee and later DWR directed facilitators to convene  
17 independent scientists at many key stages of the BDCP planning process, enlisting well-recognized  
18 experts in ecological and biological sciences to produce recommendations on a range of relevant  
19 topics, including approaches to conservation planning for aquatic and terrestrial species in the Delta  
20 and developing adaptive management and monitoring programs. Among other topics, the  
21 independent scientists provided recommendations and guidance on the following issues.

- 22 • Scientifically sound conservation strategies for species and natural communities proposed to be  
23 covered by the Plan.
- 24 • A set of reserve design principles that addresses the needs of species, landscapes, ecosystems,  
25 and ecological processes in the Plan Area proposed to be addressed by the Plan.
- 26 • Management principles and conservation goals that could be used in developing a framework  
27 for the monitoring and adaptive management component of the Plan.
- 28 • Identification of data gaps and uncertainties so that risk factors may be adequately evaluated.

29 The Steering Committee or DWR assembled seven different groups of independent science advisors  
30 during the development of the BDCP.

- 31 • **Initial BDCP independent science advisors (September 2007).** The first group provided  
32 guidance on approaches to planning for the conservation of aquatic species and ecosystem  
33 processes in the Delta.
- 34 • **Independent science advisors for nonaquatic resources (September 2008).** The second  
35 group considered approaches to planning for the conservation of nonaquatic resources in the  
36 Plan Area.
- 37 • **Independent science advisors on adaptive management (December 2008).** This group  
38 focused on matters related to the development of an adaptive management decision-making  
39 process for the BDCP informed by data and information generated by monitoring and research  
40 efforts.

- 1       • **Science input to the DRERIP evaluation process (2008–2009).** The Steering Committee  
2       undertook a rigorous process to incorporate new and updated information and to evaluate a  
3       wide variety of issues and approaches as it formulated a cohesive, comprehensive conservation  
4       strategy. As part of this effort, multiple teams of experts used the CALFED Bay-Delta Ecosystem  
5       Restoration Program’s Delta Regional Ecosystem Restoration Implementation Plan (DRERIP)  
6       Scientific Evaluation Process to evaluate draft conservation measures.
- 7       • **Independent science input on logic chain approach (February/March and July/August  
8       2010).** The Delta Science Program provided assistance in assembling two groups of  
9       independent science advisors to evaluate and provide recommendations on the logic chain  
10      planning structure. The logic chain was proposed as a framework for linking recovery goals for  
11      covered fish species with BDCP goals, objectives, conservation measures, monitoring, and  
12      adaptive management. Two science reports on the logic chain were prepared.
- 13     • **Independent science advisors for aquatic resources (2011).** Advisors were convened by an  
14      independent facilitator to refine biological goals and objectives for covered fish species.
- 15     • **Independent science advisors review of effects analysis (October 2011 and May 2012).**  
16      The Delta Science Program, an arm of the Delta Stewardship Council, convened two panels of  
17      independent scientists to review the effects analysis. The first panel reviewed the first two  
18      appendices, Appendix 5.A, *Conceptual Foundation and Analytical Framework* (this appendix has  
19      since been incorporated into Chapter 5, *Effects Analysis*, and other appendices related to  
20      Chapter 5), and Appendix 5.B, *Entrainment*. The second panel reviewed the remaining technical  
21      appendices of the effects analysis and early drafts of the conclusions.

22      In addition, the National Academy of Sciences National Research Council convened a Committee on  
23      Sustainable Water and Environmental Management in the California Bay-Delta, sponsored by  
24      USFWS. This committee issued two reports, in 2010 and 2011, on the Bay-Delta and BDCP. For a  
25      detailed summary of each of these independent scientific reviews and the related scientific reports,  
26      see Chapter 10, *Integration of Independent Science in BDCP Development*.

### 27    1.6.3        **Organization**

28      The BDCP document consists of an executive summary, 12 chapters, and 25 appendices. The  
29      organization of this document is outlined as follows.

- 30     • The *Executive Summary* provides an overview of the BDCP, including descriptions of the  
31      background, purpose, covered activities, conservation strategy, and approach to Plan  
32      implementation.
- 33     • Chapter 1, *Introduction*, sets the context for the development of the BDCP, including the purpose  
34      and scope of the Plan, the planning and conservation goals and objectives, and the expected  
35      regulatory outcomes. Chapter 1 also describes the process that guided the development of the  
36      Plan.
- 37     • Chapter 2, *Existing Ecological Conditions*, describes existing environmental conditions in the  
38      Plan Area, providing the context in which the BDCP and its various elements have been  
39      developed.
- 40     • Chapter 3, *Conservation Strategy*, sets out the conservation strategy, including the biological  
41      goals and objectives of the Plan, the approach to conservation adopted by the Plan, the range of

- 1 conservation measures for aquatic and terrestrial species and habitats, and the adaptive  
2 management and monitoring program.
- 3 • Chapter 4, *Covered Activities and Associated Federal Actions*, identifies the activities proposed for  
4 regulatory coverage, including existing and future actions.
  - 5 • Chapter 5, *Effects Analysis*, includes an analysis of the beneficial and adverse effects of the BDCP  
6 on covered natural communities and covered species. The chapter also describes the indirect  
7 and cumulative effects resulting from the implementation of the conservation strategy and the  
8 covered activities.
  - 9 • Chapter 6, *Plan Implementation*, addresses matters relating to the implementation of the BDCP,  
10 including the schedule for the implementation of actions, the reporting process to ensure  
11 compliance, regulatory assurances anticipated by the entities seeking authorizations, measures  
12 to address changed circumstances, and the approach to unforeseen circumstances.
  - 13 • Chapter 7, *Implementation Structure*, sets out a governance structure to ensure successful long-  
14 term implementation of the Plan.
  - 15 • Chapter 8, *Implementation Costs and Funding Sources*, estimates the costs of Plan  
16 implementation and identifies the sources of funding that will be relied on to implement the  
17 Plan.
  - 18 • Chapter 9, *Alternatives to Take*, sets out the alternatives to take that were developed and  
19 considered and the reasons why they were not adopted.
  - 20 • Chapter 10, *Integration of Independent Science in BDCP Development*, describes the independent  
21 science advisory process and the recommendations provided by these scientists.
  - 22 • Chapter 11, *List of Preparers*, lists the preparers of the BDCP.
  - 23 • Chapter 12, *Glossary*, provides definitions of key terms.
- 24 The appendices are as follows.
- 25 • 1.A, *Evaluation of Species Considered for Coverage*
  - 26 • 2.A, *Covered Species Accounts*
  - 27 • 2.B, *Vernal Pool Complex Mapping and Modifications to Natural Community Mapping*
  - 28 • 2.C, *Climate Change Implications and Assumptions*
  - 29 • 3.A, *Background on the Process of Developing the BDCP Conservation Measures*
  - 30 • 3.B, *BDCP Tidal Habitat Evolution Assessment*
  - 31 • 3.C, *Avoidance and Minimization Measures*
  - 32 • 3.D, *Monitoring and Research Actions*
  - 33 • 3.E, *Conservation Principles for the Riparian Brush Rabbit and Riparian Woodrat*
  - 34 • 3.F, *U.S. Fish and Wildlife Service Conservation Guidelines for the Valley Elderberry Longhorn*  
35 *Beetle*
  - 36 • 3.G, *Proposed Interim Delta Salmonid Survival Objectives*
  - 37 • 5.A, *Climate Change Implications for Natural Communities, Terrestrial Species, and Aquatic*  
38 *Species*

- 1 • 5.B, *Entrainment*
- 2 • 5.C, *Flow, Passage, Salinity, and Turbidity*
- 3 • 5.D, *Contaminants*
- 4 • 5.E, *Habitat Restoration*
- 5 • 5.F, *Biological Stressors on Covered Fish*
- 6 • 5.G, *Fish Life Cycle Models*
- 7 • 5.H, *Aquatic Construction and Maintenance Effects*
- 8 • 5.J, *Effects on Natural Communities, Wildlife, and Plants*
- 9 • 8.A, *Implementation Costs Supporting Materials*
- 10 • 9.A, *Economic Benefits of the BDCP and Take Alternatives*
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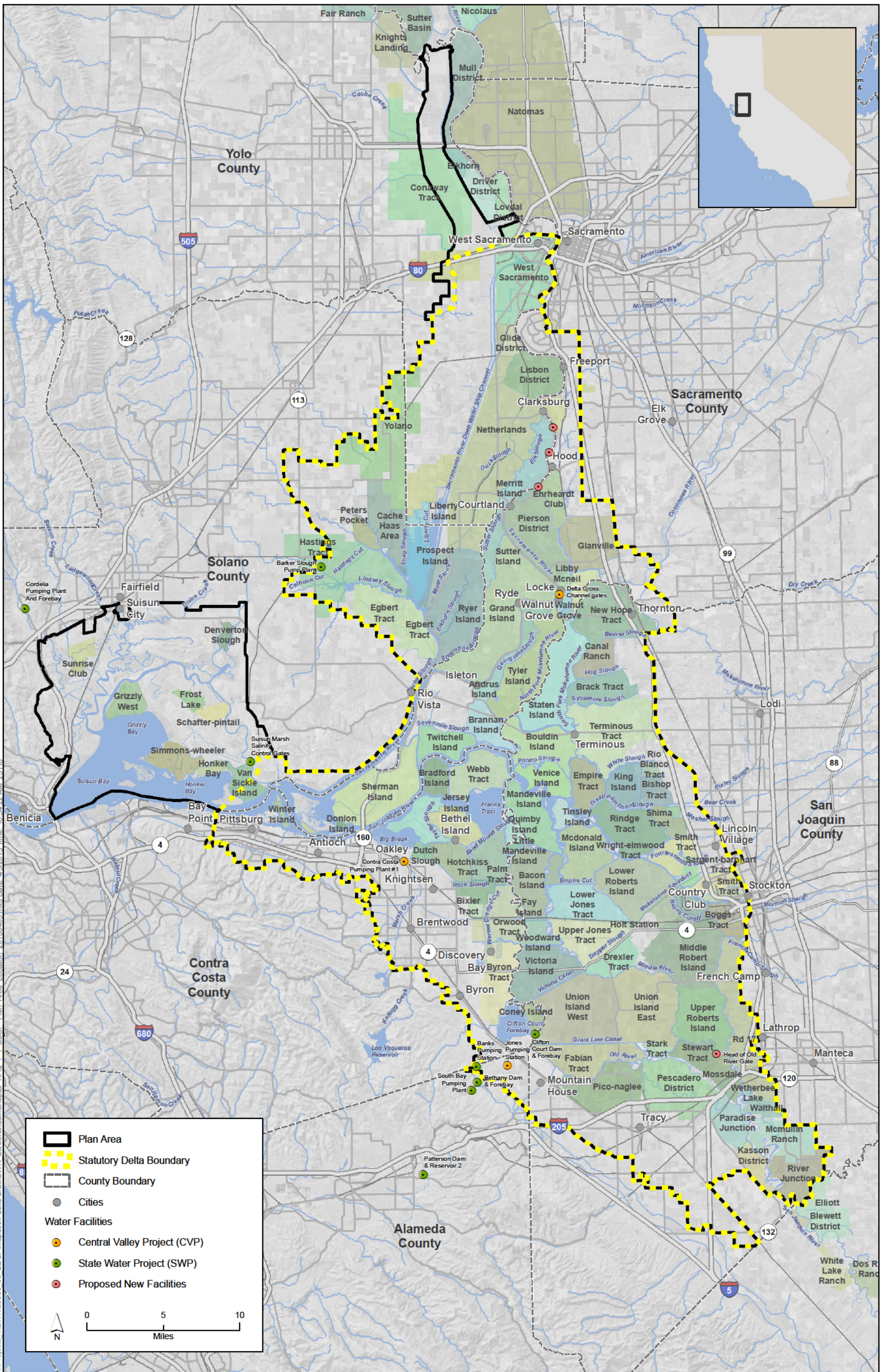
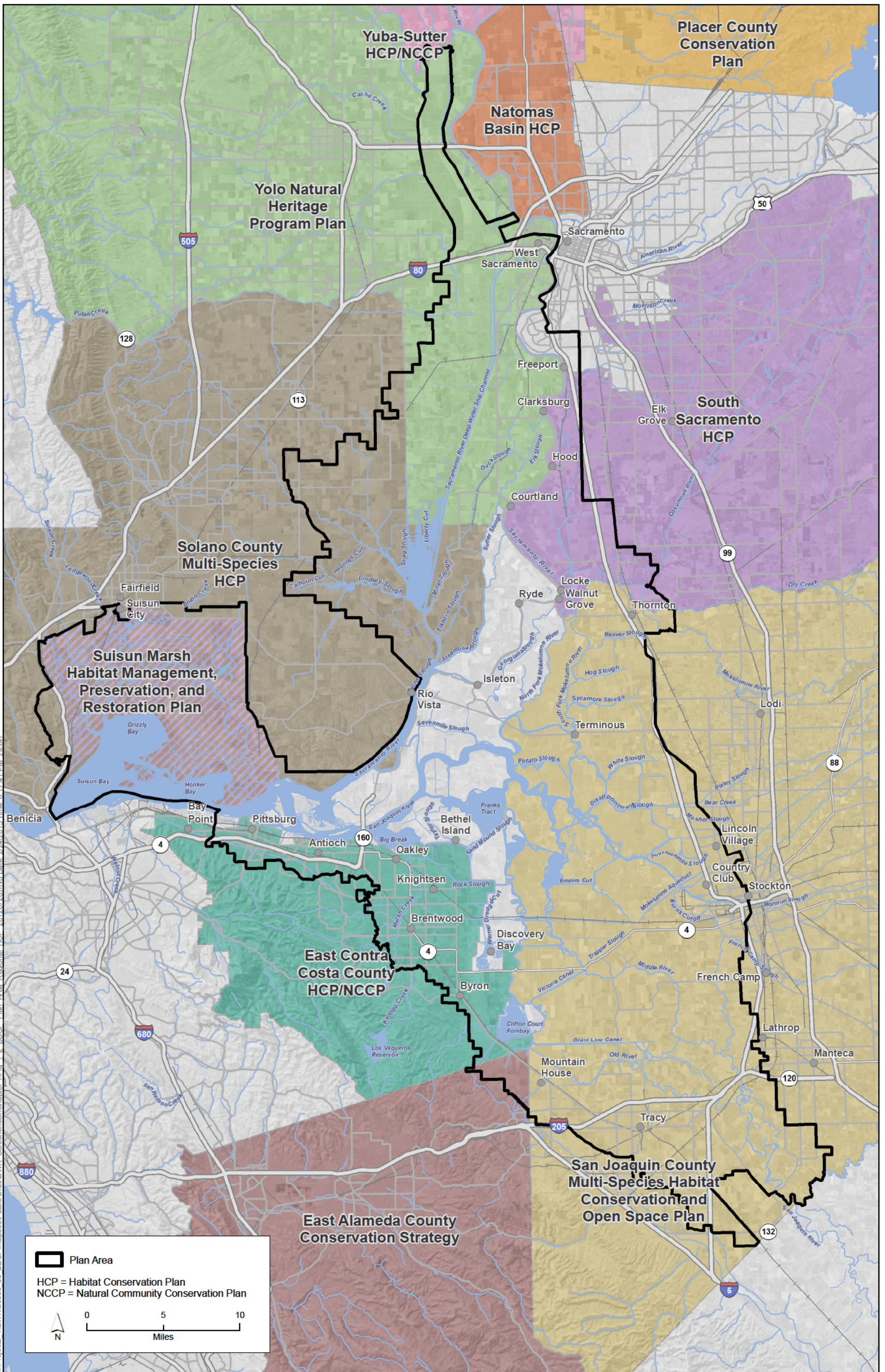


Figure 1-1  
Plan Area Location



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GIS Data Source: Plan Area, ICF 2012; Conservation Plan Boundaries, ICF 2012.

**Figure 1-2**  
**Plan Area in Relation to Neighboring Conservation Plan Boundaries**