

4. Environmental Compliance and Permit Summary

This chapter summarizes key policies and regulations applicable to the Sites Reservoir Project (Project) and its implementation. Appendix 4A Environmental Compliance contains additional detail related to plans, policies, and regulations applicable to the analysis of each specific resource section (i.e., Chapters 6 through 31), as well as Project construction and operation.

4.1 Federal Policies or Approvals

4.1.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA), which was signed into law on January 1, 1970, establishes a national environmental policy and goals for the protection, maintenance, and enhancement of the environment, and provides a process for implementing these goals by the federal agencies.

NEPA requires that all federal agencies use all practicable means to create and maintain conditions under which humans and nature can exist in harmony. NEPA further requires that federal agencies incorporate environmental considerations into their planning and decision making using an interdisciplinary approach.

NEPA's implementing regulations are administered by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500 et seq.).¹ Section 1502.14 of the CEQ Regulations for Implementing NEPA requires that EISs rigorously explore and objectively evaluate all reasonable alternatives to the project, including the No Action Alternative and reasonable alternatives not within the jurisdiction of the lead agency.

4.1.2 Coordinated Operations Agreement for Operations of the CVP and SWP

Depending on the decisions by the California Water Commission with regard to the public benefits acquired under the WSIP and decisions by the Secretary of the Interior under the WIIN legislation of 2016, the Project could (to a greater or lesser degree) operate in cooperation with the Coordinated Operations Agreement (COA), described below.

The Central Valley Project (CVP) and State Water Project (SWP) use a common water supply in the Delta. The Bureau of Reclamation (Reclamation) and California Department of Water Resources (DWR) water rights are conditioned by the State Water Resources Control Board (SWRCB) to protect the beneficial uses of water individually within the CVP and SWP, and jointly to protect beneficial uses² in the Sacramento Valley and the Delta Estuary. Reclamation and DWR coordinate and operate the CVP and SWP to meet water right and contract obligations upstream of the Delta, Delta water quality objectives, and CVP and SWP water right and contract obligations that depend upon diversions from the Delta. The COA, signed in 1986, does the following:

- Defines the CVP and SWP facilities and their water supplies

¹ The Code of Federal Regulations annual edition is the codification of the general and permanent rules published in the *Federal Register* by the departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation.

² Beneficial uses define the resources, services, and qualities of aquatic systems that are the goal of SWRCB to protect and maintain high water quality. SWRCB is charged with protecting all these uses from pollution to nuisances that may occur as a result of waste discharges in the region. Beneficial uses of surface waters, groundwater, marshes, and wetlands serve as a basis for establishing water quality objectives and discharge prohibitions.

- Sets forth procedures for coordination of operations
- Identifies formulas for sharing joint responsibilities for meeting Delta standards as the standards existed in SWRCB Decision 1485 (D-1485) and other legal uses of water
- Identifies how unstored flow will be shared
- Establishes a framework for exchange of water and services between the CVP and SWP
- Provides for periodic review of the agreement

DWR and Reclamation have operational arrangements to accommodate new facilities, water quality and flow objectives, the Central Valley Project Improvement Act (CVPIA), and the federal Endangered Species Act (ESA).

In-basin uses or legal uses of water in the Sacramento Basin, as defined by the COA, include water required under SWRCB D-1485 Delta standards for water quality protection for agricultural, municipal and industrial, and fish and wildlife use. The CVP and SWP are individually obligated to ensure that water is available for these uses, but the degree of obligation depends on several factors and changes throughout the year. Balanced water conditions are defined in the COA as periods when releases from upstream reservoirs, plus unregulated flows, approximately equal the water supply needed to meet Sacramento Valley in-basin uses and exports. Excess water conditions are periods when the described flows exceed Sacramento Valley in-basin uses and exports. During excess water conditions, sufficient water is available to meet all beneficial needs, and the CVP and SWP are not required to supplement the supply with water released from reservoir storage. These conditions must be mutually agreed upon by Reclamation and DWR. During excess water conditions, sufficient water is available to meet all beneficial needs, and the CVP and SWP are not required to make additional releases. In-excess water conditions water accounting is not required, and some of the excess water is available to CVP water contractors, SWP water contractors, and users located upstream of the Delta. During balanced water conditions, the CVP and SWP share the responsibility in meeting in-basin uses. When water must be withdrawn from reservoir storage to meet in-basin uses, 75 percent of the responsibility is borne by the CVP, and 25 percent is borne by the SWP. When unstored water is available for export while balanced water conditions exist, the sum of CVP stored water, SWP stored water, and the unstored water for export is allocated 45 and 55 percent to the CVP and SWP, respectively. As described above, the percentages and ratios included in the COA were derived from negotiations between Reclamation and DWR for SWRCB D-1485 standards, and CVP and SWP annual supplies existing at the time and projected into the future. Reclamation and DWR have continued to apply these ratios as new SWRCB standards and other statutory and regulatory changes have been adopted.

4.1.3 Federal Regulations Related to CVP Authorization and Operations

In the early 1900s, the federal government and the State of California initiated several projects that coordinated water supply, flood control, and navigation benefits. One of the first California projects was proposed in 1920 by Colonel Marshall of the U.S. Geological Survey (USGS) (Marshall Plan), as described in Chapter 1 Introduction. In 1933, the State Legislature adopted the California Central Valley Project Act to sell revenue bonds for the facilities. However, because of economic conditions, the bonds could not be sold, and federal government assistance was requested. The first federal authorization of the CVP was by Federal Rivers and Harbors Act of 1935 appropriated funds and authorized the U.S. Army Corps of Engineers (USACE) to construct Shasta and Friant dams, power generating and transmission

facilities, and the Contra Costa, Madera, and Friant-Kern canals. In 1937, the CVP was reauthorized for construction, operation, and maintenance by the Secretary of the Department of the Interior (Secretary), pursuant to the Reclamation Act of 1902, as amended and supplemented by the Rivers and Harbors Act of 1937, which included a provision to assign construction and operation of the CVP to the Reclamation Service (later known as the Bureau of Reclamation). The 1937 act also provided that the dams and reservoirs of the CVP "... be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power." Authorization of the CVP was subsequently amended and supplemented by the Rivers and Harbors Act of 1940, which authorized the CVP for construction and mandated that dams and reservoirs be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power. Additional CVP facilities were authorized under the American River Division Authorization Act of 1949, Grasslands Development Act of 1954, Trinity River Act of 1955, San Luis Unit Authorization Act, Rivers and Harbors Act of 1962, Auburn-Folsom South Unit Authorization Act of 1965, San Felipe Division Authorization Act of 1967, Energy and Water Development Appropriation Act of 1980, and Suisun Marsh Preservation and Restoration Act of 1980.

In 1992, the Central Valley Project Authorization Act of 1937 was amended by Section 3406(a) of the CVPIA, Public Law 102-575, Title 34. The CVPIA modified the 1937 act and specified that the dams and reservoirs of the CVP be used "first, for river regulation, improvement of navigation, and flood control; second for irrigation and domestic uses and fish and wildlife mitigation, protection and restoration purposes; and third for power and fish and wildlife enhancement." The CVPIA amended the authorization of the CVP to include fish and wildlife protection, restoration, and mitigation as project purposes of the CVP having equal priority with irrigation and domestic uses of CVP water, and elevates fish and wildlife enhancement to a level having equal purpose with power generation. Section 3406(b)(2) of the CVPIA provides the basis for implementing upstream and Sacramento-San Joaquin Delta (Delta) actions for fish management purposes. Section 3406(b)(2) includes curtailing exports at Jones Pumping Plant for fishery management protection based on U.S. Fish and Wildlife Service (USFWS) recommendations. Among the changes to previous CVP authorizations and requirements mandated by the CVPIA that could influence the operations of the Project are:

- Dedicating 800,000 acre-feet³ annually to fish, wildlife, and habitat restoration – §3406(b)(2)
- Authorizing water transfers outside the CVP service area – §3405
- Implementing an anadromous fish restoration program – §3406(b)(1)
- Providing for the Shasta Dam temperature control device – §3406(b)(6)
- Implementing fish passage measures at the Red Bluff Diversion Dam – §3406(b)(10)
- Calling for planning to increase the CVP yield – §3406(j)
- Mandating firm water supplies for Central Valley wildlife refuges and wildlife habitat areas – §3406(d)
- Meeting federal trust responsibility to protect fishery resources in the Trinity River – §3406(b)(23)

4.1.4 Federal Endangered Species Act (ESA)

Federal agencies have an obligation pursuant to Section (7a)(2) of ESA to determine that any discretionary action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of their critical habitat [16 United States Code (U.S.C.) 1536 (a)(2)]. A discretionary agency

³ An acre-foot is the amount of water that would fill a 1-acre plot of land up to 1-foot deep; approximately 325,000 gallons.

action jeopardizes the continued existence of a listed species if the action is reasonably expected to directly or indirectly appreciably reduce the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of the listed species (50 CFR 402.02).

ESA applies to proposed federal, state, and local projects that may result in the “take” of a fish or wildlife species that is federally listed as threatened or endangered, and to actions that are proposed to be authorized, funded, or undertaken by a federal agency and that may jeopardize the continued existence of any federally listed fish, wildlife, or plant species or that may adversely modify or destroy designated critical habitat for such species. “Take” is defined under ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct” [16 U.S.C. 1532(19)]. Under federal regulations, “harm” is defined as “an act which actually kills or injures wildlife,” including potentially significant habitat modification or degradation where it actually results, or is reasonably expected to result, in death or injury to wildlife by substantially impairing essential behavioral patterns, including breeding, feeding, sheltering, spawning, rearing, and migrating (50 CFR 17.3, 222.102). “Harass” is defined similarly broadly. If there is a potential that implementing a project would result in take of a federally listed species, a federal interagency consultation, under Section 7 of ESA, is required.

In carrying out its obligations, Reclamation must consult with the appropriate regulatory agency or agencies (e.g., USFWS and NMFS) when an action may affect listed species. After the formal consultation process, those agencies render written statements (biological opinions) setting forth their opinion as to effects of the agency action on listed species and its designated critical habitat. If these agencies conclude that the action will jeopardize the continued existence of a listed species or result in the destruction or adverse modification of their designated critical habitat, they must suggest an RPA to the agency action if one exists. As defined in ESA, RPAs “refer to alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction, that is economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat” (40 CFR 402.02).

4.1.4.1 ESA Consultation for Operation of the CVP and SWP

The following federally-listed aquatic species are anticipated to potentially require consideration based on previous Reclamation coordination with USFWS and National Marine Fisheries Service (NMFS) for the coordinated long-term operation of the CVP and SWP analysis and operation of the Project:

- Sacramento River winter-run Chinook salmon Evolutionarily Significant Unit (ESU)
- Central Valley spring-run Chinook salmon ESU
- Central Valley steelhead Distinct Population Segment (DPS)
- Central California Coast steelhead DPS
- Southern Oregon/Northern California Coast coho salmon ESU
- Southern DPS of the North American green sturgeon
- Southern Resident DPS of killer whales
- Delta smelt

Fall and late-fall runs of Chinook salmon are federal species of concern, but have not been formally listed.

On December 15, 2008, USFWS issued a biological opinion analyzing the effects of the coordinated long-term operation of the CVP and SWP on delta smelt and its designated critical habitat. The 2008 USFWS biological opinion concluded that “the coordinated operation of the CVP and SWP, as proposed, [was] likely to jeopardize the continued existence of the Delta Smelt” and “adversely modify Delta Smelt critical habitat.” The biological opinion included a reasonable and prudent alternative (RPA) for long-term operation of the CVP and SWP designed to allow the CVP and SWP to continue operating without causing jeopardy to delta smelt or adverse modification of designated critical habitat. The 2008 USFWS Biological Opinion RPA required the CVP and SWP to reduce CVP and SWP Delta exports during specific times in different water year types, increase Delta outflow in fall months when preceding water year was wetter than normal (also known as “Fall X2”), and create or restore at least 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh. On December 15, 2008, Reclamation provisionally accepted and began implementing operations in accordance with the USFWS RPA and has subsequently initiated studies related to creation or restoration of habitat.

On June 4, 2009, NMFS issued a biological opinion analyzing the effects of the coordinated long-term operation of the CVP and SWP on listed salmonids, green sturgeon, and southern resident killer whale and their designated critical habitats. The 2009 NMFS biological opinion concluded that the long-term operation of the CVP and SWP, as proposed, was likely to jeopardize the continued existence of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, Southern DPS of North American green sturgeon, and southern resident killer whales. Further, the biological opinion concluded that the proposed action would destroy or adversely modify critical habitat for Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, and Southern DPS of North American green sturgeon. The 2009 NMFS biological opinion determined that the long-term operation of the CVP and SWP would not likely adversely affect Central California Coast steelhead DPS and its critical habitat. The 2009 NMFS biological opinion included an RPA designed to allow the CVP and SWP to continue operating without causing jeopardy to the analyzed species or adverse modification of their designated critical habitat.

The 2009 NMFS Biological Opinion RPA increased spring flows in Clear Creek through releases from Whiskeytown Lake and included the following: temperature criteria for streams downstream of Whiskeytown Lake, Shasta Lake, Folsom Lake, and New Melones Reservoir to be managed by changes in storage and release patterns from these CVP reservoirs; Delta Cross Channel gate operations; operational controls of CVP and SWP Delta exports to reduce reverse flow conditions as compared to historical operations; support funding for the CVPIA Anadromous Fish Screen Program; restoration of floodplain habitat in Yolo Bypass area and improved floodplain habitat along Clear Creek and Stanislaus River; modified management plans for Nimbus and Trinity River Fish Hatchery Operations; improvements to CVP Tracy Fish Collection Facility and SWP Skinner Fish Collection Facility; and fish passage plans at Shasta, Folsom, and New Melones dams. On June 4, 2009, Reclamation provisionally accepted and began implementing operations in accordance with the NMFS RPA and has subsequently initiated studies related to habitat restoration, fish screen program, and fish hatchery and fish passage programs.

On August 2, 2016, Reclamation and DWR requested re-initiation of consultation with USFWS and NMFS on the coordinated long-term operation of the CVP and SWP related to the species listed above. The re-initiation of consultation is based on recent drought conditions, recent data demonstrating low delta smelt populations, and new information as a result of collaborative science processes. If the SWP seeks to avail itself of the incidental take exemption provided by the biological opinions, the coordinated

long-term operation of the SWP would be subject to the biological opinions, including any reasonable and prudent measures, terms and conditions, or RPAs required by the biological opinions.

4.1.4.2 ESA Consultation for Construction of the Sites Reservoir Project

In addition to the aquatic species identified above, the following federally-listed terrestrial species may occur and depending on presence could require consideration by Reclamation in coordination with USFWS for the construction, operation, and maintenance of the Project:

- Conservancy fairy shrimp
- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp
- Valley elderberry longhorn beetle
- California red-legged frog
- California tiger salamander
- Giant garter snake
- Bald eagle
- Northern spotted owl
- Western yellow-billed cuckoo
- Hoover's Spurge
- Palmate-Bracted Birds Beak
- Colusa Grass
- Hairy Orcutt Grass
- Keck's Checkerbloom
- Greene's Tuctoria

4.1.5 1995 and 2006 Water Quality Control Plans for the Sacramento/San Joaquin Delta

In 1994, representatives of the federal and State governments, urban and agricultural water users, and environmental interest groups agreed to implementation of the interim Bay-Delta protection plan under the Bay-Delta Plan Accord. The 1995 Bay-Delta Plan included provisions for operations of the CVP and SWP to be consistent with requirements of the 1995 USFWS delta smelt biological opinion and the 1995 NMFS winter-run Chinook salmon biological opinion. Many of the water quality provisions of the 1995 Bay-Delta Plan and implementing Water Rights Orders 95-06 and 98-09 were similar to those in the 1978 Delta Plan and implementing Water Rights D1485. However, 1995 Bay-Delta Plan also included additional requirements for managing Delta salinity in the spring through X2⁴ requirements, upper limits on exports, and operations of the Delta Cross Channel gates to improve aquatic resources habitat.

SWRCB adopted a revised Bay-Delta Plan in 2006. There were no major changes in the 2006 Plan, and a number of changes were made simply for consistency.

Following adoption of the 1995 Bay-Delta Plan, SWRCB adopted D-1641 on December 29, 1999 which includes flow and water quality objectives on the operations of the CVP and SWP. D-1641 specifies that, from February through June, the location of X2 must be west of Collinsville and must additionally be west of Chipps Island or Port Chicago for a certain number of days each month, depending on the

⁴ X2 is the location of the 2 parts per thousand salinity contour (isohaline), 1 meter off the bottom of the estuary, as measured in kilometers upstream from the Golden Gate Bridge.

previous month's Eight River Index.⁵ D-1641 specifies that compliance with the X2 standard may occur in one of three ways: (1) the daily average electrical conductivity at the compliance point is less than or equal to 2.64 thousandths of an ohm per centimeter (milliohms/cm); (2) the 14-day average electrical conductivity is less than or equal to 2.64 milliohms/cm; or (3) the 3-day average Delta outflow is greater than or equal to the corresponding minimum outflow.

SWRCB revised D-1641 on March 15, 2000. The requirements in the revised D-1641 address the standards for fish and wildlife protection, urban water quality, agricultural water quality, and Suisun Marsh salinity. D-1641 also authorizes the CVP and SWP to jointly use each other's points of diversion in the southern Delta (also known as Joint Point of Diversion), with conditional limitations and required coordination plans, and modifies the Vernalis salinity standard in the 1995 Bay-Delta Plan. The Joint Point of Diversion was authorized to meet a prioritized list of conditions. The highest priority was to convey CVP water in SWP facilities to several water service contractors located in the San Joaquin Valley, and to recover export reductions that were required to protect fish. The next priorities were for authorized purposes of current CVP and SWP water rights permits up to the physical capacity of the diversion facilities. The Joint Point of Diversion diversions are allowed only under excess conditions, as previously discussed, and after water rights and biological opinion requirements for the Contra Costa Water District Los Vaqueros Project are met. The second priority also requires operations in accordance with a Fisheries Response Plan.

4.1.6 Federal Water Pollution Control Act (Clean Water Act)

The Federal Water Pollution Control Act was initially adopted in 1948. Modifications to a portion of the act in 1972, 1977, and 2002 became known as the Clean Water Act (CWA) (33 U.S.C. 1251 to 1376). The CWA establishes the basis for regulating discharges of pollutants into surface waters of the United States and regulating water quality standards for stated beneficial uses. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires the U.S. Environmental Protection Agency (USEPA) to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

The CWA is implemented by USEPA. USEPA is generally directly responsible for implementing CWA provisions, although the CWA also authorizes states to implement portions of CWA through a delegation process. Through an agreement between USEPA and the State of California, SWRCB has been designated by USEPA, along with the nine Regional Water Quality Control Boards (RWQCBs), to develop and enforce water quality objectives and implementation plans in California to identify beneficial uses and water quality criteria to protect those beneficial uses.

⁵ The Eight River Index refers to the sum of the unimpaired runoff for the following locations: Sacramento River flow at Bend Bridge, near Red Bluff; Feather River, total inflow to Oroville Reservoir; Yuba River flow at Smartville; American River, total inflow to Folsom Reservoir; Stanislaus River, total inflow to New Melones Reservoir; Tuolumne River, total inflow to Don Pedro Reservoir; Merced River, total inflow to Exchequer Reservoir; and San Joaquin River, total inflow to Millerton Lake.

Several provisions of the CWA are implemented through other agencies, including Section 404 of the CWA that authorizes USACE to regulate discharge of dredging material and fill into “waters of the United States (including wetlands).”

4.1.6.1 Clean Water Act Section 303(d) Total Maximum Daily Load

Under Section 303(d) of the CWA, USEPA establishes requirements for states, territories, and authorized Indian tribes (referred to collectively as “states” in the CWA) to identify and prioritize water bodies that do not meet water quality standards and are not supporting their designated beneficial uses. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Each state prepares a list of impaired waters that composes the “303(d) list.” For these water quality–limited water bodies, states must calculate the total maximum daily load⁶ (TMDL) for the contaminants of concern, set an allowable load to achieve water quality standards, and adopt a plan of implementation within the applicable water quality management plan. Placement on this list triggers development of a TMDL Program for each water body and associated pollutant/stressor on the list. The list defines low, medium, and high priority pollutants that require immediate attention by federal and State agencies. The RWQCBs are generally responsible for implementing the TMDL programs; however, SWRCB implements TMDL programs that extend across several regions. The TMDLs that are completed or under preparation along the Sacramento, Feather, and American rivers downstream of the CVP and SWP dams include mercury, pesticides and toxicity, chlorpyrifos, and polychlorinated biphenyls (PCBs), as described in Chapter 7 Surface Water Quality. The TMDLs in the Bay-Delta Region include chlorpyrifos, dissolved oxygen, mercury, pathogens, pesticides, PCBs, electrical conductivity, boron, invasive species, and selenium.

4.1.6.2 Clean Water Act Section 402 NPDES Permit Compliance

The National Pollutant Discharge Elimination System (NPDES) permit program pursuant to §402 of the CWA applies to point-source and nonpoint-source discharges of wastes to surface waters of the U.S. An NPDES permit sets specific discharge limits for point and nonpoint sources discharging pollutants into waters of the United States and establishes monitoring and reporting requirements. The NPDES permits are issued for long-term discharges, such as discharges from treatment plants, and temporary discharges, such as discharges during construction activities (e.g., General Permit for Storm Water Discharges Associated with Construction Activities). In California, SWRCB and the RWQCBs manage the NPDES permit program under authorization provided by USEPA to the California Environmental Protection Agency (CalEPA). CalEPA, through SWRCB, established regulations that provided stormwater permit requirements for specific categories of industries, including construction, and Municipal Separate Storm Sewer Systems (MS4s).

4.1.6.3 Clean Water Act Section 404

Pursuant to CWA Section 404, USACE has been authorized to regulate the discharge of dredged and fill material into waters of the U.S., including some wetlands. Activities in waters of the U.S. that are regulated pursuant to this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands

⁶ TMDL is the maximum amount of a specified pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that load among the various sources of that pollutant.

for farming and forestry. Waters of the U.S. include navigable waters⁷ of the U.S.; interstate waters; waters where their use, degradation, or destruction could affect interstate or foreign commerce; tributaries to any of these waters; and wetlands that meet any of these criteria or are adjacent to any of these waters or their tributaries. Wetlands are defined pursuant to §404 as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: (1) hydrophytic vegetation (i.e., plants that grow in saturated soil), (2) hydric soil types (i.e., soils that are wet or moist enough to develop anaerobic conditions⁸), and (3) wetland hydrology. Activities regulated by 404 permits include dredging, bridge construction, flood control actions, and some fishing operations.

Pursuant to §404(b)(1) of the CWA, the Least Environmentally Damaging Practicable Alternative (LEDPA) must be identified from among those alternatives considered as part of obtaining a 404 permit. If a federal agency is a partner in the implementation of a project, the proposed project must be recognized as the LEDPA. A Section 404(b)(1) evaluation must be conducted to provide required information on the potential effects of project activities regarding water quality and to provide rationale in support of identifying the LEDPA.

4.1.6.4 Clean Water Act Section 408

CWA Section 408 approval is required before approval and implementation of any proposed project that may affect any existing USACE (and/or Project) levee in the Central Valley and Delta. Section 2035 of the Federal Water Resources Development Act of 2007 requires that flood damage reduction projects be reviewed by independent experts if it is determined that a review is necessary for the public's health, safety, and welfare.

4.1.7 Flood Programs and Regulations Implemented by the Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for maintaining minimum federal standards for floodplain management within the United States and territories of the United States. FEMA plays a major role in managing and regulating floodplains. FEMA is responsible for management of floodplain areas, which are defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 1 percent or greater chance of flooding in any given year (the 100-year floodplain).

FEMA mapping provides important guidance in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps. DWR completed work to map the 200-year floodplain for many areas of California.

4.1.8 Rivers and Harbors Act of 1899

The Rivers and Harbors Act of 1899 (which has subsequently been amended numerous times) includes sections and provisions related to placement of fill into navigable waters of the U.S. Activities identified

⁷ Waters subject to the ebb and flow of the tide shoreward to the mean high water mark that may be used to transport interstate or foreign commerce.

⁸ Conditions where there is no oxygen present in the soil.

within the act are regulated by USACE, with many of the original provisions related to discharge addressed in coordination with USEPA as part of the CWA.

4.1.8.1 Section 10 of the Rivers and Harbors Act (33 U.S.C. 403)

Section 10 of the Rivers and Harbors Act of 1899 requires that regulated activities conducted below the ordinary high water elevation of navigable waters of the U.S. be approved/permited by USACE. Regulated activities include the placement/removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. Navigable waters of the U.S. are those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past or may be susceptible to use to transport interstate or foreign commerce.

4.1.8.2 Section 14 of the Rivers and Harbors Act (33 U.S.C. 408)

33 U.S.C. 408 and Section 14 of the Rivers and Harbors Act provide that the Secretary of the Army, on the recommendation of the Chief of Engineers, may grant permission for the temporary occupation or use of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States. This permission will be granted by an appropriate real estate instrument in accordance with existing real estate regulations. This regulation is used to require permits prior to modifications of federal project levees. Types of alterations typically requiring a Section 408 permit are major modifications such as degradations, raisings, and realignments. Section 408 approval is required before approval and implementation of any proposed project that may affect any existing USACE (and/or Project) levee in the Central Valley and Delta. Section 2035 of the Federal Water Resources Development Act of 2007 requires that flood damage reduction projects be reviewed by independent experts if it is determined that a review is necessary for the public's health, safety, and welfare.

4.1.9 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Public Law 104-297) is the principal law governing commercially managed marine and anadromous fisheries in the United States. The purpose of this federal act is to conserve and manage anadromous fishery resources of the United States. The act establishes eight Regional Fishery Management Councils to prepare, monitor, and revise fishery management plans, which will achieve and maintain the optimum yield from each fishery. In California, the Pacific Fishery Management Council (PFMC) is responsible for achieving the objectives of the statute. The Secretary of Commerce has oversight authority.

The statute was amended in 1996 to establish a new requirement to describe and identify "essential fish habitat" (EFH) in each fishery management plan. EFH is defined as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity." EFH also includes all habitats necessary to allow the production of commercially valuable aquatic species, to support a long-term sustainable fishery, and contribute to a healthy ecosystem.

EFH has been established by NMFS and PFMC for waters in California that support coastal marine fish and macroinvertebrate species that support commercial fisheries such as Pacific salmon, including the Sacramento-San Joaquin Delta, San Francisco Bay, and Suisun Bay. Chinook salmon and coho salmon are actively managed species under the Pacific Coast Salmon Plan. Because EFH applies only to commercial fisheries, Chinook and coho salmon habitats are included, but steelhead habitats are not.

Three fishery management plans – Pacific Salmon, Coastal Pelagic, and Groundfish – have been issued by PFMC for several species that occur in the Project area. The northern anchovy and starry flounder are identified by PFMC as monitored species in the Coastal Pelagic Species Fishery Management Plan and the Pacific Coast Groundfish Fishery Management Plan, respectively, and are subject to EFH consultation as a result. Pacific sardine is classified as an actively managed species in the Coastal Pelagic Species Fishery Management Plan.

4.1.10 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) gives the U.S. Secretary of Interior the authority to provide assistance to federal, State, public, or private agencies in developing, protecting, rearing, or stocking all wildlife, wildlife resources, and their habitats. Under the FWCA, whenever waters of any stream or other water body are proposed to be impounded, diverted, or otherwise modified by any public or private agency under federal permit, that agency must consult with USFWS and, in California, the California Department of Fish and Wildlife (CDFW). In practice, the FWCA is implemented through coordination of the action agency with USFWS. FWS will coordinate with CDFW and NMFS and solicit recommendations for the action agency to consider for the conservation or improvement of fish and wildlife habitat for any or all species during the life of the project.

4.1.11 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements a series of international treaties that provide migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds, and the act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (16 U.S.C. 703). It is also unlawful to attempt to take, capture, or possess any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs.

4.1.12 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act, as amended) prohibits the take of bald and golden eagles including individuals, parts, nests, eggs, nest trees, and nest territories (generally defined as areas around the nest that an eagle defends). The term “take” includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.

4.1.13 National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations require federal agencies to consider the effects of their undertakings, or those they fund or permit, on properties that may be eligible for listing, or that are listed in the National Register of Historic Places (NRHP). The 36 CFR 60.4 regulations describe the criteria to evaluate cultural resources for inclusion in the NRHP. Cultural resources can be significant on the national, State, or local level. Such resources are required to retain integrity and must exhibit an association with broad patterns of our history, be associated with an important person, embody a distinctive characteristic, or yield information that is historically significant.

The Section 106 process that is typically associated with NEPA compliance requires consultation of the federal lead agency with other federal, state, and local agencies, the Advisory Council on Historic

Preservation, the State Historic Preservation Officer, Indian tribes, and interested members of the public, such as historical societies. Throughout the Section 106 process, the federal lead agency and consulting parties work together to identify adverse impacts on sites of cultural significance or historic properties and seek ways to avoid, minimize, or mitigate the adverse effects. A Memorandum of Agreement or Programmatic Agreement is issued by the participating parties that includes the measures agreed upon to avoid or reduce (i.e., mitigate) adverse effects. For large or complex undertakings, a Programmatic Agreement may also be negotiated to develop a phased approach to historic properties management or alternative Section 106 processes through consultations. Thus, impacts on cultural resources that are identified in a NEPA document are addressed through Section 106.

Section 110 of the NHPA sets out the broad responsibilities of federal agencies for identifying and protecting historic properties under their jurisdiction and for avoiding unnecessary damage to them. It is intended to ensure that a historic preservation program is fully integrated into the ongoing program of each federal agency. Section 110 allows the costs of preservation activities as eligible project costs in all undertakings conducted or assisted by a federal agency.

4.1.13.1 National Register of Historic Places

The NRHP was authorized under the NHPA to identify, evaluate, and protect historic and archaeological resources. The NRHP is the official list of the Nation's historic places worthy of preservation. To be eligible for the register, the property must meet criteria related to age, integrity, and significance. All nominations to the register are reviewed by the State Office of Historic Preservation.

The NRHP is maintained by the National Park Service under the Secretary of the Interior and includes districts, sites, buildings, structures, architecture, archaeology, engineering, culture, and objects of significance in American history. A property may be listed in the NRHP if it meets criteria for evaluation defined in 36 CFR 60.4:

- The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
 - That are associated with events that have made a significant contribution to the broad patterns of our history; or
 - That are associated with the lives of persons significant in our past; or
 - That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess an artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
 - That have yielded, or may be likely to yield, information important to prehistory or history.

4.1.13.2 Protection of Historic Properties (36 CFR 800)

This section is the implementing regulations for the NHPA that requires federal agencies to consider the effects of their undertakings on historic properties. Consultation early in the planning process allows identification of properties potentially affected by the undertaking and the development of measures to avoid, minimize, and mitigate adverse effects on historic properties.

The 36 CFR 800 regulations, implementing Section 106, require considerable consultation with the State Historic Preservation Officer, Indian tribes, and interested members of the public throughout the process. The four principal steps are as follows:

- Initiate the Section 106 process
- Identify historic properties and resources eligible for inclusion in the NRHP
- Assess the effects of the undertaking to historic properties in the area
- Resolve adverse effects

4.1.13.3 Native American Consultation

The United States has a unique legal and political relationship with Native American tribes as provided for in the Constitution, treaties, and other federal laws and policies. Aspects of this relationship include, but are not limited to, the federal trust responsibility and government-to-government relationship. President Clinton issued an Executive Memorandum in April 1994 that required executive departments and agencies to work within government-to-government relationship parameters, consult with tribal governments prior to implementing actions that might affect tribes, and assess the effects of federal programs and projects on tribal trust assets. Reclamation, in response to the memorandum, issued guidelines for consulting with tribal governments in 1998, and most recently updated the guidelines in 2012. Reclamation will consult with Native American tribes in accordance with these protocols and pursuant to the consultation requirements of 36 CFR 800.

4.1.14 Private Aids to Navigation – U.S. Coast Guard

A Private Aid to Navigation (PATON) is a buoy, light, or day beacon owned and maintained by any individual or organization other than the U.S. Coast Guard. Approval for PATON is regulated by U.S. Coast Guard under 33 CFR 66. For the Eleventh Coast Guard District (California, Nevada, Arizona, and Utah), this responsibility lies with the Aids to Navigation Branch. It is expected that a new intake facility on the Sacramento River will require a PATON Permit.

4.1.15 Federal Power Act of 1920

The Federal Power Act [16 U.S.C. 791-828(c)], passed in 1920 and amended in 1935 and 1986, created what is now the Federal Energy Regulatory Commission (FERC), an independent regulatory agency that oversees the natural gas, oil, and electricity markets; regulates the transmission and sale of these energy resources (except for oil); provides licenses for non-federal hydroelectric plants; and addresses environmental matters arising in any of the areas above. The agency is governed by a five-member commission appointed by the President with the advice and consent of the Senate. The Electric Consumers Protection Act of 1986 amended the Federal Power Act of 1920 to require FERC to give equal consideration to non-power-generating values such as the environment, recreation, fish, and wildlife, as is given to power and development objectives when making hydroelectric project licensing decisions.

4.1.16 Electric Consumers Protection Act of 1986

The Electric Consumers Protection Act of 1986 specifies that in addition to the power and development purposes for which licenses are issued, FERC shall give “equal consideration” to power and water facility development, energy conservation, recreational uses, protection, mitigation of damage to and

enhancement of fish and wildlife (including spawning grounds and habitat), and preservation of other aspects of environmental quality [16 U.S.C. 797(f)].

4.1.17 Energy Policy Acts of 1992 and 2005

The Energy Policy Acts established open access requirements for all transmission system owners and gave authority to FERC to mandate construction of new facilities to accommodate all access requests that are in the public's interest. The 1992 Act amended Section 211 of the Federal Power Act (16 U.S.C. 824j) subsection (a) to read: "Any electric utility, federal power marketing agency, or any other person generating electric energy for sale or resale, may apply to the Commission for an order under this subsection requiring a transmitting utility to provide transmission services (including any enlargement of transmission capacity necessary to provide such services) to the applicant...[and that] the Commission may issue such order if it finds that such order meets the requirements of Section 212, and would otherwise be in the public interest." The act specifies that the costs of such improvements can be recovered through the provider's rates and tariffs, but that "such rates, charges, terms, and conditions shall promote the economically efficient transmission and generation of electricity and shall be just and reasonable, and not unduly discriminatory or preferential."

The 2005 act authorized FERC to certify a national electric reliability organization to enforce mandatory reliability standards for the bulk-power system, under which the Western Electricity Coordinating Council has authority through the North American Electric Reliability Council and, ultimately, FERC, to enforce electric reliability standards for bulk power transactions on the interconnected transmission system in the western half of North America. The 2005 act further strengthened transparency in the wholesale power market by granting FERC the authority to publish power, energy, and interstate transmission service prices, and gave FERC approval authority over the sale or merger of entities under its jurisdiction greater than \$10 million in value.

The 2005 act also repealed the requirement under the Public Utility Regulatory Policies Act that utilities must purchase power from all qualifying facilities and small power producers at a rate based on the utilities' avoided cost, providing FERC finds that a competitive electricity market exists and a qualifying facility has adequate access to wholesale markets, and it repealed the Public Utility Holding Company Act of 1935, which restricted the structure of holding companies of investor-owned utilities but mandated that utilities give access to their books and records to FERC and state utility regulators.

4.2 State Policies or Approvals

4.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) statute was passed in 1970 shortly after the passage of NEPA. CEQA institutes a statewide policy of environmental protection that requires State and local agencies to analyze and disclose environmental impacts of all projects and to mitigate impacts to the extent feasible.

CEQA Guidelines §15126.6 requires that environmental impact reports (EIRs) describe and evaluate a reasonable range of alternatives to a project, or to the location of a project, which would feasibly attain most of the basic project objectives and avoid or substantially lessen potentially significant project impacts. CEQA also requires that the No Project Alternative be analyzed.

4.2.2 SWRCB Water Rights

SWRCB is responsible for overseeing the water rights and water quality functions in California. It has jurisdiction to issue permits and licenses for appropriation from surface and underground streams, whereas the California courts have jurisdiction over the use of infiltrating groundwater, riparian use of surface waters, and the appropriative use of surface waters from diversions begun before 1914.

California law recognizes several types of surface water rights, including riparian and appropriative rights.⁹ A riparian right exists through ownership of land adjacent to a stream or other body of water and is normally senior in priority to most appropriative rights. The right allows a water user to divert from the natural flow of a stream for beneficial use on adjoining land within the watershed of the source. Seasonal storage of water is not allowed under a riparian right. If there is insufficient water for the reasonable uses of all the riparian users, flows are shared correlatively to needs. Generally, riparian water users¹⁰ have first priority to the use of the natural flow in a river. Remaining water is available to appropriative water rights holders.¹¹ No permit or license is necessary to divert water under claim of riparian right; however, a record of water use should be filed with SWRCB.

Appropriative water rights are granted by SWRCB based on the time of water right application. Appropriative water rights initiated before 1914 (“pre-1914 appropriative water rights”) do not require a permit or license; however, the pre-1914 water use is generally recorded with SWRCB. Post-1914 water rights require a permit or license from SWRCB or its predecessor agencies. All new appropriators must file an application with SWRCB and obtain a permit before diverting water. SWRCB determines whether the water will be put to beneficial use, the quantity and pattern of diversion, location of diversion, necessary conditions to protect the environment, the public trust, and prior water rights. If the water is diverted and applied to beneficial use in accordance with the terms of the permit for a period of years, a license may be issued by SWRCB confirming the extent of the permittee’s right. SWRCB has the authority to prevent waste and unreasonable use, prevent unreasonable method of use and unreasonable diversion of water, and to protect public trust uses of water. SWRCB granted post-1914 appropriate water rights to Reclamation and DWR for the CVP and SWP, respectively.

The Authority intends to apply for water rights consistent with the application filed on September 30, 1977 (#25517). This application is under the control of the SWRCB and is expected to be treated as a ‘State Filing’ under California Water Code 10500.

4.2.3 Water Rights for CVP and SWP

Multiple post-1914 appropriative water rights have been issued to Reclamation and DWR since the 1920s to allow diversion of water from the Trinity, Sacramento, Feather, American, Stanislaus, and San Joaquin rivers and Clear Creek, and to allow re-diversion within the Sacramento-San Joaquin Delta. Additional water rights have been issued to Reclamation and DWR related to storage water rights associated with streams where instream dams have been constructed by Reclamation and DWR.

Initiation of the major water supply project that would become the CVP and SWP in the 1920s by the State of California raised concerns for availability of water remaining in Northern California following

⁹ Appropriative rights pertain to the diversion of water for immediate use on non-riparian property (property not including or adjacent to a stream) or for storing the water for later use. These rights, initiated after 1914, require a permit from SWRCB.

¹⁰ Users who extract water for use on lands that directly border a stream; this use does not require a permit from SWRCB.

¹¹ Users who extract water for delivery to a parcel of land that is not adjacent to the stream or other water source. This use, initiated after 1914, requires a permit from SWRCB.

construction of storage and export facilities. In 1927, the State Legislature adopted the Feigenbaum Act. This act allows the State to file for unappropriated water¹² for general water resource development plans to avoid further filings by private parties for unappropriated water. These issues were discussed again in the 1950s as the SWP was being developed. Under this legislation, the State issued appropriative water rights to the federal government through Reclamation for the CVP and to the State through DWR for the SWP. The Feigenbaum Act was amended in 1931 to protect the availability of water for beneficial uses in the counties of origin.

SWRCB issued further decisions and orders associated with these water rights, including the following:

- Decision 893 in 1958 – related to water rights issued to Reclamation on the American River, including provisions for minimum fish flows.
- Decision 990 in 1961 – related to water rights issued to Reclamation on upstream channels in the Delta watershed and the ability to re-divert those waters in the Delta.
- Decision 1275 in 1967 – related to water rights issued to DWR on the Feather River and the ability to re-divert those waters in the Delta. This decision also included provisions to protect water quality in the Delta as affected by the coordinated operation of the CVP and SWP in the Delta.
- Decision 1379 in 1971 – required Reclamation and DWR to operate the CVP and SWP in accordance with water quality and flow criteria.
- Decision 1422 in 1973 and Water Rights Order 83-3 – provided water rights and operational criteria to Reclamation for the Stanislaus River and water quality conditions on the San Joaquin River at Vernalis.
- Decision 1485 in 1978 – required Reclamation and DWR to operate the CVP and SWP in accordance with the 1978 Water Quality Control Plan for the Delta and Suisun Marsh.
- Decision 1594 in 1983 and Water Rights Order 84-2 in 1984 – defined Standard [Water Rights] Permit Term 91 to protect CVP and SWP stored water from diversion by other junior water rights holders.
- Water Rights Order 90-05 in 1990 and Water Rights Order 91-01 in 1990 – required Reclamation to operate under water rights on the upper Sacramento River to comply with stated temperature criteria.
- Decision 95-06 in 1995 and 98-09 – modified water quality criteria and provided for the planning process that resulted in the CALFED program and in development of the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (1995 Bay-Delta Plan).
- Decision 1641 in 1999 and revised in 2000 – amended certain terms and conditions of the CVP and SWP associated water rights with flow and water quality objectives as included in the 1995 Bay-Delta Plan. The objectives were developed to protect fisheries with specific Delta outflow requirements and seasonal export restrictions based upon Delta inflow and CVP/SWP exports, and to protect agricultural, municipal, industrial, and fisheries beneficial uses through seasonal and water-year oriented criteria. This decision also revised the salinity standard at Vernalis established under D-1422. D-1641 also provided for conditional changes to CVP and SWP points of diversion in the Delta to

¹² Unappropriated water is any usable water that is not claimed under prior rights.

allow the CVP and SWP to use each other’s southern Delta intakes (also known as the “Joint Points of Diversion”).

4.2.4 Water Rights Protections for County of Origin, Upstream Watersheds, and Delta

The State Legislature adopted the Feigenbaum Act in 1927 to allow for issuance of water rights for previously unappropriated water. However, this legislation raised concerns from the counties where the water was being appropriated for places of use outside of the county of origin. This section briefly describes subsequent State legislation adopted to protect the areas of origin that could be affected by issuance of water rights by SWRCB.

4.2.4.1 County of Origin Law of 1931 and Watershed Protection Statute

After passage of the 1927 Feigenbaum Act, numerous water resources projects were being planned to convey water from Northern California to the San Joaquin Valley and Southern California. The County of Origin Law of 1931 was enacted to protect water users in the counties of origin of the proposed water right that had not previously filed for water rights or who were dependent upon riparian water rights and that would need the water supplies for development of the county of origin.

The Watershed Protection Act enacted in 1933 was part of the State authorization of the CVP (which later became the federal CVP, as described in Chapter 1 Introduction) to specifically ensure that the areas where the water originated and adjacent areas would have adequate water supplies for the beneficial uses of the watershed area.

4.2.5 State Endangered Species Consultation

California Fish and Game Code Sections 2050–2115.5, also known as the California Endangered Species Act (CESA), state that all native species of fish, wildlife, and plants that are in danger of or threatened with extinction because their habitats are threatened with destruction, adverse modification, or severe curtailment, or, because of overexploitation, disease, predation, or other factors, are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA also states that the conservation, protection, and enhancement of these species and their habitat is of statewide concern (Fish and Game Code Section 2051).

An endangered species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code Section 2062). A threatened species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts (Fish and Game Code Section 2067). The California Fish and Game Commission is responsible for listing species under CESA, and CDFW is responsible for implementing and enforcing and issuing permits under CESA.

CESA strictly prohibits the “take” of any threatened or endangered fish, wildlife, or plant species or species listed as threatened or endangered under CESA. Under Section 2081 of the Fish and Game Code, an incidental take permit from CDFW is required for projects that could result in the take of a species that is State-listed as threatened or endangered, or that is a candidate for listing. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species, but the definition

does not include “harm” or “harass,” as the definition of ESA does. As a result, the threshold for take under CESA may be higher than under ESA.

Under Fish and Game Code Section 2080.1, applicants can notify CDFW that they have been issued an incidental take statement/permit pursuant to ESA for species that are listed under both ESA and CESA and can request a consistency determination. If CDFW determines that the conditions specified in the federal incidental take statement/permit are consistent with CESA, a consistency determination can be issued, which allows for incidental take under CESA under the same provisions as under the federal incidental take statement/permit.

4.2.5.1 CESA Consultation for Construction of the Sites Reservoir Project

Several of the aquatic and terrestrial species identified under Federal ESA Consultation (Section 4.1.4) are also listed as threatened or endangered by the State of California. The following species are anticipated to require consideration by Reclamation in coordination with the California Department of Fish and Wildlife (CDFW) for the construction, operation, and maintenance of the Project:

- Sacramento River winter-run Chinook salmon Evolutionarily Significant Unit (ESU)
- Central Valley spring-run Chinook salmon ESU
- Southern Oregon/Northern California Coast coho salmon ESU
- Delta smelt
- Longfin smelt
- California tiger salamander
- Giant garter snake
- American peregrine falcon
- Bald eagle
- Greater sandhill crane
- Swainson’s hawk
- Tricolored blackbird
- Western yellow-billed cuckoo
- White-tailed kite
- Pacific fisher
- Ringtail
- Indian Valley Brodiaea
- Palmate-Bracted Birds Beak
- Milo Baker’s Lupine
- Colusa Grass
- Hairy Orcutt Grass
- Red Mountain Catchfly

American peregrine falcon, bald eagle, greater sandhill crane, white-tailed kite, and ringtail are fully protected under CESA (see Table 14-5). One species with the potential to occur in the Primary Study Area, Greene’s Tuctoria (*Tuctoria greenei*), is listed as “Rare” under the California Native Plant Protection Act (NPPA).

4.2.6 Water Quality Regulations Implemented by SWRCB

4.2.6.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established surface water and groundwater quality regulations that set limits on water quality constituents for the purpose of protecting beneficial uses¹³ and provided the authority for SWRCB to protect the State's surface water and groundwater. The nine RWQCBs were established to oversee and implement specific water quality activities in their geographic jurisdictions. The Porter-Cologne Act requires the RWQCBs to establish water quality objectives while acknowledging that water quality may change without unreasonably affecting beneficial uses. Therefore, water quality objectives are references as opposed to rules for meeting federal and State requirements for water quality control.

The Porter-Cologne Act also requires that each RWQCB develop basin plans that establish and periodically review the beneficial uses and water quality objectives for surface water and groundwater bodies within its jurisdiction. Water quality objectives provide specific water quality guidelines to protect groundwater and surface water to maintain designated beneficial uses. SWRCB, through the RWQCBs, is the permitting authority in California to administer NPDES and waste discharge requirements for regulation of waste discharges.

USEPA may allow a state to implement portions of the CWA. In 1972, the State Legislature amended the Porter-Cologne Act to give SWRCB the authority to implement those portions of the CWA. Portions of Water Quality Control Plans that are consistent with and under the jurisdiction of the CWA also require approval by USEPA.

4.2.6.2 California Water Code, Section 13160

California Water Code, Section 13160, authorizes SWRCB to act as the State water pollution control agency for purposes of compliance with Section 401 of the CWA. For an activity that may result in any discharge into navigable waters, Section 401 of the federal CWA requires a federal license or permit applicant to provide to the licensing or permitting agency a certification from the state in which the discharge originates that any such discharge will comply with State water quality standards and other appropriate requirements. SWRCB administers the Section 401 program. Section 401 requires SWRCB to find that there is a reasonable assurance that an activity will be conducted in a manner that will not violate applicable water quality standards and other appropriate requirements. Certification may be conditioned with other limitations to assure compliance with various CWA provisions.

4.2.7 California State Lands Commission

California State Lands Commission (CSLC) was established in 1938 with authority under Division 6 of the California Public Resources Code. CSLC provides stewardship of the California lands and waterways entrusted to its care. Nearly 4 million acres of sovereign lands are owned by the State. This amount includes the beds of navigable streams, rivers, and lakes; tidal waterways; and tidelands up to the ordinary high water mark and submerged lands along the coastline extending from the shoreline out to 3 miles offshore. CSLC may lease sovereign lands for any public trust purpose, including open space, fisheries, commerce, recreation, and navigation. For instance, a public or private entity must lease sites for marinas

¹³ "Beneficial uses" of the waters of the State that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

and recreational piers that are within sovereign lands. CSLC also issues permits for dredging lands within its jurisdiction.

4.2.8 Regulations Implemented by the Central Valley Flood Protection Board

The Central Valley Flood Protection Board (CVFPB) was previously known as the Reclamation Board. In 1855, California passed the Reclamation District Act providing for the sale of swamp lands. Reclamation districts were formed and were regulated so that construction of levees occurred along hydrologic boundaries (rather than along property lines). Islands in the Delta are ringed with levees that have their own districts for maintenance.

The CVFPB mission is to control flooding along the Sacramento and San Joaquin rivers and their tributaries in cooperation with USACE; to cooperate with federal, State, and local agencies in establishing, planning, constructing, operating, and maintaining flood control works; and to maintain the integrity of the existing flood control system and designated floodways through the CVFPB's regulatory authority by issuing permits for encroachments.

CVFPB is a major sponsor of federal flood risk management projects. It shares in construction cost; provides lands, easements, and rights-of-way; and assumes responsibility for operation and maintenance. CVFPB also approves or denies plans for reclamation, dredging, or improvements that alter any project levee. It has the authority to approve or deny any land reclamation plan (related to public works) or flood protection that involves excavation near rivers and tributaries, and has legal responsibility for oversight of the entire Central Valley flood management system.

Title 23 of the California Code of Regulations and the California Water Code provide guidance to DWR and CVFPB on how to enforce appropriate standards for flood control projects in the Central Valley. These codes provide DWR and CVFPB with the authority to enforce standards for the erection, maintenance, and operation of levees, channels, and other flood control works within their jurisdiction.

4.2.9 California Fish and Game Code Section 1602 (Streambed Alteration)

Sections 1600–1616 of the Fish and Game Code state that it is unlawful for any person or agency to (1) substantially divert or obstruct the natural flow of the bed, channel, or bank of any river, stream, or lake; (2) substantially change the bed, channel, or bank of any river, stream, or lake; (3) use any material from the bed, channel, or bank of any river, stream, or lake; or (4) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake in California, without first notifying CDFW.

Section 1602 of the Fish and Game Code states that any entity proposing to substantially divert or obstruct the natural flow or alter streambed materials, channel, or bank in any river, stream, or lake must provide a detailed description and map of the proposed project location, name and description of the river, stream, or lake affected by streamflow diversions, and copies of applicable local, State, or federal permits and/or other documents already issued as part of a Streambed Alteration Agreement. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. The Streambed Alteration Agreement must include measures designed to protect the affected fish and wildlife and associated riparian resources.

4.2.10 California Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code codify the Native Plant Protection Act of 1977 (NPPA), which is intended to preserve, protect, and enhance endangered or rare native plants in the State. Under Section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is present in such small numbers throughout its range that it may become endangered if its environment worsens. The California Fish and Game Commission has the authority to designate native plants as endangered or rare, and CDFW has authority to implement and enforce the NPPA. Like CESA, the NPPA strictly prohibits the take of endangered and rare plant species. However, the NPPA contains certain exceptions to the take prohibition that are not included within CESA.

CDFW maintains a Special Vascular Plants, Bryophytes, and Lichens List for California as part of the California Natural Diversity Database. The list is updated quarterly and is reviewed and updated by rare plant status review groups (more than 300 botanical experts from government, academia, nongovernment organizations, and the private sector) managed jointly by CDFW and the California Native Plant Society (CNPS). Plant species, subspecies, or varieties are assigned a California Rare Plant Rank (CRPR) based on their level of endangerment. Plants with CRPR 1A, 1B, or 2 meet the definitions of Section 1901 of the Fish and Game Code and may qualify for State listing. For plants with a CRPR 3 rank, CDFW and CNPS lack sufficient information to assign them another code. CRPR 4 plants are those of limited distribution and/or those that are infrequently found within a broader range in California. CNPS believes that CRPR 3 and 4 plants are uncommon enough to justify their regular monitoring. One species with the potential to occur in the Primary Study Area, Greene’s Tuctoria (*Tuctoria greenei*) is listed as “Rare” under the NPPA.

4.2.11 Assembly Bill 52 Tribal Cultural Resources (CEQA Lead Agency)

AB 52 requires early notice and coordination with California Native American tribes by lead agencies under CEQA for all projects issuing a Notice of Preparation after July 1, 2015. The bill establishes a consultation process with all California Native American tribes on the Native American Heritage Commission List. This law creates a new CEQA class of resources termed “Tribal Cultural Resources” and requires consideration of tribal cultural values and resources as well as meaningful consultation as requested by a potentially affected tribe.

4.3 Local/Regional Policies or Approvals

According to California Government Code §65300, every county and city in the State of California is required by law to adopt a general plan for the “physical development of the county or city, and any land outside its boundaries which bears relation to its planning”. Called the “constitution for future development” by the California Supreme Court, the General Plan is a guideline for growth and policy decisions. The General Plan is intended to serve as a comprehensive long-term document establishing land use and development policy for the next 10 to 20 years.

4.3.1 Glenn County General Plan

The most recent General Plan for Glenn County was adopted in 1993 and provides a template for development in the unincorporated areas of the county, outside of the communities of Willows and Orland. The Plan addresses land use, transportation, housing, open space, conservation, safety, noise and economic development.

4.3.2 Colusa County General Plan

In 2012, Colusa County adopted a new General Plan, replacing the previous 1989 General Plan. The 2012 Plan provides a framework for decisions on growth, development, and conservation of open space, consistent with the desires of the County's residents and businesses. The Plan contains specific elements including agriculture, transportation, community character, conservation, economic development, housing, land use noise, open space, public services and facilities, and safety. The Plan also includes a Sites Planning Area.

4.3.3 Colusa County Voluntary Oak Woodlands Management Plan

The purpose of Colusa County's Oak Woodland Management Plan is to provide a consistent policy for conservation and use of oak woodlands throughout the county. The document is expected to provide direction to landowners, the Colusa County Planning Department, and developers.

4.4 Primary Permits and Authorizations

Numerous permits from federal, State, and local agencies will be required to implement the Project. Anticipated federal, State, and local permits and authorizations are summarized in Table 4-1 and listed below.

4.4.1 Federal Permits and Authorizations

- Section 404 of the Clean Water Act – U.S. Army Corps of Engineers Permit
- Section 10 of the Rivers and Harbors Act – U.S. Army Corps of Engineers
- Section 14 of the Rivers and Harbors Act (33 U.S.C. 408, commonly called Section 408) – U.S. Army Corps of Engineers
- Federal Endangered Species Act Consultation (Section 7) – U.S. Fish and Wildlife Service and National Marine Fisheries Service
- Bald Eagle Protection Act – U.S. Fish and Wildlife Service and National Marine Fisheries Service
- Section 106 of the National Historic Preservation Act – Federal Lead Agencies
- Hydropower License – Federal Energy Regulatory Commission
- Private Aids to Navigation Permit – U.S. Coast Guard

4.4.2 State Permits and Authorizations

- Section 401 Water Quality Certification – Regional Water Quality Control Board
- Encroachment Permit – Central Valley Flood Protection Board
- Water Rights – State Water Resources Control Board
- California Fish and Game Code Section 1600 Streambed Alteration Agreement – California Department of Fish and Wildlife
- California Endangered Species Act Consultation – California Department of Fish and Wildlife
- Division of Safety of Dams – California Department of Water Resources
- Assembly Bill 52 Tribal Cultural Resources – (CEQA Lead Agency)

4.4.3 Local Permits and Authorizations

- Local air quality management district permits
- County grading, building, traffic control, well drilling, septic system installation, and use permits and, potentially, zoning variances or revisions
- Electric power utility connections
- Electric power utility
- Possible actions related to the Sites Reservoir alternatives; potential CEQA-responsible agencies include the following:
 - Glenn-Colusa Irrigation District
 - Colusa County Water District
 - Westside Water District
 - Maxwell Irrigation District
 - Western Canal Water District
 - Carter MWC
 - Garden Highway MWD
 - Orland Artois Water District
 - Placer County Water Agency and City of Roseville
 - Tehama-Colusa Canal Authority
 - Reclamation District 108
 - Colusa County
 - Glenn County
 - Davis Water District
 - Dunnigan Water District
 - Cortina Water District
 - LaGrande Water District
 - Proberta Water District
 - City of American Canyon
 - 4M Water District (TC-6)
 - California Water Service
 - Antelope Valley-East Kern Water
 - Castaic Lake Water Agency
 - Coachella Valley Water District
 - Desert Water Agency
 - Metropolitan Water District of Southern California
 - Pacific Resources MWC
 - San Bernardino Valley Municipal Water District
 - Santa Clara Valley Water District
 - San Geronio Pass Water Agency
 - Wheeler Ridge-Maricopa Water Storage District
 - Alameda County, Zone 7

**Table 4-1
Applicable Federal, State, and Local Permits and Approvals**

Agency	Type of Permit or Approval	Regulated Activity	Review Period	Authority
Federal Agency Permits and Approvals				
U.S. Army Corps of Engineers	Department of the Army permit (Section 404)	Discharge of dredged or fill material into waters of the U.S. (including wetlands)	10 to 18 months after application submittal	Section 404 Clean Water Act (33 U.S.C. 1344)
U.S. Army Corps of Engineers	Department of the Army permit (Section 10)	Construction of any structure in or over navigable waters of the U.S., the excavation/dredging or deposition of material in these waters, or any obstruction or alteration in navigable water	10 to 18 months after application submittal	Section 10 of the Rivers and Harbor Act (33 U.S.C. 403)
U.S. Army Corps of Engineers	Department of the Army permit (Section 408)	Any proposed project that may affect any existing USACE (and/or State Plan of Flood Control levee in the Central Valley and Delta)	10 to 18 months after application submittal	Section 408 of the Rivers and Harbors Act (33 U.S.C. 408)
U.S. Environmental Protection Agency/U.S. Army Corps of Engineers	LEDPA review	Review of LEDPA for issuance of an Individual Permit (Section 404) if required. Project could be relieved of LEDPA analysis if water-dependent determination is upheld.	Up to approximately 1 year depending on NEPA status	Section 404(b)(1)
Advisory Council on Historic Preservation/State Office of Historic Preservation/Reclamation	Section 106 review and compliance	Federal undertaking (Reclamation) and as part of consideration of a Section 404 permit by USACE	6 to 18 months after Section 106 study result submittal	NHPA (36 CFR 800)
U.S. Fish and Wildlife Service/National Marine Fisheries Service/Reclamation	Section 7 consultation	Federal undertaking (Reclamation) and as part of consideration of a Section 404 permit by USACE	6 to 18 months after biological assessment permit application and BA submittal	16 U.S.C. 1531 et seq; 50 CFR 17, Sections 17.94-17.96 ESA
U.S. Fish and Wildlife Service	Bald Eagle Protection Act (typically addressed through Section 7 consultation)	Federal undertaking potentially impacting bald or golden eagle	(typically included as part of Section 7 consultation)	16 U.S.C. 668-668d, 54 Stat. 250
U.S. Coast Guard	Navigability determination	Determination if proposed activities potentially affect river navigation	6 months	33 CFR 2.40

Agency	Type of Permit or Approval	Regulated Activity	Review Period	Authority
Bureau of Reclamation	Warren Act Contract	Storage and transportation of non-CVP water supplies through CVP water facilities	1 year	42 CFR 523
Federal Energy Regulatory Commission	Hydropower license	Authorizes the construction and operation of a hydroelectric project for a term of up to 50 years	5 – 10 years	Federal Power Act – 16 U.S.C. 791(a)-825r
State Agency Permits and Approvals				
California Department of Transportation	Encroachment permits	Use of California rights-of-way for installation of pipelines along State freeways and roads	2 months after application submittal	21 CCR 14.11.1–14.11.6
California Department of Transportation	Transportation permit	Transport of heavy or oversized loads on State roads during construction	Same day as applied for	California Vehicle Code Section 35780; California Streets and Highway Code 117, 660–711
California State Lands Commission	Land use lease	Placement of fill or structures in navigable waterways or Section 16 or 36 lands (water intake structures are typically exempt from this process)	6 to 12 months after application submittal	California Public Resources Code Section 6000 et. seq.
Central Valley Flood Protection Board	Encroachment permit	Encroachment onto/through state flood control facilities. CVFPB encroachment application requires CEQA and NEPA review completion or exemption (exclusion), environmental review, hydraulic/hydrologic review, and 408 coordination with USACE.	6 to 18 months after application submittal	23 CCR encroachment permit
State Water Resources Control Board	Water rights permit	Diversion of water from existing streamflow	3 – 5 years	California Water Code §5101
State Water Resources Control Board and Regional Water Quality Control Boards	General Construction Stormwater National Pollution Discharge Elimination System permit	All stormwater discharges when clearing, grading, and excavation result in a land disturbance of 5 or more acres	Prior to construction	CWA
State Water Resources Control Board and Regional Water Quality Control Boards	Waste discharge requirements	Discharge of reclaimed water on land and to groundwater	6 to 18 months after application submittal	Porter-Cologne Water Quality Act
State Water Resources Control Board and Regional Water Quality Control Boards	Section 401 Water Quality Certification	Discharge of fill materials to waters of the U.S.	6 to 18 months after application submittal	CWA

Agency	Type of Permit or Approval	Regulated Activity	Review Period	Authority
California Department of Water Resources, Division of Safety of Dams	Approval of plans and specifications for the construction or enlargement of a dam or reservoir	Dam or reservoir construction or enlargement	6 to 18 months after application submittal	California Water Code Division 3, Dams and Reservoirs Parts 1 and 2
California Occupational Safety and Health Administration	Permits for buildings, structures, scaffolding/falsework, construction, trenches/excavations, and demolition	Construction of trenches or excavations 5 feet or deeper and into which a person is required to descend. Construction or demolition of any building, structure, scaffolding, or falsework more than 3 stories high. The underground use of diesel engines in working mines and tunnels.	6 months after application submittal	California Labor Code Section 6500
California Department of Fish and Wildlife	Streambed Alteration Agreement	Crossing of streams, rivers, or lakes (also for reservoirs, which interrupt streams)	6 to 18 months after application submittal based on 50 percent design	Sections 1601–1603 of the California Fish and Game Code
California Department of Fish and Wildlife	Section 2081 Management Agreement	Potential adverse effects on State-listed endangered or threatened species or species proposed for State listing. Incidental take of State-protected species by a non-state entity.	6 to 18 months after application submittal based on 50 percent design	Section 2081 California Fish and Game Code
Native American Heritage Commission/Local Tribes	AB 52 Consultations	Effects on tribal cultural resources	1 to 3 years	California Public Resources Code 21080.3.1
State Office of Historic Preservation	See Advisory Council on Historic Preservation under USACE	Potential adverse effects on State unique archaeological sites and historical resources	6 to 18 months after application submittal	Consultation under Section 106 of the NHPA; state law
Local Agency Permits and Approvals				
Colusa and Glenn County Air Pollution Control Districts	Authority to construct and permit to operate	Construction or operation of any non-exempt source of air contaminants; typically limited to stationary sources.	6 months after application submittal	New Source Review regulations; Clean Air Act; New Source Review regulations; Clean Air Act; Glenn County Air Pollution Control District Article III, Sections 50 to 57; Colusa County Air Pollution Control District Regulation III, Rules 3.1 to 3.18.
Colusa and Glenn County Public Works Departments	Encroachment permit	Use of local jurisdictions right-of-way to install pipeline across roadways	2 months	County ordinances

Agency	Type of Permit or Approval	Regulated Activity	Review Period	Authority
Colusa and Glenn County Public Works Departments	Transportation permit	Transport of heavy or oversized loads on county roads	2 months	County ordinances
Colusa and Glenn County Public Works Departments	Building permit, street improvement permit, grading permit	Construction activities within the county	Approximately 1 month after final design	Uniform Building Codes, as adopted
Colusa County Planning Department	Zoning/General Plan amendment	Changes to zoning or General Plan designations	6 months	County Zoning Code and General Plan

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