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## **1 INTRODUCTION**

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3 below.

### **1.1 Background**

The U.S. Bureau of Reclamation (Reclamation) and California Department of Water Resources (DWR) propose to construct and operate new water conveyance facilities in the Sacramento–San Joaquin River Delta (Delta). The project is referred to as California WaterFix (CWF). The purpose of this Biological Opinion (Opinion) is to analyze the potential effects of the proposed action on NMFS listed threatened and endangered species and on critical habitat under the Endangered Species Act (ESA). In summary, the proposed action consists of:

- construction and operation of these new facilities, including three intakes, two tunnels, associated facilities, and a permanent head of Old River (HOR) gate;
- operation of existing Central Valley Project (CVP) and State Water Project (SWP) Delta facilities and the new facilities;
- maintenance of the newly-constructed and existing Delta facilities;
- implementation of new and existing conservation measures; and
- implementation of an ongoing monitoring and adaptive management program.

The in-water construction activities associated with the intakes, tunnels, and associated structures, as well as the change in SWP Delta operations, requires a combination of authorizations from the U.S. Army Corps of Engineers (Corps) under Rivers and Harbors Act Section 10, Clean Water Act Section 404, and 33 U.S.C. 408. DWR is the applicant for authorizations for and the entity undertaking all construction-related activities, including those related to the intakes, the associated tunnels, and their associated structures. The Corps is therefore the Federal action agency for Federal authorizations for construction-related activities under the proposed action.

The Corps has designated Reclamation as the lead Federal agency for the ESA section 7 consultation (Jewell 2015). Reclamation is responsible for operation and maintenance of the CVP. DWR is responsible for the operation and maintenance of the SWP. DWR's operation of the proposed facilities would modify operation of the SWP, which is operated in coordination with the CVP according to the Coordinated Operations Agreement between the United States of America and DWR. As the lead Federal agency for the ESA section 7 consultation on the proposed action and Federal action agency for coordinated operation of the CVP/SWP, Reclamation proposes to coordinate CVP operations of the new and existing facilities with DWR.

NOAA's National Marine Fisheries Service (NMFS) prepared the biological opinion and incidental take statement (ITS) portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq.*), and implementing regulations at 50 CFR 402.

We also completed an essential fish habitat (EFH) consultation on the proposed action, in accordance with section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 *et seq.*) and implementing regulations at 50 CFR 600.

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Because the proposed action would modify a stream or other body of water, NMFS also provides recommendations and comments for the purpose of conserving fish and wildlife resources, and enabling the Federal agency to give equal consideration with other project purposes, as required under the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

We completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available through NMFS' Public Consultation Tracking System. A complete record of this consultation is on file at the California Central Valley Office.

### **1.1.1 Central Valley Project**

The CVP is the largest Federal Reclamation project. The CVP was originally authorized by the Rivers and Harbors Act of 1935 and reauthorized by the Rivers and Harbors Act of 1937, which provided that the dams and reservoirs of the CVP “shall be used, first, for river regulation, improvement of navigation and flood control; second, for irrigation and domestic uses; and, third, for power” (Pub. L. No. 75-392, 50 Stat. 844, 850). The CVP was reauthorized in 1992 through the Central Valley Project Improvement Act (CVPIA; Pub. L. No. 102-575, 106 Stat. 4600, Title 34). CVPIA 3406(a) amended the CVP authorizations to provide that the dams and reservoirs of the CVP should now 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 includes authorization for actions to benefit fish and wildlife intended to implement the purposes of Title 34. Specifically, Section 3406(b)(1), which is implemented through the Anadromous Fish Restoration Program (AFRP), provides for modification of the CVP operations to meet the fishery restoration goals of the CVPIA, so long as the operations are not in conflict with the fulfillment of the Secretary's contractual obligations to provide CVP water for other authorized purposes. Furthermore, CVPIA Section 3604(b) provides, “The Secretary [of the Interior], immediately upon the enactment of this title, shall operate the Central Valley Project to meet all obligations under State and Federal law, including but not limited to the Federal Endangered Species Act, 16 U.S.C. 1531, *et seq.*, and all decisions of the California State Water Resources Control Board (SWRCB) establishing conditions on applicable licenses and permits for the project.”

### **1.1.2 State Water Project**

DWR was established in 1956 as the successor to the Department of Public Works for authority over water resources and dams within California. DWR also succeeded to the Department of Finance's powers with respect to state application for the appropriation of water (Stats. 1956, First Ex. Sess., Ch. 52; see also Wat. Code Sec. 123) and has permits for appropriation from the SWRCB for use by the SWP. DWR's authority to construct state water facilities or projects is derived from the Central Valley Project Act (CVPA) (Wat. Code Sec. 11100 *et seq.*), the Burns-Porter Act (California Water Resources Development Bond Act) (Wat. Code Sec. 12930-12944), the State Contract Act (Pub. Contract Code Sec. 10100 *et seq.*), the Davis-Dolwig Act (Wat. Code Sec. 11900-11925), and special acts of the State Legislature. The Davis-Dolwig Act (Wat. Code Sec. 11900-11925) establishes the policy that preservation of fish and wildlife is part of

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state costs to be paid by water supply contractors, and recreation and enhancement of fish and wildlife are to be provided by appropriations from the General Fund.

### **1.1.3 Coordinated Operations Agreement**

The Coordinated Operations Agreement (COA) between the United States of America and DWR to operate the CVP/SWP was signed in November 1986. Public Law 99-546 (100 Stat. 3050 (1986)) authorized and directed the Secretary of the Interior to execute and implement the COA. The COA defines the rights and responsibilities of the CVP/SWP with respect to in-basin water needs and project exports and provides a mechanism to account for those rights and responsibilities.

Under the COA, Reclamation and DWR agree to operate the CVP/SWP under balanced conditions in a manner that meets Sacramento Valley and Delta needs while maintaining their respective annual water supplies as identified in the COA. Balanced conditions are defined as periods when the two projects agree that releases from upstream reservoirs, plus unregulated flow, approximately equal water supply needed to meet Sacramento Valley in-basin uses and project exports. Coordination between the CVP and the SWP is facilitated by implementing an accounting procedure based on the sharing principles outlined in the COA.

## **1.2 Consultation History**

The CVP and SWP are two major inter-basin water storage and delivery systems that divert and re-direct water from the southern portion of the Delta, and have a complex history of consultation under the ESA. One part of this long and complex consultation history has been for a proposed north Delta diversion facility (*i.e.*, for a dual-water conveyance system), which has been under various stages of development since 2006, first as part of a conservation strategy in the Bay-Delta Conservation Plan (BDCP), and now as a stand-alone project referred to as CWF. The past 8 years has been spent in nearly continuous engagement among multiple agencies, including, *inter alia*, Reclamation, DWR, California Department of Fish and Wildlife (CDFW), NMFS, and the U.S. Fish and Wildlife Service (USFWS). Key aspects of this consultation history dealing with the BDCP and CWF are summarized chronologically below.

In July 2006, several state and private parties entered into a memorandum of agreement that established the financial commitments of the parties to carry out actions to satisfy existing regulatory requirements related to operation of the CVP/SWP and develop a conservation plan for the Delta that would support new regulatory authorizations under state and Federal endangered species laws for current and future activities related to the CVP/SWP. This plan was named the BDCP.

In December 2013, DWR issued a draft habitat conservation plan (*i.e.*, the BDCP) and filed an application for an incidental take permit under section 10 of the ESA (DWR, 2013), and together with Reclamation, NMFS, and USFWS, issued a Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) evaluating the BDCP and 12 other alternatives (DWR et al, 2013).

In February 2015, Reclamation and DWR decided to pursue an ESA section 7 consultation (instead of an incidental take permit under ESA section 10) for the construction and operation of water facilities formerly proposed under the BDCP, specifically, those included in BDCP Conservation Measure 1. The majority of other BDCP conservation measures are not included in the section 7 consultation effort.

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In April 2015, The Corps transmitted a letter to Reclamation, designating them as the lead Federal agency for the CWF section 7 consultation.

During 2015, NMFS provided technical assistance to Reclamation and DWR during the development of the components of the revised project. This included review of a draft biological assessment (BA) produced by Reclamation and DWR in October 2015 (ICF, 2015).

In January 2016, Reclamation and DWR released a revised working draft BA for technical assistance review by the Services (ICF, 2016). NMFS provided technical assistance on this draft between January and the end of July, 2016.

On August 2, 2016, NMFS received a request for formal consultation on the proposed action from Reclamation, the lead Federal action agency for the ESA section 7 consultation on the proposed action, and DWR, the applicant (Banonis, 2016). The accompanying BA identified the Corps as the federal action agency for construction under the proposed action (Reclamation, 2016). Reclamation determined that the project may affect and is likely to adversely affect Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*) and its critical habitat, Central Valley spring-run Chinook salmon (*O. tshawytscha*) and its critical habitat, California Central Valley steelhead (*O. mykiss*) and its critical habitat, and the Southern Distinct Population Segment (DPS) of North American green sturgeon (*Acipenser medirostris*) and its critical habitat. Reclamation determined that the project may affect but is not likely to adversely affect the Southern Resident killer whale DPS and is not likely to adversely affect its critical habitat. The project may also adversely affect Essential Fish Habitat, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act.

On September 2, 2016, NMFS initiated formal consultation, which was confirmed by transmission of a letter of sufficiency to Reclamation on September 6, 2016 (Stelle Jr., 2016).

On September 6, 2016, NMFS sent additional information and clarification requests to Reclamation in its letter of sufficiency; communication exchange occurred throughout September.

On November 7, 2016, Reclamation requested two additional components be added to the proposed action: 1) new spring outflow criteria that were contained in their application for issuance of an incidental take permit under Section 2081(b) of the California Endangered Species Act (CESA), and 2) the construction and operation of new facilities as a result of DWR's settlement agreement with Contra Costa County Water District.

On December 20, 2016, Reclamation transmitted a log of responses to all information and clarification requests submitted by NMFS on September 6, 2016, including all changes to the project description that have occurred since submission of the BA.

### **1.3 Proposed Action (PA)**

“Action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (50 CFR 402.02).

For EFH consultation, a Federal action means any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken by a Federal Agency (50 CFR 600.910).

Under the FWCA, except for circumstances that are not applicable under the proposed action, consultation is required “whenever the waters of any stream or other body of water are proposed

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or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, or by any public or private agency under Federal permit or license” (16 USC 662(a)).

In summary, the proposed action consists of:

- construction and operation of new water conveyance facilities in the Delta, including three intakes, two tunnels, associated facilities, and a permanent head of Old River (HOR) gate;
- coordinated operation of existing SWP and CVP Delta facilities, and the new facilities, once construction is complete;
- maintenance of the newly constructed and existing SWP and CVP Delta facilities;
- implementation of new and existing conservation measures; and
- implementation of an ongoing monitoring and adaptive management program.

Reclamation, as the lead agency for the ESA section 7 consultation, proposes to coordinate CVP operations with DWR, the applicant, using the new and existing facilities in the Delta. The Corps proposes to issue permits to DWR pursuant to Rivers and Harbors Act Section 10, Clean Water Act Section 404, and 33 U.S.C. 408.

DWR’s operation of the proposed facilities, would modify operation of SWP, which is operated in coordination with the CVP. Reclamation is responsible for operation and maintenance of the CVP, and DWR is responsible for the operation and maintenance of the SWP. The proposed new facilities would operate in coordination with the existing Delta facilities, including the Clifton Court Forebay (CCF), located in San Joaquin County, California. The three proposed intakes, comprising the new proposed north Delta diversions, would be located on the east bank of the Sacramento River near Clarksburg, in Sacramento County, California, and connected to the CCF by two underground tunnels and a new pumping plant, which would be sited at the CCF. The proposed new facilities would provide water for intake at the Banks Pumping Station and the South Bay Pumping Plant, which are existing SWP facilities that draw water from the CCF for distribution through existing SWP facilities. This is described in more detail in chapter 3 of the BA, which contains the complete PA.

DWR is the entity undertaking all construction-related activities including those related to the intakes, the associated tunnels, and their associated structures. The in-water construction activities associated with the intakes, tunnels, and associated structures, as well as the change in Delta operations, requires a combination of approvals from the Corps. DWR and/or its designees will operate and maintain the facilities, and Reclamation will adjust operation of the CVP to utilize the dual conveyance.

The PA entails construction and operation of facilities for the movement of water entering the Delta from the Sacramento Valley watershed to the existing CVP/SWP pumping plants located in the southern Delta. The PA also entails operation of the existing and proposed new CVP/SWP Delta facilities in a manner that minimizes or avoids adverse effects on listed species, and that protects and enhances aquatic, riparian, and associated natural communities and ecosystems. The

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PA includes activities that would occur in both aquatic and terrestrial environments with potential effects to both aquatic and terrestrial species.

This Opinion analyzes effects to listed aquatic species under NMFS' jurisdiction. The PA includes the following general categories of activities that may affect listed aquatic species under NMFS' jurisdiction, as described below: 1) water conveyance facility construction; 2) operation of new and existing water conveyance facilities; 3) maintenance of new and existing water conveyance facilities; and 4) implementation of conservation measures. In summary, the components of these general categories of activities include:

- Water Conveyance Facility Construction
  - Geotechnical Exploration: Sampling is expected to occur at locations along the water conveyance alignment and at proposed project facility sites to provide data to support the development of an appropriate geologic model, characterize ground conditions, and reduce the geologic risks associated with the construction of proposed facilities. The proposed duration of work is 24 months.
  - Tunneled Conveyance: The PA includes construction of two conveyance tunnels that are expected to extend from the proposed north Delta diversion facilities to a proposed intermediate forebay and to CCF; total length of the tunneled conveyance, most of which is proposed as 40-ft diameter dual-bore, is approximately 40 miles. Sites will remain active throughout the whole construction period of 2018-2030, but peak activity will be from October 2020 to April 2025 (4.5 years).
  - North Delta Diversions (NDD): The PA includes proposed construction of three 3,000 cfs capacity on-bank screened water intakes, and associated land-based facilities, on the east bank of the Sacramento River between Clarksburg and Courtland, in Sacramento County, California. The total proposed duration of work is around 8 years.
  - HOR Gate: The PA includes construction of an operable gate at the head of Old River to minimize the movement of outmigrating salmonids into the south Delta via Old River and to improve water quality in the San Joaquin River during certain seasons; this would replace the temporary rock barrier that has been seasonally installed and removed. The proposed duration of work is around 1.5 years.
  - Clifton Court Forebay: The PA includes a proposal to divide the existing CCF into two halves; the North CCF will receive screened water from the north Delta diversions as primarily controlled by a proposed pump station at the North CCF, while the South CCF will be expanded and will continue to receive flows from the existing intake gate on Old River. The proposed duration of work is around 7 years.
  - Connections to Banks/Jones Pumping Plants: The PA includes a collection of control structures, canals, and siphons with radial gates and stop logs to configure a system that allows both the Federal and state pumping plants to draw water from existing sources and/or from the North CCF. No changes are proposed to either

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- the Federal or state fish facilities. The proposed duration of work is around 3 years.
  - Interconnection Facility: The PA includes a new Interconnection Facility between the CWF water conveyance facilities and existing Contra Costa Water District (CCWD) facilities. This would occur either at Victoria Island or at CCF. Construction of the new facility would take 24-30 months.
- Operation of New Water Conveyance Facilities and Existing Delta Facilities
  - Site-Specific Operational Criteria for New Facilities: The PA includes operational criteria specific to the proposed new facilities, applicable to:
    - NDD
    - HOR Gate
  - Operational Criteria for Existing Delta Facilities: The PA also includes operational criteria that relate to operation of existing Delta facilities, which will apply when the new water conveyance facilities become operational. The operational criteria include:
    - Old and Middle River (OMR) Flows
    - Flows at Rio Vista
    - Seasonal Outflow, Including Spring Outflow
    - Delta Cross Channel (DCC) gates
    - Suisun Marsh facilities
    - North Bay Aqueduct (NBA) Intake
  - Real-Time Operations: The PA includes real-time operations, which will apply when the new water conveyance facilities become operational, that will be needed at various times of the year for:
    - NDDs
    - South Delta export facilities
    - HOR gate
- Maintenance of New and Existing Water Conveyance Facilities: The PA includes the assumed maintenance of the NDD facilities (intakes, conveyance facilities, and appurtenance structures), the DCC, the HOR gate, and the south Delta facilities;
- Implementation of Conservation Measures: The PA includes conservation measures intended to avoid, minimize, and offset effects on listed species, and to provide for their conservation and management, including:
  - Purchasing available credits at existing conservation banks
  - Permanent non-physical barrier at Georgiana Slough
  - Tidal perennial and riparian habitat restoration



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- A framework for collaborative science and adaptive management
- Monitoring and research program

The proposed action for this consultation is a mixed programmatic action as defined by 50 CFR 402.02. In a mixed programmatic action, part of the Federal action subject to ESA section 7 consultation will not be subject to further section 7 consultation (non-framework actions); and part of the Federal action subject to section 7 consultation approves a framework for development of future actions that are authorized, funded, or carried out at a later time, which will be subject to further section 7 consultation.

This PA includes the following non-framework actions during the construction phase that will not be the subject of future consultations:

- Geotechnical exploration
- Tunneled conveyance
- Intermediate forebay
- CCF adjustments
- Connections to Banks and Jones pumping plants

This PA includes the following activities that will be subject to subsequent further section 7 consultations:

- NDD construction and operations
- HOR Gate construction and operations
- Continued operations of the south Delta facilities
- Georgiana Slough non-physical barrier construction and operations
- Maintenance of new and existing water conveyance facilities
- Implementation of conservation measures

### **1.3.1 Key Consultation Considerations**

There are currently numerous regulatory constraints in place that relate to the operational aspects of the PA. Key constraints and relationships are highlighted briefly below.

#### **1.3.1.1 Existing Biological Opinions on the Long-Term Operations of the CVP and SWP**

Implementation of the PA will include operations of both new and existing water conveyance facilities once the new north Delta diversion facilities are completed and become operational. Until the new north Delta diversion facilities are completed and become operational, the CVP/SWP are expected to continue to operate consistent with the currently applicable USFWS (USFWS, 2008) and NMFS (NMFS, 2009 and 2011) biological opinions (BiOps) or as amended through successor Opinion(s). However, operational limits included in this PA for south Delta export facilities will replace the south Delta operational limits currently implemented as described in the USFWS (2008) and NMFS (2009) BiOps when the proposed NDD becomes operational. The PA also includes criteria for spring outflow and new minimum flow criteria at Rio Vista during the months of January through August that will apply when the proposed NDD becomes operational. The NDD and the HOR gate are new facilities for the SWP and will be operated consistent with the criteria presented in the PA for these facilities. (See Appendix [AA] for a more detailed explanation of the PA in this Opinion compared to the USFWS (2008) and

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NMFS (2009) BiOps.) The USFWS (2008) and NMFS (2009) BiOps for CVP/SWP operations will continue to apply for CVP/SWP activities not described as part of the PA in this Opinion.

On August 2, 2016, Reclamation sent a letter to NMFS (Murillo, 2016) requesting the use of the adaptive management provision outlined in the Reasonable and Prudent Alternative (RPA) section 11.2.1.2 of the NMFS 2009 BiOp relating to Shasta Reservoir operations. On August 18, 2016 NMFS sent a letter to Reclamation concurring that recent multiple years of drought conditions, new science and modeling, and data demonstrating low population abundance levels of Sacramento River winter-run Chinook salmon and Sacramento River spring-run Chinook salmon warrant modifications to the Shasta RPA actions (RPA Action Suite I.2) in the 2009 Opinion. NMFS is targeting early 2017 for completion of the Shasta RPA adjustment. The proposed CWF operating criteria are not intended to change Shasta operations; thus, the Shasta RPA adjustment will control if there are any unforeseen conflicts in Shasta operations and the proposed CWF operating criteria.

On August 2, 2016, Reclamation sent a letter to NMFS (Cowin and Murillo, 2016) requesting reinitiation of consultation on the Coordinated Long-term Operation of the CVP/SWP. On August 18, 2016 NMFS sent a letter to Reclamation concurring that reinitiation is required under the terms of the 2009 Biological Opinion and ESA regulations (50 CFR 402.16). Reasons for the reinitiation include new information related to the effects of multiple years of drought, recent data demonstrating extremely low abundance levels for endangered Sacramento River winter-run Chinook salmon and threatened Central Valley spring-run Chinook salmon, and new information resulting from ongoing scientific collaboration.

### **1.3.1.2 Consultation on the Relicensing of the Oroville Facilities**

NMFS issued the biological opinion for the Federal Energy Regulatory Commission's (FERC) proposed relicensing of the Oroville Facilities Hydroelectric Project (Oroville Facilities) on December 5, 2016. Under the proposed action analyzed in that biological opinion, FERC will issue a license to DWR to operate the Oroville Facilities for the next 30-50 years. That biological opinion analyzes the effects of the proposed relicensing of the Oroville Facilities in the Feather River, and the effects of Feather River Fish Hatchery salmonid strays in the Sacramento River watershed. Effects of the coordinated operations of the CVP and SWP, including the Oroville Facilities, downstream of the confluence of the Feather River and the Sacramento River were analyzed in the 2009 CVP/SWP biological opinion (as amended in 2011). However, because the final biological opinion for relicensing the Oroville Facilities was not completed before the hydrology/operational modeling scenarios were run for the California WaterFix, Oroville Facilities operations were accounted for in the hydrology/operational modeling scenarios analyzed in this Opinion based on the information available at the time as described further in Section 4.4 of the CWF BA.

### **1.3.1.3 California Endangered Species Act (CESA)**

DWR's application for issuance of an incidental take permit under Section 2081(b) of the CESA submitted in October, 2016, includes spring outflow criteria that are slightly different than the spring outflow criteria presented in the Biological Assessment. Consistent with the discussion in Section 3.3.1, page 3-83 of the Biological Assessment, the different spring outflow criteria are proposed to meet the mitigation requirements for longfin smelt, a species listed under the CESA. As these spring outflow criteria are included in DWR's 2081(b) application and essentially

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revise the description of the Proposed Action, Reclamation has requested that this information be considered as part of the proposed action analyzed in this Opinion.

**1.3.1.4 Decision 1641 and Revised D1641**

On December 29, 1999, the SWRCB adopted and subsequently revised (on March 15, 2000) Decision (D)-1641, amending certain terms and conditions of the water rights of the CVP/SWP under SWRCB D1485. D-1641 substituted certain objectives adopted in the 1995 Bay-Delta Plan for water quality objectives that had to be met under the water rights of the CVP/SWP. The requirements in D-1641 address the standards for fish and wildlife protection, municipal and industrial water quality, agricultural water quality, and Suisun Marsh salinity. SWRCB D-1641 also authorizes the CVP/SWP to jointly use each other's points of diversion in the southern Delta, with conditional limitations and required response coordination plans. SWRCB D-1641 modified the Vernalis salinity standard under SWRCB Decision 1422 to the corresponding Vernalis salinity objective in the 1995 Bay-Delta Plan. The Proposed Action includes ongoing compliance with D-1641 when the proposed north Delta diversion becomes operational.

**1.3.1.5 Real-Time Operations (RTO)**

The PA does not propose changing any of the existing real-time operational processes currently in place for CVP/SWP operations. However, an additional RTO process would be implemented under the PA when the proposed north Delta diversion becomes operational. To complement the existing RTO process, DWR and Reclamation can convene a separate real time operations coordination team (RTOCT) that includes representatives of USFWS, NMFS, CDFW, DWR and Reclamation. DWR and Reclamation also will designate one representative of the SWP contractors and one representative of the CVP contractors as participants on the coordination team in an advisory capacity. This RTOCT effort will assist DWR and Reclamation in fulfilling their responsibility to inform the SWP and CVP contractor participants regarding available information and real-time decisions. This may result in recommendations being made through the Delta Conditions Team. Decision-making will still happen as it currently does under the USFWS 2008 and NMFS 2009 BiOps, as outlined in section 3.3.3 of the BA.

For the PA, RTO are expected to be needed during at least some part of the year at the north and south Delta diversions and the HOR gate. Operational adjustments will be consistent with the criteria, and within any ranges, established in the PA. Any modifications to the criteria and/or ranges set out in the operating criteria will occur through the adaptive management program, and the effects of any such modifications will be analyzed by Reclamation and DWR, in consultation with NMFS and USFWS, to determine if Reclamation should reinstate consultation prior to implementation.

**1.3.2 Interrelated and Interdependent Actions**

“Interrelated actions” are those that are part of a larger action and depend on the larger action for their justification. “Interdependent actions” are those that have no independent utility apart from the action under consideration (50 CFR 402.02).

There are no Interrelated or Interdependent Actions for this project.

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