

Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project Project Management Plan

Bureau of Reclamation, Bay-Delta Office
National Marine Fisheries Service, Central Valley Office
U.S. Fish and Wildlife Service, Bay-Delta Office
California Department of Water Resources
California Department of Fish and Wildlife

1.0 MISSION STATEMENTS OF THE PARTICIPATING AGENCIES

The mission of the Bureau of Reclamation (Reclamation) is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The mission of the U.S. Fish and Wildlife Service (USFWS) is working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

The National Marine Fisheries Service (NMFS) is responsible for the stewardship of the nation's ocean resources and their habitat.

The mission of the California Department of Water Resources (DWR) is to manage the water resources of California in cooperation with other agencies, to benefit the State's people and to protect, restore and enhance the natural and human environments.

The Mission of the California Department of Fish and Wildlife (CDFW) is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

2.0 PURPOSE OF THIS PROJECT MANAGEMENT PLAN

The primary purpose of this Project Management Plan (PMP) is to clearly define the roles, responsibilities, procedures, and processes regarding communication, coordination, direction and documentation that will result in the successful reinitiation of Endangered Species Act (ESA) Section 7 consultation and associated National Environmental Policy Act (NEPA) processes with USFWS and NMFS on the coordinated long-term operation (LTO) of the Central Valley Project (CVP) and State Water Project (SWP) (Project). The PMP will guide management of the consultation and NEPA process on the Project and participation by the three Federal agencies (i.e., Reclamation, USFWS, and NMFS) and two State agencies, DWR and the CDFW (collectively "five agencies"), such that the Project objectives (see Section 5.0) are satisfied and completed in accordance with the associated schedule.

This PMP is a living document, designed as a tool for the multi-agency participants (*i.e.*, Reclamation [and its consultants], USFWS, NMFS, DWR, and CDFW) to actively use throughout the duration of the consultation and NEPA process on the Project. This PMP will be revised as the Project details are developed and elaborated on through time. New signatures will only be required when there are changes to the trajectory of the project. Details of the PMP will be commensurate with the schedule and scope at the point in time being considered.

3.0 PROJECT PURPOSE

The overarching purpose of the Project is to continue the operation of the CVP in coordination with operation of the SWP, for its authorized purposes, in a manner that:

- is consistent with Federal Reclamation law; other Federal laws and regulations; Federal permits and licenses; State of California water rights, permits, and licenses; and
- enables Reclamation and DWR to satisfy their contractual obligations to the fullest extent possible.

The overall goal of the reinitiation of consultation (ROC) is to achieve a durable and sustainable biological opinion (BO) issued jointly by the USFWS and NMFS (or two closely coordinated BOs) that accounts for the updated status of the species, operation of new facilities constructed or expected to be constructed, including the California WaterFix project (CWF), and modifications to the operation of the CVP and SWP. In a parallel process, DWR will comply with the California Endangered Species Act (CESA) for the SWP.

Objectives for this overall consultation process include:

- “Fresh Look Concept”: The five agencies aim to analyze revising operation of the CVP and SWP, including appurtenant facilities, hatcheries, and inclusion of possible restoration, to account for new science and recent information.
- Biological objectives: The five agencies hope to focus the Proposed Action on meeting biological objectives, through consideration of operations in conjunction with habitat restoration and construction, instead of focusing solely on operational objectives.
- Best available science: The five agencies will use best available science and set appropriate biological objectives to attain water use and species conservation goals.
- Science-based adaptive management: The Proposed Action is anticipated to include adaptive management for adjustments over time based on new science.
- Transparency: Reclamation will establish an expanded stakeholder engagement process, and will include a broad range of stakeholders in coordination with the five agencies.
- Peer review: Peer review and/or independent review of new tools used and specific analyses is an important objective of this consultation.

4.0 PROJECT BACKGROUND

The CVP and SWP are currently operated in accordance with the 2008 USFWS BO and the 2009 NMFS BO, both of which concluded that the coordinated long-term operation of the CVP and SWP, as proposed in Reclamation’s 2008 Biological Assessment (BA), was likely to jeopardize the continued existence of listed species and destroy or adversely modify designated critical habitat. Both BOs included Reasonable and Prudent Alternatives (RPAs) designed to allow the

CVP and SWP to continue operating without causing jeopardy or adverse modification to designated critical habitat. Reclamation accepted and then implemented the USFWS and NMFS RPAs.

Reclamation completed the court-ordered NEPA process on the Coordinated Long-term Operation of the CVP and SWP with issuance of a Record of Decision (ROD) on January 11, 2016.

On August 2, 2016, Reclamation requested reinitiation of ESA Section 7 consultations with the USFWS and NMFS on the Coordinated Long-term Operation of the CVP and SWP. Several factors resulted in Reclamation requesting reinitiation of consultation under the ESA, including the continued decline in the status of the listed species, the recent multiple years of drought, and the evolution of best available science. This consultation is expected to update the system-wide operating criteria for the LTO consistent with Section 7 requirements, to investigate the potential of including new and relevant conservation measures for listed species, and to review the existing RPA actions included in the 2008 USFWS BO and 2009 NMFS BO to determine their continued substance and efficacy in meeting the requirements of Section 7 of the ESA.

DWR obtained a 2081(b) Incidental Take Permit for Longfin smelt for operation of the SWP in 2009. DWR also received CESA Consistency Determinations under Fish and Game Code Section 2080.1, for Delta Smelt based on the 2008 USFWS BO and winter and spring-run Chinook salmon based on the 2009 NMFS BO.

Prior to the 2008 USFWS BO and the 2009 NMFS BO being upheld by the U.S. Court of Appeals, Reclamation and DWR were developing concepts for modifications to RPA actions to avoid jeopardy of listed species and adverse modifications to critical habitat and improve their feasibility and sustainability over the long term. The five agencies aim to explore opportunities to include appropriate actions to avoid jeopardy in the NEPA alternatives and proposed action for this reinitiated consultation.

The CWF will be referenced in this consultation. DWR and Reclamation released the Final Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for the CWF in December 2016. Reclamation submitted a Biological Assessment to the USFWS and NMFS on the CWF project in September 2016.

5.0 PROJECT OBJECTIVES

In order to achieve the identified overarching purpose and objectives of the overall consultation process, the five agencies need to:

- Develop a new Proposed Action that reflects current conditions, incorporates new facilities proposed by, or required through the environmental approvals of, CWF, and includes a suite of actions intended to result in issuance of a non-jeopardy and non-adverse modification BO(s);
- Provide analyses regarding the potential effects of the Proposed Action to listed and proposed aquatic and terrestrial species, and their critical habitats;
- Integrate, as appropriate, California state environmental compliance requirements for the SWP, including compliance with CESA;

- Provide appropriate information on Essential Fish Habitat (EFH) that will help inform the consultation with NMFS under the Magnuson-Stevens Fishery Conservation and Management Act (MSA);
- Prepare a BA and a joint BO (or coordinated BOs) using best available science in a timely manner;
- Evaluate the Proposed Action and alternatives in compliance with NEPA, including preparation of an environmental impact statement (EIS) and associated ROD.

6.0 AUTHORITIES

Authorities of the five agencies include:

- Reclamation Act of 1935 and Rivers and Harbor Act of 1937 provide for the construction and operation of the CVP.
- Burns Porter Act authorizes construction and operation of the SWP.
- Central Valley Project Improvement Act (CVPIA), 1992, Section 3406(a)(1) added protection and restoration of fish and wildlife as project purposes and fish and wildlife mitigation as operations, maintenance and replacement (OM&R) costs of the CVP.
- Fish and Wildlife Coordination Act (Public Law 85-24) authorizes the Secretaries of the Interior and Commerce “to provide that wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation and rehabilitation ... the Secretary of the Interior is authorized (1) to provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations in the development, protection, rearing, and stocking of all species of wildlife, resources thereof, and their habitat, in controlling losses of the same from disease or other causes”
- Departmental Manual Part 255 DM 1, Chapter 1, Section 1.1 delegates authority to the Assistant Secretary of the Interior to take the following actions, either directly or by providing financial assistance to non-Federal parties, regarding the construction and/or continued operation and maintenance of any Federal reclamation project:
 - Plan, design, and construct, including acquiring lands or interest therein as needed for: (a) fish passage and screening facilities at any non-Federal water diversion or storage project; or (b) Projects to create or improve in-stream habitat.
 - Acquire or lease water or water rights from willing sellers or lessors; or
 - Monitor and evaluate the effect of Reclamation actions on ESA-listed species.
- Endangered Species Act of 1973 states that all federal agencies shall utilize their authorities in furtherance of the purposes of the Endangered Species Act by carrying out programs for the conservation of endangered species and threatened species.
- National Environmental Policy Act of 1969 authorizes and directs all agencies of the Federal government to include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on— (i) the environmental impact of the proposed action, (ii) any adverse environmental effects

which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

- Magnuson-Stevens Fishery Conservation and Management Act requires each Federal agency to consult with NMFS with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat.
- California Endangered Species Act (CESA) allows CDFW to issue an incidental take permit for a species listed as candidate, threatened, or endangered under the California Endangered Species Act if specific criteria are met, and also provides for applicants who have obtained a federal incidental take statement pursuant to a federal Section 7 consultation to request that CDFW find the federal documents consistent with CESA.

SCOPE

Reclamation must define and evaluate a Proposed Action for Section 7 consultation on listed and proposed species and their designated critical habitats. This Proposed Action will be different from the Proposed Action description included in the 2008 BA that was the basis for the current 2008 USFWS and 2009 NMFS BOs. The reinitiation of consultation will use a "fresh-look" concept, and evaluate modifications to operations of the CVP and SWP, including new facilities and habitat. The BA will include an analysis of effects associated with the new Proposed Action.

In addition, the Proposed Action undergoing ESA Section 7 consultation must also be evaluated as a Federal action under NEPA. The NEPA process will include the development and analysis of alternatives to the Proposed Action, as well as preparation of a public draft EIS, final EIS, and ROD.

The project area includes the CVP and SWP Service Areas and facilities, as described below:

A. CVP Facilities.

- The CVP facilities include reservoirs on the Trinity, Sacramento, American, Stanislaus, and San Joaquin rivers.
 - A portion of the water from Trinity River is stored and re-regulated in Clair Engle Lake, Lewiston Lake, and Whiskeytown Reservoir, and diverted through a system of tunnels and powerplants into Clear Creek and the Sacramento River.
 - Water is also stored and re-regulated in Shasta, Keswick, and Folsom reservoirs.
 - Water from these reservoirs flows into the Sacramento River.
- Water is stored in the New Melones Reservoir for water rights holders in the Stanislaus River watershed and CVP contractors in the northern San Joaquin Valley.

- The Sacramento River carries water to the Sacramento-San Joaquin Delta (Delta). The Jones Pumping Plant at the southern end of the Delta lifts the water into the Delta Mendota Canal (DMC). This canal delivers water to CVP contractors, who divert water directly from the DMC, and exchange contractors on the San Joaquin River, who divert directly from the San Joaquin River and the Mendota Pool. CVP water is also conveyed to the San Luis Reservoir for deliveries to CVP contractors through the San Luis Canal. Water from the San Luis Reservoir is also conveyed through the Pacheco Tunnel to CVP contractors in Santa Clara and San Benito counties.
 - The CVP provides water from Millerton Reservoir on the San Joaquin River to CVP contractors located near the Madera and Friant-Kern canals.
- B. State Water Project Facilities. DWR operates and maintains the SWP, which delivers water to agricultural and municipal and industrial (M&I) contractors in northern California, the San Joaquin Valley, the Bay Area, the Central Coast, and southern California.
- SWP water is stored and re-regulated in Lake Oroville and released into the Feather River, which flows into the Sacramento River.
 - Water is transported through the Delta to the Banks Pumping Plant and other facilities. The Banks Pumping Plant lifts the water into the California Aqueduct, which delivers water to the SWP contractors and conveys water to the San Luis Reservoir.
 - The SWP also delivers water to the Cross-Valley Canal, when the systems have capacity, for CVP water service contractors.

This BA and BO and EIS will either include or incorporate by reference any new facilities as noted above, including those from the CWF. A draft BA for the CWF was submitted in September 2016 and the issuance of BOs for the CWF are expected in 2017. The CWF BA, BO, once finalized, Final EIS/EIR and Section 2081(b) incidental take permit for the SWP issued by CDFW have been prepared and will be referenced in this process.

The planning horizon of the BA and EIS will be through the year 2070, with anticipated 2030, 2050, and 2070 levels of analysis.

The schedule to successfully complete the Project is described in Section 8.0 Schedule/Milestones.

7.1 RECLAMATION TASKS

Tasks that Reclamation will take the lead on include the following:

- Alternatives development, where the preferred alternative for NEPA will become the draft proposed action for the ESA Section 7 and MSA consultations
- Preparation of an administrative draft EIS, public draft EIS, final EIS, and ROD
- Requesting USFWS, NMFS, and other agencies to be Cooperating Agencies under NEPA
- Preparation of a new BA

- Completing a peer review process during development of the BA
- Agency and stakeholder coordination
- Formal consultation coordination
- Preparation of its Administrative Record (AR) for the BA and NEPA

General descriptions of the above tasks are provided below.

Task 1 - Preliminary Modeling Analyses and Assessments – Reclamation will develop a Conceptual Framework which outlines potential components of an initial Proposed Action and provides recommendations for conceptual modeling activities and feasibility assessments. The Conceptual Framework will identify the scope and extent of initial modeling activities and assessments needed to develop an initial Proposed Action for further discussion and analysis under the ESA, NEPA, and for the SWP, CESA. This may include initial analyses and assessments of existing RPA actions to determine their continued substance and efficacy in meeting the requirements of Section 7 of the ESA, and for the SWP, CESA. Reclamation will conduct the modeling activities using readily available tools such as CalSim II and other hydrologic and biological models and associated spreadsheets. Reclamation will prepare assessments of the potential components that are anticipated to be included in an initial Proposed Action.

Task 2 – Development of Alternatives for NEPA and the Proposed Action for Section 7/MSA Consultation – Alternatives as well as the Proposed Action will include an accurate description of the proposed coordinated long-term operation of the CVP and SWP. Alternatives and the Proposed Action will be developed, as appropriate, relying on input from the stakeholder/public engagement process, NEPA public scoping process, Collaborative Science Adaptive Management Program (CSAMP), Interagency Ecological Program (IEP), existing information compiled during the 2011-2016 NEPA process, 2016 CWF BA, 2016 2081(b) application, and 2017 BOs, 2017 Incidental Take Permit, 2008 Reclamation BA, 2008 USFWS BO, 2009 NMFS BO, the 2009 NMFS RPA with 2011 amendments, and the 2014 updated proposed action. The project area will include the CVP and SWP service areas and facilities, including new Delta conveyance facilities and operations, potential actions outside of the Delta to address issues such as climate change, and U.S. Army Corps of Engineers flood control rule curve updates, and potential cumulative effects. In addition, the NEPA alternatives and new Proposed Action developed for ESA Section 7 consultation will likely include operations, habitat restoration, and construction actions.

Reclamation will begin development of alternatives and the Proposed Action by brainstorming methods to meet biological objectives in the CVP and SWP service areas, which may include examining current RPA actions, reviewing previously submitted alternatives to RPA actions (*e.g.*, San Luis Delta Mendota Water District/Westland Water District/San Joaquin River Exchange Contractors Water Authority alternative), beginning analysis of new components included in the consultation, and developing areas that need further analysis (*e.g.*, climate change, new science, flood curve updates, results of Coordinated Operations Agreement [COA] negotiations, and predation studies).

The Proposed Action will include a description of: (1) the action to be consulted upon; (2) where the action will take place; (3) when the action will take place; (4) Reclamation's

authority to take the action; (5) measures that relate to how the action will be accomplished; and (6) conservation measures such as avoidance measures, seasonal restrictions, compensation, or restoration/creation. The Proposed Action description will include appropriate maps and figures to illustrate the location and appropriate details described in the text. The project maps and narratives will describe all the areas to be affected directly or indirectly by the Federal action.

Task 3: Analytical Tools – Reclamation, in coordination with the five agencies, will identify appropriate tools (*e.g.*, models, research, business practices) to be used to evaluate impacts of the Proposed Action to the biological environment. Reclamation assumes that various hydrologic and hydrodynamic models, temperature models, biological models for different life stages of fish species, statistical relationships between physical conditions and fish species, models for ecological conditions and individual fish species, and habitat models for fish, wildlife and plants may be required to evaluate biological impacts using best available science. Reclamation assumes that CalSim II (and/or CalSim III if available and peer reviewed) and DSM2 will be used for water supply and water quality modeling. Potential biological impacts of the Proposed Action will be evaluated using output from various models which will include Delta Smelt and anadromous salmonids life cycle models, Upper Sacramento River Water Quality Model (USRWQM), Reclamation Temperature Models (HEC5Q, *etc.*), Reclamation Egg Mortality Model, SALMOD, IOS, OBAN, Delta Passage Model, WUA, DSM2 Particle Tracking Model, RMA models, and similar models (or best models available with coordination among the five agencies).

Task 4: Biological and Operational Modeling – Reclamation will conduct operational and biological modeling activities necessary to evaluate the effects associated with the Proposed Action. The Proposed Action and a base model or models will be two of the simulations modeled. The modeling will represent operational and regulatory conditions such as the 1986 COA, the SWRCB Decision 1641, the CVPIA, water transfers, and, as appropriate, any updates to the Bay Delta Water Quality Control Plan (WQCP).

Task 5- Preparation of a Public Draft EIS, Final EIS, and ROD – Reclamation will oversee the development of a new EIS, including issuance of a Notice of Intent, conducting a public scoping process, and preparation of an administrative draft EIS, public draft EIS, final EIS, and ROD.

Task 6 – Preparation of a New BA – Reclamation will prepare a new BA for aquatic and terrestrial species drawing largely from the Reclamation's 2008 aquatic species BA, Reclamation's 2008 terrestrial species BA, the 2008 USFWS BO, the 2011 USFWS Draft BO, the 2009 NMFS BO, the 2009 NMFS RPA with 2011 amendments, the 2014 updated proposed action, the 2016 CWF BA, 2016 2081(b) application, and 2017 BOs, 2017 Incidental Take Permit, CWF Final EIR/EIS and 2011-2016 NEPA process. The BA will also include input from the parallel NEPA process and other parallel processes such as CSAMP and IEP. This task also involves the development of an effects analysis within the framework of an aggregate analysis. Examples for focused effects analyses may include, but are not limited to, flow, water temperature, water export (pumping), critical habitat, and migration and passage (dams, pumping plants or gates). A peer review will be done of the BA through the Delta Stewardship Council's Independent Science Board or another independent process.

Task 7 – Five Agency Coordination – Reclamation will facilitate hosting regularly scheduled interagency meetings, as needed, throughout the development of the BA and EIS. These interagency meetings are intended to provide coordination among the five agencies and to strive for the effective and efficient completion of the consultation and NEPA processes.

Task 8 – Formal Consultation Coordination - Once the final BA is transmitted to USFWS and NMFS, Reclamation will provide technical support by providing additional technical information requested by USFWS, NMFS, and CDFW. Reclamation will attend meetings with USFWS and NMFS during formal consultation to discuss the BA and development of the BO(s).

Task 9 – Water User Coordination – Reclamation will coordinate with water users during the informal and formal pieces of the ESA consultation process to meet the requirements of Public Law No 114-322.

Task 10 – Reclamation Administrative Record – Reclamation will identify, acquire, and organize its AR, documenting the decision-making process and the basis for Reclamation's BA and NEPA process. The AR will consist of all documents and materials directly or indirectly considered by decision-makers. Each agency will be responsible for its own administrative record.

7.2 DWR TASKS

DWR, as applicant in the Section 7 process, will take or share the lead on tasks including:

Task 1 - Preliminary Modeling Analyses and Assessments – DWR will work closely with Reclamation during the development of a Conceptual Framework which outlines potential components of an initial Proposed Action and provides recommendations for conceptual modeling activities and feasibility assessments. DWR will assist Reclamation in conducting preliminary modeling activities using available tools. DWR will work closely with Reclamation to prepare assessments of the potential components that are anticipated to be included in an initial Proposed Action.

Task 2 – Development of the Proposed Action for Section 7/MSA Consultation – DWR will participate, along with all five agencies, in brainstorming methods to meet biological objectives in the CVP and SWP service areas, which may include examining RPA actions, reviewing previously submitted alternatives to RPA actions, beginning analysis of new components included in the consultation, and developing areas that need further analysis (*e.g.*, climate change, new science, flood curve updates, results of COA negotiations, and predation studies). DWR will coordinate closely with Reclamation during the development of the Proposed Action.

Task 3 - Biological and Operational Modeling – DWR will work with Reclamation to conduct operational and biological modeling activities necessary to evaluate the effects associated with alternatives and the Proposed Action. Reclamation anticipates that DWR will take the lead on performing Delta water quality modeling, with agreement by Reclamation on all model assumptions.

Task 4 – Preparation of a BA– DWR will assist Reclamation in developing a new BA for aquatic and terrestrial species, and assist with the effects analysis. Examples for focused effects analyses may include, but are not limited to, flow, water temperature, water export (pumping), critical habitat, and migration and passage (dams, pumping plants or gates).

Task 5 – Five Agency Coordination – The five agencies will alternate hosting regularly scheduled interagency meetings, as needed, throughout the development of the BA and EIS. These interagency meetings are intended to provide coordination among the five agencies and to strive for the effective and efficient completion of the consultation and NEPA processes.

Task 6 – Formal Consultation Coordination - Once the final BA is transmitted to USFWS and NMFS, and as appropriate and at the request of and in coordination with Reclamation, DWR will provide technical support by providing additional technical information requested by USFWS, NMFS, and CDFW. Reclamation and DWR will attend meetings with USFWS and NMFS during formal consultation to discuss the BA and development of the BO(s).

Task 7 – Water User Coordination – DWR will coordinate with SWP water users during the informal and formal pieces of the ESA consultation process to meet the requirements of Public Law No 114-322, in coordination with Reclamation.

7.3 USFWS TASKS

The USFWS assumes that by working collaboratively and following the guidance in the PMP, a complete BA will be submitted by Reclamation. Given this, the tasks that USFWS will take or share the lead on include the following:

Task 1 – Preparation of a New BA – The USFWS will provide technical assistance in the preparation of a new BA for ESA-listed species and designated critical habitats for those species in the action area. The BA may also include input from the NEPA process and other parallel processes. This task also involves the development of an effects analysis within the framework of an aggregate analysis. Examples for focused effects analyses may include, but are not limited to, flow, water temperature, water export (pumping), critical habitat, and migration and passage (dams, pumping plants or gates).

Task 2 – Participation in the NEPA Process as a Cooperating Agency – Reclamation assumes that USFWS will participate as a NEPA cooperating agency during Reclamation's development of a new EIS, including during preparation of an administrative draft EIS, public draft EIS, and final EIS.

Task 3 – Five Agency Coordination – The five agencies will alternate hosting regularly scheduled interagency meetings, as needed, throughout the development of the BA and EIS. These interagency meetings are intended to provide coordination among the five agencies and to strive for the effective and efficient completion of the consultation and NEPA processes.

Task 4 – USFWS Notification Letter – Within 30 days of receipt of Reclamation's final BA and request to initiate ESA section 7 formal consultation, USFWS will issue a notification

letter to Reclamation indicating whether the initiation package contains all the information necessary to initiate Section 7 consultation.

Task 5 – USFWS Draft BO – The USFWS will issue a draft BO for Reclamation and DWR to review. The BO may be reviewed through the Delta Stewardship Council’s Delta Science Program or another independent peer review process. Reclamation will facilitate review by water users in accordance with Public Law 114-322.

Task 6 – USFWS Final BO – The USFWS will issue a final BO to Reclamation. The final BO will include consideration and/or integration of comments received by the USFWS from Reclamation and DWR during the draft BO review process.

Task 7 – USFWS Administrative Record – The USFWS will identify, acquire, and organize its AR, documenting the decision-making process and the basis for USFWS’ BO. The AR will consist of all documents and materials directly or indirectly considered by the decision-maker.

7.4 NMFS TASKS

NMFS assumes that by working collaboratively and following the guidance in the PMP, a complete BA will be submitted by Reclamation. Given this, the tasks that NMFS will take or share the lead on include the following:

Task 1 – Preparation of a New BA – NMFS will provide technical assistance in the preparation of a new BA for ESA-listed species and designated critical habitats for those species in the action area. The BA may also include input from the NEPA process and other parallel processes. This task also involves the development of an effects analysis within the framework of an aggregate analysis. Examples for focused effects analyses may include, but are not limited to, flow, water temperature, water export (pumping), critical habitat, and migration and passage (dams, pumping plants or gates).

Task 2 – Participation in the NEPA Process as a Cooperating Agency – Reclamation assumes that NMFS will participate as a NEPA cooperating agency during Reclamation’s development of a new EIS, including during preparation of an administrative draft EIS, public draft EIS, and final EIS.

Task 3 - Five Agency Coordination – The five agencies will alternate hosting regularly scheduled interagency meetings, as needed, throughout development of the BA and EIS. These interagency meetings are intended to provide coordination among the five agencies and to strive for the effective and efficient completion of the consultation and NEPA processes.

Task 4 – NMFS Notification Letter – Within 30 days of receipt of Reclamation’s final BA and request to initiate ESA section 7 formal consultation, NMFS will issue a notification letter to Reclamation indicating whether the initiation package contains all the information necessary to initiate Section 7 consultation.

Task 5 – NMFS Draft BO – NMFS will issue a draft BO for Reclamation and DWR to review. The BO may be reviewed through the Delta Stewardship Council’s Delta Science

Program or another independent peer review process. Reclamation will facilitate review by water users in accordance with Public Law 114-322.

Task 6 – NMFS Final BO –NMFS will issue a final BO to Reclamation. The final BO will include consideration and/or integration of comments received by NMFS from Reclamation and DWR during the draft BO review process.

Task 7 – NMFS Administrative Record – NMFS will identify, acquire, and organize its AR, documenting the decision-making process and the basis for NMFS' BO. The AR will consist of all documents and materials directly or indirectly considered by the decision-maker.

7.5 CDFW Tasks

The tasks that CDFW will assist with include the following:

Task 1 – Preparation of a New BA – CDFW will provide technical assistance for CESA-listed species. This task also involves the development of an effects analysis within the framework of an aggregate analysis. Examples for focused effects analyses may include, but are not limited to, flow, water temperature, water export (pumping), critical habitat, and migration and passage (dams, pumping plants or gates).

Task 2 - Five Agency Coordination – The five agencies will alternate hosting regularly scheduled interagency meetings, as needed, throughout development of the BA and EIS. These interagency meetings are intended to provide coordination among the five agencies and to strive for the effective and efficient completion of the consultation and NEPA processes.

8.0 SCHEDULE/MILESTONES

Table 1 lists the major Project milestones such as completion of a project deliverable. There are smaller milestones that are not included on this table, but are included in the project schedule (see Attachment 2). If there are any scheduling delays which may impact a milestone or delivery date, the senior management team of the five agencies (see section 9, below) must be notified immediately so proactive measures may be taken to minimize slippage in deliverable due dates.

Table 1 - Project Milestones

Milestone	Duration	Timeframe
Complete Contracting Process/Award Consultant Contract(s)	14 months	August 2016 through September 2017
Prepare and Publish NOI in Federal Register	7 months	March 2017 through September 2017
Conduct Public Scoping Process/Meetings	1 month	October 2017
Develop and Select Proposed Action for Analysis	7 months	January through July 2018

Milestone	Duration	Timeframe
Prepare 5-Agency and Cooperating Agency Administrative Draft EIS and Complete Internal and External Review Processes	25 months	November 2017 thru November 2019
Prepare 5-Agency and designated non-Federal representatives Draft BA and Submit to USFWS and NMFS	13 months	August 2018 through August 2019
USFWS and NMFS Review	4 months	September through December 2019
Incorporate Comments, Prepare Public Draft EIS, Complete Internal and External Review Processes, and Publish Draft EIS	4 months	December 2019 thru March 2020
Public Comment Period	3 months	March through May 2020
USFWS and NMFS Prepare Draft BO(s)	12 months	June 2020 through May 2021
Reclamation and Peer Review of Draft BO(s)	3 months	June 2021 through August 2021
Incorporate Comments, Prepare Final EIS, and Complete Internal and External Review Processes, and Publish Final EIS	16 months	June 2020 through September 2021
USFWS and NMFS Prepare and Issue Final BO(s)	6 months	September 2021 through February 2022
Prepare and Sign ROD	1 month	March 2022

Note: Green pertains to ESA process and blue pertains to NEPA process

9.0 ROLES AND RESPONSIBILITIES

Detailed below are the roles and responsibilities of the core teams, interagency teams, and stakeholders for the Project. It is recognized that team members and stakeholder representatives may change during the duration of the Project due to various factors, including, but not limited to turnover, reassignment, etc. Other agency representatives may be invited to the various meetings, as appropriate.

9.1 TEAMS

Various teams for the Project are composed of Reclamation as the Federal Action Agency, USFWS, NMFS, and CDFW as the regulatory agencies, DWR as the applicant, and the consultants selected to support the process. Roles and responsibilities for each team are identified in Tables 2-6.

Reclamation's Core Team responsibility includes preparing a BA, in coordination with DWR, adequate for ESA Section 7 and MSA consultations, and completing the NEPA process. As the

Federal Action Agency and NEPA Lead Agency, Reclamation is ultimately responsible for development of the Proposed Action.

Table 2 - Reclamation (Federal Action Agency) Teams

Name	Title	Project Role	Phone	Email
SENIOR MANAGEMENT TEAM				
David Murillo	Mid-Pacific Regional Director	High level policy decision maker	(916) 978-5000	dmurillo@usbr.gov
Pablo Arroyave	Assistant Regional Director	High level policy decision maker	(916) 978-5013	parroyave@usbr.gov
David Mooney	Acting Bay-Delta Area Office Manager	Provide overall direction	(916) 414-2403	dmmooney@usbr.gov
Jeff Rieker	Central Valley Operations Office Manager	CVP operations expert Provide overall direction on characterization of operations	(916) 979-2199	jrieker@usbr.gov
CORE TEAM				
Janice Piñero	Conservation and Conveyance Division Chief	Project oversight Program Manager	(916) 414-2428	jpinero@usbr.gov
Katrina Harrison	Project Manager	Project Manager ESA Section 7 and NEPA lead Operations and Modeling Co-Lead Contracting Officer's Representative	(916) 414-2425	kharrison@usbr.gov
Patti Idlof	Special Assistant	Strategic planning	(916) 414-2404	pidlof@usbr.gov
Kristin White	Water Resources Branch Chief	Central California Area Office Representative Operations and Modeling Co-Lead	(916) 989-7226	knwhite@usbr.gov
John Hannon	Fish Biologist	Science Division liaison Biological Resources Lead	(916) 414-2439	jhannon@usbr.gov
Ben Nelson	Natural Resources Specialist	Environmental compliance support	(916) 414-2424	bcnelson@usbr.gov

Name	Title	Project Role	Phone	Email
Carolyn Bragg	Natural Resources Specialist	Environmental compliance support	(916) 414-2433	cbragg@usbr.gov
Luke Davis	Natural Resources Specialist	Environmental compliance support	(916) 414-2429	ldavis@usbr.gov
TECHNICAL RESOURCES (AS NEEDED)				
Donna Garcia	CVO Project Manager	Liaison between BDO and CVO	(916) 979-0264	dcgarcia@usbr.gov
Nancy Parker	Hydraulic Engineer	CALSIM Modeling Expert	(303) 445-2532	nparker@usbr.gov
Erwin Van Nieuwenhuyse	Interagency Ecological Program/Pelagic Organism Decline Manager	Delta fisheries technical lead	(916) 414-2406	EVanNieuwenhuyse@usbr.gov
Josh Israel	Fish Biologist	Sacramento River technical lead	(916) 414-2417	jaisrael@usbr.gov
Paul Zedonis	Supervisory Natural Resources Specialist	Northern California Area Office Representative	(530) 276-2047	pzedonis@usbr.gov
Allen Lindauer	Operations and Maintenance Division Chief	Tracy Office Representative	(209) 836-6252	alindauer@usbr.gov
Kevin Tanaka	DOI – Office of the Solicitor	Legal Review	(916) 978-6134	kevin.tanaka@sol.doi.gov

Table 3 - USFWS (Regulatory Agency) Teams

Name	Title	Project Role	Phone	Email
SENIOR MANAGEMENT TEAM				
Paul Souza	Pacific Southwest Regional Director	Director - High level decision maker	916-414-6469	paul_souza@fws.gov
Dan Castleberry	Assistant Regional Director, Fisheries	High level decision maker	916-978-6178	dan_castleberry@fws.gov
Kaylee Allen	Field Supervisor, Bay-Delta Fish and Wildlife Office	Provide overall policy direction	913-930-5632	kaylee_allen@fws.gov
CORE TEAM				

Name	Title	Project Role	Phone	Email
Jana Affonso	Assistant Field Supervisor	Provide overall direction	916-930-2664	jana_affonso@fws.gov
Kim Squires	Section 7 Coordinator	Provide overall direction	916-930-5634	kim_squires@fws.gov
Matt Nobriga	Assistant Field Supervisor	Provide overall direction	916-930-5609	matt_nobriga@fws.gov
TECHNICAL RESOURCES (AS NEEDED)				
Katherine Sun	Senior Section 7 Biologist	Consultation lead/Delta Smelt and terrestrial	916-930-5641	katherine_sun@fws.gov
Heather Swinney	Senior Biologist	Assist with consultation	916-930-5653	Heather_swinney@fws.gov
Derek Hilts	Hydrologist	Modeling/technical support	916-930-5628	derek_hilts@fws.gov
Evan Carson/Erin Gleason	Fisheries Biologist	Delta Smelt lead	916-930-5624	evan_carson@fws.gov and erin_gleason@fws.gov
Leanna Zweig	Fish and Wildlife Biologist	Delta water quality lead	916-930-5631	Leanna_zweig@fws.gov

Table 4 - NMFS (Regulatory Agency) Teams

Name	Title	Project Role	Phone	Email
SENIOR MANAGEMENT TEAM				
Barry Thom	West Coast Regional Administrator	Director - High level decision maker	206-526-6150	barry.thom@noaa.gov
Maria Rea	Assistant Regional Administrator for California Central Valley Office	Provide overall policy direction	916-930-3623	maria.rea@noaa.gov
CORE TEAM				
Garwin Yip	Water Operations and Delta Consultations Supervisor	Provide overall direction	916-930-3611	garwin.yip@noaa.gov
TECHNICAL RESOURCES (AS NEEDED)				
Brycen Swart	Fisheries Biologist	Whiskeytown/Clear Creek and Shasta/Sacramento Division lead	916-930-3712	Brycen.swart@noaa.gov

Name	Title	Project Role	Phone	Email
		Trinity River Division coordinator		
Seth Naman	Fisheries Biologist	Trinity River Division lead	707-825-5180	seth.naman@noaa.gov
Jeff Stuart	Fisheries Biologist	Delta Division lead	916-930-3607	j.stuart@noaa.gov

Table 5 - DWR (Applicant) Teams

Name	Title	Project Role	Phone	Email
SENIOR MANAGEMENT TEAM				
Bill Croyle	Acting Director	Director – High level decision maker		
Cindy Messer	Chief Deputy Director	High level decision maker		Cindy.Messer@water.ca.gov
Michelle Banonis	Assistant to the Chief Deputy Director	Provide overall policy direction	(916) 653-0901	Michelle.banonis@water.ca.gov
CORE TEAM				
Heidi Rooks	Chief, Office of Environmental Compliance	Provide overall direction	916-376-9705	Heidi.Rooks@water.ca.gov
Chris Wilkinson	Chief, Ecological Studies Branch	Provide overall direction	916-376-9769	christopher.wilkinson@water.ca.gov
Harry Spanglet	Chief, Regulatory Compliance Branch	CESA compliance	916-376-9844	Harry.spanglet@water.ca.gov
TECHNICAL RESOURCES (AS NEEDED)				
Erik Reyes	Chief, Central Valley Modeling	Central Valley Modeling	916-653-5569	ereyes@water.ca.gov
Nazrul Islam	Senior Engineer	Central Valley Modeling	916-653-8727	nislam@water.ca.gov
Jacob McQuirk	South Delta Branch	Temporary Barriers and Lower San Joaquin	916-653-9883	jacob.mcquirk@water.ca.gov
Ryan Reeves	South Delta Special Projects	South Delta Management	916-653-6868	rreeve@water.ca.gov

Name	Title	Project Role	Phone	Email
Curtis Yip	Environmental Scientist	Delta Conveyance Fish Science	916-654-0849	Curtis.yip@water.ca.gov
Nicky (Prabhjot) Sandhu	Delta Modeling	Delta Modeling	916-657-5071	psandhu@water.a.gov
Xiao Wang	Delta Modeling	Delta Modeling	916-651-9694	xwang@water.ca.gov
Ted Sommer	DWR Lead Scientist	Delta Aquatic Species	916-376-9772	tsommer@water.ca.gov
Brian Schreier	Chief, Aquatic Resources	Delta Aquatic Species	916-376-9759	bschreie@water.ca.gov
Kevin Reece	Senior Environmental Scientist	Regulatory Compliance	916-376-9709	creece@water.ca.gov

Table 6 - CDFW (Regulatory Agency) Teams

Name	Title	Project Role	Phone	Email
SENIOR MANAGEMENT TEAM				
Carl Wilcox	Policy Advisor on the Delta	Provide overall policy direction	(707) 944-5584	Carl.Wilcox@wildlife.ca.gov
Chad Dibble	Program Manager for SWP permitting and operations compliance		916-445-1202	Chad.Dibble@wildlife.ca.gov
CORE TEAM				
Ken Kundargi	Supervisor SWP permitting and operations compliance	Provide overall direction		Kenneth.Kundargi@wildlife.ca.gov
TECHNICAL RESOURCES (AS NEEDED)				
Bob Hughes	engineer	Water operations and temperature modeling		Robert.Hughes@wildlife.ca.gov
Jason Roberts	Senior Environmental Scientist	Shasta, Trinity, and Clear Creek		Jason.Roberts@wildlife.ca.gov
John Shelton	Senior Environmental Scientist	Friant and Stanislaus		John.Shelton@wildlife.ca.gov
Colin Purdy	Senior Environmental Scientist	Feather/American Rivers/Yolo Bypass		Colin.Purdy@wildlife.ca.gov

Name	Title	Project Role	Phone	Email
Jim Starr	Environmental Program Manager	In Delta facilities		Jim.Starr@wildlife.ca.gov
Duane Linander	Environmental Scientist	Delta Salmonid issues		Duane.Linander@wildlife.ca.gov
Mike Eakin	Environmental Scientist	Delta and Longfin Smelt		Michael.Eakin@wildlife.ca.gov
Bjarni Serup	Environmental Scientist	Yolo Bypass		Bjarni.Serup@wildlife.ca.gov
Randy Baxter/BDR other IEP staff technical staff	Species Experts as needed to be determined			

9.2 INTERAGENCY TECHNICAL TEAMS

Interagency technical teams will be formulated following further decisions regarding the scope of the Proposed Action. It is anticipated that these additional technical teams will focus on two separate efforts needed to complete the BA: (1) the Effects Analysis; and (2) the Action Alternatives Development and Proposed Action (based on geographic areas, Table 7). These teams will also focus on development of the NEPA impact analyses and alternatives.

9.2.1 EFFECTS ANALYSIS TECHNICAL TEAMS

Meetings on the effects analysis will be held on a regular basis, or as requested by the Core Team, to provide input on proposed changes to the alternatives, Proposed Action, and associated effects and impact analyses.

9.2.2 Action Alternatives Development and Proposed Action Technical Teams

These interagency technical teams will review the 2008 and 2009 RPA actions for their efficacy and ability to achieve the desired biological goals and objectives. These teams will also brainstorm new actions to include in the alternatives and/or proposed action. Alternatives Development meetings will be held on a regular basis, or as requested by the Core Team, to develop proposed alternative actions and ensure that they are “as protective, or better” than 2008 and 2009 RPA actions for the targeted listed species and designated critical habitats. When developing action alternatives, these teams will also ensure that the biological objective of the original RPA action is preserved.

Table 7 - Interagency Interdisciplinary Technical Teams to Address Action Alternatives Development and the Proposed Action

Team	Members	Key issues/ responsibilities
Shasta, Trinity and Sacramento	Reclamation NMFS DWR USFWS CDFW	Shasta fish passage Sacramento River temperature management Keswick release criteria Lower Klamath River flows Wilkins Slough Battle Creek Feather River Water Quality Control Plan updates
Clear Creek	Reclamation NMFS USFWS CDFW DWR	Clear Creek flows Clear Creek temperature
American River	Reclamation NMFS USFWS CDFW	Lower American River Flow Management Standard revisions American River Water Control Manual update Water Quality Control Plan updates Fish passage
Delta and San Joaquin	Reclamation DWR NMFS USFWS CDFW	Delta Cross Channel Head of Old River Barrier Georgiana Slough gate Old and Middle River reverse flow Exports California WaterFix operations Delta outflow San Luis Reservoir San Joaquin April-May Actions (I:E) Friant
Stanislaus River	Reclamation NMFS USFWS CDFW	New Melones Revised Plan of Operations Water Quality Control Plan updates Fish passage

9.3 APPLICANT AND DESIGNATED NON FEDERAL REPRESENTATIVES

9.3.1 Applicant

DWR is the applicant. An applicant requires formal approval or authorization from the Federal Action Agency as a prerequisite to conducting an action [50 CFR 402.02]. The applicant has the opportunity to submit information for consideration during the consultation. The applicant is entitled to review a draft BO obtained through the Federal Action Agency and to provide

comments through the Federal Action Agency. USFWS and NMFS with Reclamation will discuss the basis of their biological determination with the applicant and seek the applicant's expertise in identifying reasonable and prudent alternatives to the action if likely jeopardy to the species or adverse modification of critical habitat is determined. USFWS and NMFS will provide the applicant with a copy of the final BO(s).

9.3.2 Designated Non-Federal Representatives

Reclamation invited CVP and SWP water agencies to request designation as Designated Non-Federal Representatives on December 15, 2016. Agencies responded by January 31, 2017. Reclamation responded to requests in February and March 2017. Designated non-federal representatives may comment on portions of the BA due to their specific technical expertise on the coordinated long-term operation of the CVP and SWP. Designated non-federal representatives identified to date are:

- Metropolitan Water District of Southern California
- Friant Water Authority
- State Water Contractors
- Kern County Water Agency
- San Luis and Delta Mendota Water Authority
- Santa Clara Valley Water District
- South Valley Water Association
- Contra Costa Water District
- South San Joaquin Irrigation District
- Tehama-Colusa Canal Authority
- Zone 7 Water Agency
- Stockton East Water District
- Reclamation District No. 108
- East Bay Municipal Utility District
- West Lands Water District
- Oakdale Irrigation District
- Glenn-Colusa Irrigation District

9.3 NEPA COOPERATING AGENCIES

As noted above, Reclamation anticipated that USFWS and NMFS will participate as Federal cooperating agencies during the NEPA process for the Project. Reclamation may request that other federal agencies participate as cooperating agencies during the NEPA process. In addition, Reclamation expects to invite numerous California state and local agencies, including DWR and CDFW, to participate in the NEPA process as cooperating agencies similar to those that were invited to participate in the 2011-2016 NEPA process on the Coordinated Long-term Operation of the CVP and SWP.

10.0 COMMUNICATIONS PLAN/CONFLICT RESOLUTION

This section includes a communications matrix that describes the communications framework for the consultation, and NEPA process. It will serve as a guide for communications throughout the life of the consultation and NEPA process and will be updated as communication requirements change. A Project Management Team Directory also is included in Tables 2 through 6 to provide contact information.

The Project leads and/or managers for the five agencies and the consultant team will take the lead in ensuring effective communications for this consultation and NEPA process. The communications requirements are identified in Table 8 Communications Matrix. The Communications Matrix will be a guide of how the five agencies will be communicating, including what information to communicate, who is to do the communicating, when to communicate it, and to whom to communicate.

Table 8 - Communications Matrix

Communication Type	Description	Frequency	Format	Participants/Distribution	Deliverable	Lead
Interagency Collaboration Meetings (Five Agency Meetings)	Meetings to discuss the ESA Section 7/MSA consultation, and NEPA processes, focusing on policy questions	2 hour meetings twice per month	In person or via conference call	Core Project Management Team and consultants	Notes and memo to files	Katrina Harrison, Heidi Rooks, Jana Affonso, Garwin Yip, Chad Dibble
Interagency Interdisciplinary Technical Team Meetings	Meetings to discuss alternatives development and proposed action	As requested by the Core Team; monthly to start	In person or via conference call	Interagency Technical Teams (Tables 5 and 6)	Notes and technical memoranda, tracking matrix	See Table 7 for interagency technical team leads
Senior Management Briefings	Briefings to keep senior management team apprised of progress in the Project, elevation of issues for resolution	Quarterly, or as requested	In person, via conference call, or in writing	Reclamation, USFWS, NMFS, DWR, CDFW, and consultants	Briefing Papers	Katrina Harrison, Heidi Rooks, Jana Affonso, Garwin Yip, Chad Dibble
Stakeholder Meetings	Meetings to provide updates and discuss issues associated with the BA and EIS	Quarterly, or as requested	In person or via conference call	Water agencies, power users, environmental NGOs, fishing organizations	Meeting agenda, materials and summary	Katrina Harrison
Public Meetings	Webinars to provide updates on the ESA/MSA and NEPA processes	Quarterly	Webinars/ conference calls	General public and stakeholders	PowerPoint presentation	Katrina Harrison

11.0 QUALITY ASSURANCE/CONTROL MANAGEMENT

The Core Team will work together to identify potential major issues that could result in changes to the Project's scope, schedule or budget. After identifying potential issues, the first step will be to discuss ways to avoid these types of changes while fully addressing the issue. If there is agreement that these issues could be resolved without changing the Project scope, schedule, or budget, the discussion will be documented in meeting notes so that the same issues are not brought up at a later date. If avoiding a change is not possible, the Core Team will implement the following process:

1. Notify, in writing, the BDO Area Manager, DWR Chief Deputy Director, USFWS Bay-Delta Fish and Wildlife Office Field Supervisor, NMFS Central Valley Office Assistant Regional Administrator, and CDFW Special Policy Advisor for the Delta that an issue could cause changes to the Project's scope, schedule or budget.
2. Evaluate the potential changes to the Project scope, schedule or budget with management.
3. The Core Team will determine if the issue would need to be elevated, and elevate the issue as appropriate.
4. If a change to the PMP is warranted based on major changes to the Project, the Core Team will work together to make the appropriate changes to the PMP, initially in track changes. A version number will be assigned every time a major change is memorialized.

13.0 RISK MANAGEMENT PLAN

This process identifies risk items; assesses risk probabilities, cost and schedule impacts; defines mitigation strategies, and continually monitors changes in risk items. Given the complex nature of this consultation and the diversity of the involved parties, managing risks is very important. The agencies expect that issues will arise through this process, therefore, this Risk Management Plan describes a process to identify risks and take or recommend additional actions to mitigate any potential impacts.

Risk Identification: The five agencies will work to identify potential risks. For each risk, they will document the risk category, internal versus external risk type, risk name, risk description, risk range, risk impact, priority level, pre- and post-mitigation probability and impact, and mitigation action. To ensure consistency, ranges are provided for risk probability and impact. The risk probability range goes from "Very Unlikely" to "Virtually Certain," corresponding to numerical values from 1 to 5 (Table 8). The risk impact range goes from "Very Low" to "Very High," also corresponding to numerical values from 1 to 5 (Table 8). The risk is then assigned a risk index that is the product of risk probability and impact values. The risk index is used to indicate a priority level from "Minor" to "Critical" (Table 9). This priority level helps the team identify the most significant risk items. Provided in Table 10 are three examples for risk identification. Also, please see Appendix D.

The five agencies will use the risk priority and impact to develop mitigation actions for each risk item. Each mitigation action is assigned a responsible party.

Table 8 - Risk Indices Based on Risk Probability and Risk Impact

Risk Probability Risk Impact		Very Unlikely	Unlikely	Likely	Very Likely	Virtually Certain
		1	2	3	4	5
Very low	1	1	2	3	4	5
Low	2	2	4	6	8	10
Median	3	3	6	9	12	15
High	4	4	8	12	16	20
Very High	5	5	10	15	20	25

Table 9 - Risk Index and Risk Priority

Risk Index	1-4	5-10	11-15	16-20	21-25
Risk Priority	Minor	Attentive	Important	Urgent	Critical

Table 10 - Examples of Risk Assessment

Category	Risk Probability	Risk Impact	Risk Index	Risk Priority
Scope of Proposed Action	2	3	6	Attentive
Budget	4	4	16	Urgent
Schedule	3	5	15	Important

Risk Monitoring: On a quarterly basis, each risk item and mitigation action is evaluated for progress. Based on the current progress, risk probabilities and impacts are updated. Additionally, the list of risks will be revisited to determine if new risks have developed that could affect the Project.

Some initial risks are identified below:

1. CSAMP is not able to provide information in a timely manner to be used in the consultation, and NEPA analyses
2. Disagreements between the five agencies on the appropriate methods and tools for analysis of the Proposed Action
3. Disproportionate amount of work to complete the consultation, and NEPA process
4. Additional measures that are not currently in place are required to avoid jeopardy to listed or proposed species or adverse modification of designated or proposed critical habitat.

14.0 APPENDICES

- A. Memorandum of Understanding
- B. Draft Project Schedule
- C. Risk Register
- D. Outreach Plan
- E. Change Management Plan
- F. Quality Management Plan

15.0 APPROVAL OF PMP

Directors' Signatures:

David Murillo
Mid Pacific Regional Director
Bureau of Reclamation

Date

Paul Souza
Pacific Southwest Regional Director
U.S. Fish and Wildlife

Date

Barry Thom
West Coast Regional Administrator
National Marine Fisheries Service

Date

Bill Croyle
Acting Director
Department of Water Resources

Date

Charlton Bonham
Director

Date

Department of Fish and Wildlife

Appendix A – Memorandum of Understanding



Appendix B – Project Schedule



Appendix C – Risk Register

Defined Conditions for Impact Scales of a Risk on Major Project Objectives					
Project Objectives	Very Low	Low	Moderate	High	Very High
	1	2	3	4	5
Cost	<10% Cost Increase	10 - 20% cost increase	20-30% cost increase	30 - 40% cost increase	>40% cost increase
Schedule	Non-critical path delays that will not impact critical path	Non-Critical Path delays that may affect Critical Path & Critical Path delays <2 weeks	Non-Critical Path delays that may affect Critical Path and Critical Path delays of 2-4 weeks	4-6 week delay to critical path	>6 week delay to critical path
Scope	N/A	N/A	N/A	Additional work that will not affect the Critical Path	Any additional work that will affect the Critical Path
Probability Defined	Very Low= Unlikely (<10%)	Low= Unlikely (<25%)	Moderate= Possible (25-75%)	High= Likely (75-90%)	V. High= Probable (90%+)

Risk Management Plan												
Date Risk ID'd (last updated)	Risk ID	Description of Risk/Constraint	Initial Qualitative Risk Analysis				Quantitative Impact	Risk Response(s)	Qualitative Risk Analysis w/Response			Status
		(Include root causes, sources of information, the tolerance of the risk to project constraints, assumptions etc.)	Project Objective(s) Impacted (in order of priority): Schedule Cost Scope	Impact (1-5) 1=very low 2=low 3= moderate 4=high 5=v. high	Probability (1-5) 1=very low 2=low 3= moderate 4=high 5=v. high	Priority (Impact x probability) 1-4 = Minor 5-10 = Attentive 11-15 = Important 16-20 = Urgent 21-25 = Critical	(Description of Impact)	(Responses to reduce or eliminate the risk)	Impact (1-5) 1=very low 2=low 3= moderate 4=high 5=v. high	Probability (1-5) 1=very low 2=low 3= moderate 4=high 5=v. high	Priority (Impact x probability) 1-4 = Minor 5-10 = Attentive 11-15 = Important 16-20 = Urgent 21-25 = Critical	
Initiation Phase												
03/12/16	IP-1	Developing appropriate scope and schedule for the effort	S, Sc	5	4	20	Highly aggressive initial schedule may lead to later schedule slips	Clearly communicate to all team members the aggressive schedule and importance of prioritizing work	4	3	12	Open
Planning Phase												
03/12/16	PP-1	Acceptance of Scope and Schedule	S, C, Sc	4	4	16	Revised scope, schedule and budget	Seeking concurrence with project scope in writing from all three agencies	4	3	12	Open
03/12/16	PP-2	Work Scope Changes	S, C, Sc	4	3	12	Revised scope, schedule and budget	Close coordination with stakeholders in order to limit scope changes	3	3	9	Open
03/12/16	PP-3	CSAMP Input is not timely	S, Sc	3	4	12	Reduces stakeholder acceptance of modeling results, may lead to conflict	Brief CSAMP early in the process, make the schedule clear to them, and let everyone know that Reclamation will move forward without input if not received on time	3	3	9	Open
03/12/16	PP-4	Modeling tools disagreement	C, Sc	5	3	15	USFWS or NMFS may disagree with modeling tool used, requiring Reclamation to re-do modeling or requiring Reclamation to develop new models	Coordinate with USFWS and NMFS early and often, share draft of analytical tools TM	5	2	10	Open
03/12/16	PP-5	Co-NEPA lead agencies	Sc	5	2	10	USFWS or NMFS desire to be co-lead agencies with Reclamation, causing big schedule impacts due to increased review times	Initial signing of PMP verifies that USFWS and NMFS do not desire to be co-lead agencies	5	1	5	Open
03/12/16	PP-6	Additional RPAs or measures required	S, C, Sc	4	4	16	USFWS or NMFS may require additional RPAs in their Biological Opinions than analyzed in Reclamation's BA, causing impacts to future SWP / CVP operations	Coordinate with USFWS and NMFS early and often, share drafts, do peer review, etc.	4	3	12	Open
03/12/16	PP-7	Extended Review Time	C, Sc	3	4	12	Coordination with federal and state agencies may require more review time than scheduled/budgeted	Identify reviewers in advance and request priority for review of all documents	3	4	12	Open
03/12/16	PP-8	Establishing Acceptable Alternatives for Analysis	S, C, Sc	3	4	12	Developing a range of alternatives for the EIS/EIR that is deemed acceptable by stakeholders	Engage stakeholders in process and provide appropriate documentation/justification for concepts developed and selected for review in the	3	3	9	Open

Appendix D – Outreach Plan

Appendix E – Change Management Plan

Change Request Form

Project: Reinitiation of Consultation on the Long Term Operations of the Central Valley Project and State Water Project

Request No.: _____

Project Phase & Task Name: _____

Budget: ☐ Impact? \$_____ Amount of Change in dollars.

Schedule: ☐ Impact? _____ Amount of Change in days.

Scope: ☐ Impact? Description below.

Description:

Include a description of the change either here or attached; this should also include a revised schedule and budget document.

Appendix F – Quality Management Plan

1.0 Introduction

1.1 Purpose of the Project Quality Management Plan

For the Reinitiation of Consultation on the Long Term Operations of the Central Valley Project and State Water Project the Quality Management Plan will address the biological and operational modeling, as well as environmental compliance and permitting documents.

2.0 Project Quality Management Overview

2.1 Organization, Responsibilities, and Interfaces

Name	Role	Quality Responsibility
<i>Name</i>	<i>Project Manager</i>	<i>Overall Quality Assurance Monitoring and auditing products; review of NEPA and ESA documents – Auditing products and process</i>
<i>Name</i>	<i>Modeling Team Lead</i>	<i>Ensure best available models are used – potentially facilitating peer review of modeling – Auditing products and process</i>
<i>Name</i>	<i>Environmental Consultant Project Manager</i>	<i>Ensure necessary permits are obtained & adequately cover the work being planned – Auditing products and process</i>
<i>Name</i>	<i>CSAMP / CAMT</i>	<i>Reviewing modeling information and providing input on the best available science in a timely manner</i>

2.2 Tools, Environment, and Interfaces

Tool	Description
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<i>Milestones</i>	<i>Schedule incorporates Reclamation, USFWS, and NMFS benchmarks and milestones.</i>
<i>Peer Review</i>	<i>Modeling will be reviewed by multi-disciplinary interagency teams</i>
<i>CSAMP / CAMT</i>	<i>Technical output will be presented at the XX CSAMP meetings, with CSAMP input to be received by the next meeting.</i>
<i>Core Team Coordination</i>	<i>Regular monitoring of process progression and communication between the various agencies. It includes identifying issues and tracking their resolution.</i>

3.0 Project Quality Management

The Reinitiation of Consultation on the Long Term Operations of the Central Valley Project and State Water Project will incorporate the following methods of Quality Assurance/Quality Control (QA/QC):

- Peer Review: Biological and operational modeling will undergo interagency peer review prior to incorporation into environmental compliance or permitting documents. Peer review teams will comprise of multiple agencies, or alternatively USFWS, NMFS, Reclamation, DWR, and CDFW will each select a technical expert to represent them on the peer review. In addition or instead, independent peer reviews through the Delta Science Program's independent science panels or another organization may be performed.
- Environmental Permitting Reviews: Reviews and coordination with consultant team and agency staff to ensure NEPA and ESA documents include the required information and that they are suited to meet the laws and regulations for the work being executed.
- CSAMP / CAMT teams will review modeling information and technical analysis at the same time as peer review is ongoing.