MEMORANDUM

TO: SLDMWA Water Resources Committee Members and Alternates

FROM: Scott Petersen, Water Policy Director

DATE: May 13, 2024

RE: Update on Water Policy/Resources Activities

Background

This memorandum is provided to briefly summarize the current status of various agency processes regarding water policy activities, including but not limited to the (1) Reinitiation of Consultation on Long-Term Operations of the Central Valley Project and State Water Project, including environmental compliance; (2) State Water Resources Control Board action; (3) San Joaquin River Restoration Program; (4) Delta conveyance; (5) Reclamation action; (6) Delta Stewardship Council action; (7) San Joaquin Valley Water Blueprint and San Joaquin Valley Water Collaborative Action Plan.

Policy Items

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

In August 2016, the Bureau of Reclamation and California Department of Water Resources (DWR) requested reinitiation of consultation with NOAA Fisheries, also known as National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) due to multiple years of drought, low populations of listed species, and new information developed as a result of ongoing collaborative science efforts over the last 10 years.

On Jan. 31, 2019, Reclamation transmitted its Biological Assessment to the Services. The purpose of this action is to continue the coordinated long-term operation of the CVP and SWP to optimize water supply delivery and power generation consistent with applicable laws, contractual obligations, and agreements; and to increase operational flexibility by focusing on nonoperational measures to avoid significant adverse effects to species.

The biological opinions carefully evaluated the impact of the proposed CVP and SWP water operations on imperiled species such as salmon, steelhead and Delta smelt. FWS and NMFS documented impacts and worked closely with Reclamation to modify its proposed operations to minimize and offset those impacts, with the goals of providing water supply for project users and protecting the environment.

Both FWS and NMFS concluded that Reclamation's proposed operations will not jeopardize threatened or endangered species or adversely modify their critical habitat. These conclusions were reached for

several reasons – most notably because of significant investments by many partners in science, habitat restoration, conservation facilities including hatcheries, as well as protective measures built into Reclamation's and DWR's proposed operations.

On Oct. 21, 2019, FWS and NMFS released their biological opinions on Reclamation's and DWR's new proposed coordinated operations of the CVP and SWP.

On Dec. 19, 2019, Reclamation released the final Environmental Impact Statement analyzing potential effects associated with long-term water operations for the CVP and SWP.

On Feb. 18, 2020, Reclamation approved a Record of Decision that completes its environmental review for the long-term water operations for the CVP and SWP, which incorporates new science to optimize water deliveries and power production while protecting endangered species and their critical habitats.

On January 20, 2021, President Biden signed an Executive Order: "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis", with a fact sheet[1] attached that included a non-exclusive list of agency actions that heads of the relevant agencies will review in accordance with the Executive Order. Importantly, the NOAA Fisheries and U.S. Fish and Wildlife Service Biological Opinions on the Long-Term Operation of the Central Valley Project and State Water Project were both included in the list of agency actions for review.

On September 30, 2021, Reclamation Regional Director Ernest Conant sent a letter to U.S. FWS Regional Director Paul Souza and NMFS Regional Administrator Barry Thom requesting reinitiation of consultation on the Long-Term Operation of the CVP and SWP. Pursuant to 50 CFR § 402.16, Reclamation indicated that reinitiation is warranted based on anticipated modifications to the Proposed Action that may cause effects to listed species or designated critical habitats not analyzed in the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Biological Opinions, dated October 21, 2019. To address the review of agency actions required by Executive Order 13990 and to voluntarily reconcile CVP operating criteria with operational requirements of the SWP under the California Endangered Species Act, Reclamation and DWR indicated that they anticipate a modified Proposed Action and associated biological effects analysis that would result in new Biological Opinions for the CVP and SWP.

Following this action, on October 20, 2021, the SLDMWA sent a letter to Reclamation Regional Director Ernest Conant requesting participation in the reinitiation of consultation pursuant to Section 4004 of the WIIN Act and in the NEPA process as either a Cooperating Agency or Participating Agency.

On February 26, 2022, the Department of the Interior released a Notice of Intent To Prepare an Environmental Impact Statement (EIS) and Hold Public Scoping Meetings on the 2021 Endangered Species Act Reinitiation of Section 7 Consultation on the Long-Term Operation of the Central Valley Project and State Water Project[2]. In response to this, on March 30, 2022, the SLDMWA submitted a comment letter highlighting actions for Reclamation to consider during preparation of the EIS.

[1] https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/fact-sheet-list-of-agency-actions-for-review/

[2] https://www.govinfo.gov/content/pkg/FR-2022-02-28/pdf/2022-04160.pdf

During May 2022, Reclamation issued draft copies of the Knowledge Base Papers for the following management topics and requested supplementary material review and comments, to which the Authority submitted comment letters in June:

1. Spring-run Juvenile Production Estimate- Spring-run Survival Knowledge Base Document, May 2022
2. Steelhead Juvenile Production Estimate-Steelhead Survival Knowledge Base Document, April 2022
3. Old and Middle River Reverse Flow Management – Smelt, Chinook Salmon, and Steelhead Migration and Survival Knowledge Base Document, May 2022
4. Central Valley Tributary Habitat Restoration Effects on Salmonid Growth and Survival Knowledge Based Paper, March 2022
5. Delta Spring Outflow Management Smelt Growth and Survival Knowledge Base Document, May 2022
6. Pulse Flow Effects on Salmonid Survival Knowledge Base Document, May 2022
7. Summer and Fall Habitat Management Actions – Smelt Growth and Survival Knowledge Base Document, May 2022
8. Shasta Cold Water Pool Management – End of September Storage Knowledge Base Document, May 2022

Subsequent to the Knowledge Base Paper review, a Scoping Meeting was held, to which Water Authority staff provided comments, resulting in the release of a Scoping Report[3] by Reclamation in June 2022.

On October 14, 2022, Reclamation released an Initial Alternatives Report (IAR).

On May 16, 2023, Reclamation provided an administrative draft copy of the Proposed Action, titled "State and Federal Cooperating Agency Draft LTO Alternative" to agencies that have executed an MOU with Reclamation on engagement. Authority staff is reviewing the document and provided feedback to Reclamation, in coordination with member agencies and other CVP contractors.

On June 30, 2023, Reclamation released a draft Qualitative Biological Assessment for review by agencies that have executed an MOU with Reclamation on engagement, though Reclamation is not accepting formal comments. Note that this release does not initiate formal ESA consultation and is being provided to assist the fishery agencies in setting up their documents and resources for the formal consultation, which we expect to begin in late September/early October.

On July 21, 2023, Reclamation released an Administrative Draft Terrestrial Biological Assessment for review by agencies that have an MOU with Reclamation on engagement, though Reclamation is not accepting formal comments. Note that this release does not initiate formal ESA consultation and is being provided to assist the fishery agencies in setting up their documents and resources for the formal consultation, which we expect to begin in late September/early October.

On September 15, Reclamation released a Draft Environmental Impact Statement for 30-day NEPA Cooperating Agency review. The SLDMWA coordinated review of the document with member agencies

[3] https://www.usbr.gov/mp/bdo/docs/lto-scoping-report-2022.pdf

and technical consultants and submitted both high-level and technical comments on the document[4] on October 16.

On October 10, 2023, Reclamation transmitted an Aquatic species Quantitative Biological Assessment, and on October 18, 2023, Reclamation transmitted a Terrestrial Species Quantitative Biological Assessment to the Services and to consulting agencies pursuant to the WIIN Act.

On April 5, 2024, Reclamation released the 2nd Cooperating Agency Draft EIS for a two-week comment period. After review and coordination with member agencies, Authority staff provided a comment letter[5] to Reclamation on the document.

Additionally, on April 26, 2024, the U.S. Fish and Wildlife Service and National Marine Fisheries Service held a meeting under Section 4004 of the Water Infrastructure Improvements for the Nation (WIIN) Act, which provided information on the upcoming Services work product on the ESA consultation. The Services consultation schedule is attached in Appendix A.

Current Milestones

- June-July 2024: Draft Biological Assessment/Biological Opinion
- Summer 2024 – Public Draft EIS
    - The public draft EIS will be the avenue for comments to Reclamation
    - Cooperating agencies will receive an administrative draft of the EIS
    - Anticipate a 45-day public comment period
- Winter 2024 – Final Biological Opinion
- Winter 2024 – Final EIS
- Winter 2024 – Record of Decision

Note: There are also Endangered Species Act consultations on the Trinity River and Klamath River that may have overlap/interactions with the consultation for the CVP/SWP. Reclamation held an Interested Parties meeting on the Trinity River consultation, with slides included in Appendix A.

Delta Science Program Independent Peer Review

Last month, at the request of the U.S. Bureau of Reclamation, the Delta Science Program has completed the facilitation of an independent scientific peer review of Reclamation's Fish and Aquatic Effects Analysis for the long-term operations (LTO) of the federal Central Valley Project (CVP) and State Water Project (SWP).

The peer review panel, consisting of five subject-matter experts, has completed its review of the relevant technical appendices that describe the literature, models, and tools used. The Aquatic Effects Analysis informs a Biological Assessment, which is necessary when a federal agency is proposing an action that may affect Endangered Species Act (ESA) listed species. The panel also reviewed several ESA-listed species

[4] Request from Authority staff.

[5] See Appendix A.

chapters from the draft Biological Assessment. The final report includes the panel's responses to the charge questions and provides guidance for improving the analytical approach used.

State Water Resources Control Board (State Water Board) Activity

Bay Delta Water Quality Control Plan Update

Background

The State Water Board is currently considering updates to its 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay Delta Plan") in two phases (Plan amendments). The first Plan amendment is focused on San Joaquin River flows and southern Delta salinity ("Phase I" or "San Joaquin River Flows and Southern Delta Salinity Plan Amendment"). The second Plan amendment is focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), Delta outflows, and interior Delta flows ("Phase II" or "Sacramento/Delta Plan Amendment").

During the December 12, 2018 Water Board Meeting, the Department of Water Resources ("DWR") and Department of Fish and Wildlife presented proposed "Voluntary Settlement Agreements" ("VSAs") on behalf of Reclamation, DWR, and the public water agencies they serve to resolve conflicts over proposed amendments to the Bay-Delta Plan update.[6] The State Water Board did not adopt the proposed VSAs in lieu of the proposed Phase 1 amendments, but as explained below, directed staff to consider the proposals as part of a future Delta-wide proposal.

Phase 1 Status: The State Water Board adopted a resolution[7] to adopt amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and adopt the Final Substitute Environmental Document during its December 12, 2018 public meeting.

Most recently, on July 18, 2022, the State Water Resources Control Board issued a Notice of Preparation (NOP)[8] and California Environmental Quality Act (CEQA) Scoping Meeting for the Proposed Regulation to Implement Lower San Joaquin River Flows (LSJR) and Southern Delta Salinity Objectives in the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta Plan).

The purpose of the NOP is: (1) to advise responsible and trustee agencies, Tribes, and interested organizations and persons, that the State Water Board or Board will be the lead agency and will prepare a draft EIR for a proposed regulation implementing the LSJR flow and southern Delta salinity components of the 2018 Bay-Delta Plan, and (2) to seek input on significant environmental issues, reasonable alternatives, and mitigation measures that should be addressed in the EIR. For responsible and trustee agencies, the State Water Board requests the views of your agency as to the scope and content of the

[6] Available at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Blogs/Voluntary-Settlement-Agreement-Meeting-Materials-Dec-12-2018-DWR-CDFW-CNRA.pdf.

[7] Available at https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/rs2018_0059.pdf.

[8] Available at https://www.waterboards.ca.gov/public_notices/notices/20220715-implementation-nop-and-scoping-dwr-baydelta.pdf

environmental information related to your agency's area of statutory responsibility that must be include in the draft EIR.

In response to the release of the NOP, the Water Authority and member agencies provided scoping comments[9].

Phase 2 Status: In the State Water Board's resolution adopting the Phase 1 amendments, the Water Board directed staff to assist the Natural Resources Agency in completing a Delta watershed-wide agreement, including potential flow and non-flow measures for the Tuolumne River, and associated analyses no later than March 1, 2019. Staff were directed to incorporate the Delta watershed-wide agreement as an alternative for a future, comprehensive Bay-Delta Plan update that addresses the reasonable protection of beneficial uses across the Delta watershed, with the goal that comprehensive amendments may be presented to the State Water Board for consideration as early as possible after December 1, 2019.

On March 1, 2019, the California Department of Water Resources and the Department of Fish and Wildlife submitted documents[10] to the State Water Board that reflect progress since December to flesh-out the previously submitted framework to improve conditions for fish through targeted river flows and a suite of habitat-enhancing projects including floodplain inundation and physical improvement of spawning and rearing areas.

Since the March 1 submittal, work has taken place to develop the package into a form that is able to be analyzed by State Water Board staff for legal and technical adequacy. On June 30, 2019, a status update with additional details was submitted to the Board for review. Additionally, on February 4, 2020, the State team released a framework for the Voluntary Agreements to reach "adequacy", as defined by the State team.

Further work and analysis is needed to determine whether the agreements can meet environmental objectives required by law and identified in the State Water Board's update to the Bay-Delta Water Quality Control Plan.

On September 28, The State Water Resources Control Board released a draft Staff Report in support of possible updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) that are focused on the Sacramento River watershed, Delta, and Delta eastside tributaries (Sacramento/Delta).

The draft Staff Report includes scientific information and environmental and economic evaluations to support possible Sacramento/Delta updates to the Bay-Delta Plan. The report assesses a range of alternatives for updating the Sacramento/Delta portions of the Bay-Delta Plan, including: an alternative based on a 2018 Framework document identifying a 55% of unimpaired flow level (within an adaptive range from 45-65%) from Sacramento/Delta tributaries and associated Delta outflows; and a proposed voluntary agreements alternative that includes voluntary water contributions and physical habitat

[9] Request from Authority staff

[10] Available at http://resources.ca.gov/docs/voluntary-agreements/2019/Complete_March_1_VA_Submission_to_SWRCB.pdf

restoration on major tributaries to the Delta and in the Delta. In addition, based on input from California Native American tribes, the draft Staff Report identifies the proposed addition of tribal and subsistence fishing beneficial uses to the Bay-Delta Plan.

The draft Staff Report is available for review on the Board's website. The Authority coordinated and submitted comments with member agencies[11].

Schedule

LSJR Flow/SD Salinity Implementation Next Steps Assuming Regulation Path (Phase 1)

- Winter/Spring 2024
  - Final draft Staff Report for Tuolumne River VA
  - Board workshop and consideration of Tuolumne River VA
  - Final draft EIR and regulation implementing Lower SJR flows and South Delta Salinity
  - Board consideration of regulation implementing Lower SJR flows and South Delta Salinity

Sac/Delta Update: Key Milestones

- Fall 2024: Response to comments and development of proposed final changes to the Bay-Delta Plan
- Winter 2024: Board consideration of adoption

Voluntary Agreements

On March 29, 2022, members of the Newsom Administration joined federal and local water leaders in announcing the signing of a memorandum of understanding[12] that advances integrated efforts to improve ecosystem and fisheries health within the Sacramento-San Joaquin Bay-Delta. State and federal agencies also announced an agreement[13] specifically with the Sacramento River Settlement Contractors on an approach for 2022 water operations on the Sacramento River.

Both announcements represent a potential revival of progress toward what has been known as "Voluntary Agreements," an approach the Authority believes is superior to a regulatory approach to update the Bay-Delta Water Quality Control Plan.

The broader MOU outlines terms for an eight-year program that would provide substantial new flows for the environment to help recover salmon and other native fish. The terms also support the creation of new and restored habitat for fish and wildlife, and provide significant funding for environmental improvements and water purchases, according to a joint news release from the California Natural Resources Agency and the California Environmental Protection Agency (CalEPA). Local water agency managers signing the MOU

[11] Request from Authority staff.

[12] Available at https://resources.ca.gov/-/media/CNRA-Website/Files/NewsRoom/Voluntary-Agreement-Package-March-29-2022.pdf

[13] Available at https://calepa.ca.gov/2022/03/29/informational-statement-state-federal-agencies-and-sacramento-river-settlement-contractors-agree-on-approach-for-2022-water-operations-on-the-sacramento-river/

have committed to bringing the terms of the MOU to their boards of directors for their endorsement and to work to settle litigation over engaged species protections in the Delta.

On June 16, the SLDMWA, Friant Water Authority and Tehama Colusa Canal Authority signed onto the VA MOU. Additionally, since that time, in September and November, four more agencies – Contra Costa Water District, San Francisco Public Utilities Commission (SFPUC), Turlock Irrigation District (TID) and Modesto Irrigation District (MID) – have signed onto the VA MOU.

Work continues to develop the working documents associated with execution and implementation of the VA's and workgroups for participating agencies have been formed. A number of documents continue to be developed, including a global agreement, implementing agreements for each tributary, enforcement agreements, an updated Science Plan, and governance plan.

On April 24-26, the State Water Resources Control Board held a three-day workshop on the Agreements, with sessions focused on many of the more developed plans and details of the program. Information about the workshop can be found here.

San Joaquin River Restoration Program

Restoration Flows

Starting on Friday, April 26, the San Joaquin River Restoration Program (Program) began releasing a scheduled pulse flow on the San Joaquin River. Friant Dam releases increased to 1150 cubic-feet-per-second (cfs) for one day, then decreased to 850 cfs from April 28 to May 5. Then, from May 6 to May 14 Friant Dam releases will decrease by 50 cfs per day to 450 cfs before leveling off to between 390 cfs - 465 cfs through September. This pulse of flows is intended to replicate a more natural river hydrology and optimize conditions for outmigrating juvenile and returning adult spring-run Chinook salmon.

The pulse flows are part of the updated Restoration Flow schedule approved by the Bureau of Reclamation for the 2024 water year. The 2024 Restoration Allocation provides a total 325,804 acre-feet for Restoration Flows under a Normal-Wet water year type. This water year is expected to produce runoff that is close to average — a condition not experienced since 2010.

Following the pulses in early May, releases from Friant Dam will slowly decline until stabilizing in late May and throughout the summer. Restoration Flows increase again in autumn into winter coinciding with salmon reproduction, incubation, and juvenile fry emergence. Two more smaller pulses of water are tentatively scheduled to be released from Friant Dam in autumn.

The Restoration Allocation will be updated once more in May, and in response the Restoration Administrator may adjust flows or add additional features to the planned hydrograph.

The Restoration Flow schedule has been set to the following:

Date	**Friant Dam Releases**	**Flows Rate at Gravelly Ford**
April 1 – April 25	570 cfs	380 cfs

April 26 – May 5	Pulse — increasing quickly to 1150 cfs holding at that level for 1 day, then decreasing to 850 cfs and holding that level through May 5	Rising to 650 cfs and maintaining that flow for approximately 10 days
May 6 – May 14	850 cfs decreasing 50 cfs per day to 450 cfs	650 cfs gradually falling to 185 cfs
May 15 – September 30	390 – 465 cfs as required to meet the flow target at Gravelly Ford	185 – 195 cfs
November 1 – December 31	400 – 480 cfs as required to meet the flow target at Gravelly Ford (except higher during pulses)	235 cfs (except two pulses reaching 475 cfs, one pulse in November and one pulse in December)
January 1 – February 28, 2025	Approximately 400 cfs	255 cfs

For Information about Restoration Flows, please visit http://www.restoresjr.net/restoration-goal/restoration-flows/. For the Restoration Administrator recommendations, please visit http://www.restoresjr.net/documentsreports/ra-recommendations/

Delta Conveyance Project

Petition for Change of Point of Diversion and Rediversion for the Delta Conveyance Project

On February 22, 2024, the State Water Resources Control Board (Board) received a Petition for Change from the Department of Water Resources (DWR) to add two new points of diversion (POD) and rediversion (PORD) to the water right permits associated with the State Water Project. Specifically, the petition seeks to change Water Right Permits 16478, 16479, 16481, and 16482 (Applications 5630, 14443, 14445A, and 17512, respectively). The proposed new PODs/PORDs would consist of screened intakes 2.3 miles apart located on the lower Sacramento River between Freeport and Sutter Slough. The proposed new intakes are part of the Delta Conveyance Project, which would allow DWR to divert water from the northern Sacramento-San Joaquin Delta Estuary (Delta) and convey the water through a tunnel to existing water distribution facilities in the southern Delta.

This petition is available on the DWR website at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Delta-Conveyance/Public-Information/Revised_DCP_CPOD_Petition_Package_2024.pdf

Protests against the change petition must have been filed by May 13, 2024, with a copy provided to the petitioner.

U.S. Bureau of Reclamation

Reclamation Manual

Documents out for Comment

Draft Policy

- There are currently no Draft Policies out for review.

Draft Directives and Standards

- There are currently no Draft Directives and Standards out for review.

Draft Facilities Instructions, Standards, and Techniques (FIST)

- There are currently no Instructions, Standards, and Techniques our for review.

Draft Reclamation Safety and Health Standards (RSHS)

- There are currently no Safety and Health Standards out for review.

Draft Reclamation Design Standards

- There are currently no Design Standards out for review.

Delta Stewardship Council

Draft Delta Plan Five Year Review Comment Period

The Delta Stewardship Council has conducted another five-year review of the Delta Plan to evaluate progress in implementing its policies, recommendations, and performance measures and is now seeking public input on the findings and recommendations.

The 2024 Five-Year Review follows up on the first Five-Year Review adopted by the Council in 2019. The new report uses established performance measures to provide a snapshot of measured progress toward Delta Plan objectives. Performance measure evaluations are organized into topic-specific "report cards" that consider the portion of each performance measure's target achieved.

It also includes:

- an analysis of the Delta Plan's regulatory functions and a series of recommendations, along with
- associated actions to outline how the Council and our partners can implement the Delta Plan over the next five years.

Public comments are open until **June 10, 2024.**

San Joaquin Valley Water Blueprint

The Water Blueprint for the San Joaquin Valley (Blueprint) is a non-profit group of stakeholders, working to better understand our shared goals for water solutions that support environmental stewardship with the needs of communities and industries throughout the San Joaquin Valley.

Blueprint's strategic priorities for 2022-2025: Advocacy, Groundwater Quality and Disadvantaged Communities, Land Use Changes & Environmental Planning, Outreach & Communications, SGMA Implementation, Water Supply Goals, Governance, Operations & Finance.

Mission Statement: *"Unifying the San Joaquin Valley's voice to advance an accessible, reliable solution for a balanced water future for all.*

Committees

Executive/Budget/Personnel

Blueprint contribution requests have been circulated and Board members will be following up with participants. Hallmark's revised scope for defined services and deliverables (Develop & implement a strategic plan to protect operational flexibility of the 2019 Bi Ops) has been approved and will run from 3/1-8/31 and has been approved by the Board, with consultation from an ad-hoc committee of public water agency technical and policy professionals.

- Urban Water Agency Partnerships: A draft letter agreement with Urban Water Agencies including Metropolitan Water District and the Blueprint is being developed and includes monetary participation and review and analysis of water storage and conveyance opportunities. Stantec is helping scope, budget and define deliverables for this work. This includes mutual concerns/issues faced by water scarcity as well as opportunities for collaboration including recharge, conveyance, and funding. On May 8, a letter agreement was executed during the spring ACWA conference.

Technical Committee

Two specific priorities/efforts to help bridge the water deficit in the San Joaquin Valley, the Patterson ID conveyance project, and Delta Operations have been selected. The committee is evaluating total recharge opportunities and potential environmental enhancement and utilization.

Activities

Farmer to Farmer Summit – Third Session

The farmer-to-farmer delegates have been reengaged to further regional communication and will be participating in additional water solution facilitation, with a focus on the Delta. *Summit* delegates will be gathering again in May in Modesto for another facilitated meeting.

Unified Water Plan for the San Joaquin Valley

The Water Blueprint for the San Joaquin Valley Education Fund and the California Water Institute - Research and Education Division are working together to develop a Unified Water Plan for the San Joaquin Valley. This two-year project will culminate in the publication of a report to be submitted to Congress. Additionally, the California Water Institute (CWI) team is focused on the viability and success of the organization. In an effort to ensure they are planning for their future; they have decided to undertake strategic planning. Over the coming months they will be working with Amy Wolfe from Mujeres Poderosas, LLC to invest time and energy into creating a robust, relevant, and actionable road map forward for CWI.

San Joaquin Valley Water Collaborative Action Program (SJVW CAP)

Background

The CAP Plenary Group adopted work groups to implement the CAP Term Sheet[14], adopted on November 22, 2022. During Phase II, Work Groups are continuing to meet and discuss priorities and drafting various

[14] Request from Authority staff

documents for their respective areas: Safe Drinking Water; Sustainable Water Supplies; Ecosystem Health; Land Use, Demand Reduction and Land Repurposing; Implementation.

The Plenary group advanced a letter on solar recommendations[15], as well as continued discussion about the development of potential project lists for consideration for advancement to the Central Valley Community Foundation's Jobs First Initiative[16], where CAP will be assisting the Foundation to develop the "One Water" portion of the proposal.

[15] Included in Appendix A.

[16] Included in Appendix A.

APPENDIX A

April 19, 2024

VIA EMAIL

Ms. Janice Pinero
Bureau of Reclamation, Bay-Delta Office
801 I Street, Suite 140
Sacramento, CA 95814-2536
E-Mail: sha-MPR-BDO@usbr.gov

Re: Second Cooperating Agencies Draft Environmental Impact Statement for the Long-Term Operations of the Central Valley Project

Dear Ms. Pinero:

The San Luis & Delta-Mendota Water Authority ("Water Authority") appreciates the opportunity to comment in response to the U.S. Bureau of Reclamation's ("Reclamation") second version of the Cooperating Agencies Draft Environmental Impact Statement for the Long-Term Operations of the Central Valley Project, dated April 2024 ("2nd Draft EIS"). The Water Authority is among the local agencies Reclamation has agreed is a cooperating agency and appreciates the opportunity to provide input on the Draft EIS through this role.

Through this ongoing National Environmental Policy Act ("NEPA") process, Reclamation will be making policy decisions on a matter of vital importance to the future of California, including its protected fish and wildlife species, millions of people, and millions of acres of prime farmland. The Water Authority operates key Central Valley Project ("CVP") infrastructure, and its member agencies depend upon the CVP as the principal source of water they provide to users within their service areas. That water supply serves approximately 1.2 million acres of agricultural lands within areas of San Joaquin, Stanislaus, Merced, Fresno, Kings, San Benito, and Santa Clara Counties, a portion of the water supply for nearly 2 million people, including in urban areas within Santa Clara County referred to as the "Silicon Valley," and millions of waterfowl that depend upon nearly 200,000 acres of managed wetlands and other critical habitat within the largest contiguous wetland in the western United States. A list of the Water Authority's member agencies is attached as Exhibit A.

The Water Authority submitted comments dated October 16, 2023, on an earlier and less complete version of the Draft EIS. Many of the comments submitted in the October 16 letter are still applicable to the 2nd Draft EIS. Rather than repeat those comments we incorporate by reference the comments made in the October 16 letter and its attachments. Our detailed comments on the updated sections of the 2nd Draft

EIS may be found in the spreadsheet attached as Exhibit B. In this letter we offer several broadly applicable comments.

1. "Harmonizing" or "Reconciling" CVP Operations with SWP Operations Must Not Result in Imposing CESA Requirements on the CVP

In our October 16 letter we expressed concern about statements in the Draft EIS suggesting Reclamation would "voluntarily" operate the CVP to "harmonize" or "reconcile" its operations with state law requirements applicable to the State Water Project ("SWP") that do not apply to the CVP. As explained at length in that letter, the CVP is not subject to the requirements of the California Endangered Species Act ("CESA") or the determinations of the California Department of Fish and Wildlife ("CDFW").

Harmonization or reconciliation of CVP operations with SWP operations required by CESA is not a Congressionally authorized CVP purpose. Rather, the United States has consistently and correctly maintained that Reclamation's operation of the CVP is not subject to CESA because Congress has never waived the sovereign immunity of the United States against regulation by the State of California under CESA. *See Pacific Coast Federation of Fishermen's Associations v. Raimondo*, 2024 WL 1332516, *35 (E.D. Cal. 2024) ("Federal Defendants have never before accepted the premise that a CESA listing is grounds for the imposition of restrictions upon the operation of a federal water project."). As explained in the October 16 letter, Reclamation does not have discretion to voluntarily submit to regulation under CESA absent Congressional authorization. Rather, Reclamation's discretion is bounded by its legal authorities, and to the extent Reclamation is proposing a particular action, it necessarily needs statutory authority for the action.

The 2nd Draft EIS reflects some changes in response to our October 16 letter. The explanation of purpose of the Draft EIS in Section 1.1 has been modified to state that Reclamation seeks to "voluntarily reconcile CVP operating criteria, **as appropriate**, with operational requirements of the SWP under the California Endangered Species Act." 2nd Draft EIS at 1-1, emphasis added. Likewise, Section 1.6 has been modified to explain the preferred alternative will be the one that "will best meet the purpose and need, while harmonizing, **as appropriate**, the operation of the CVP and SWP." *Id*. at 1-7, emphasis added. The 2nd Draft EIS also newly acknowledges that "[a]lthough Reclamation and DWR strive for a coordinated operation of the CVP and SWP, Reclamation and the CVP are not subject to requirements under the California Endangered Species Act." *Id*. at 1-1.

While an improvement, these statements raise the question of what changes to CVP operating criteria would be deemed "appropriate." That issue bears further review and elaboration. Some changes would not interfere with CVP purposes and obligations, but others would. It would not be appropriate, for example, to modify CVP operations to meet inapplicable state law requirements for the sake of harmonizing operations with the SWP where doing so would reduce export pumping and hence CVP water supply deliveries to CVP contractors.

Alternative 2 as described in the 2nd Draft EIS remains problematic. Alternative 2 is the "Multi-Agency Consensus" alternative and includes "actions developed with the California Department of Fish and Wildlife, DWR, NMFS, and USFWS to harmonize operational requirements of CVP with California

Endangered Species Act requirements for the SWP." 2nd Draft EIS at 1-3; the "as appropriate" caveat discussed above is missing from this description of Alternative 2. By its terms Alternative 2 would apply CESA-based requirements to the CVP, such as the longfin smelt measures. *Id*. at 3-52 – 3-54, E-99 – E-102. These measures would require the CVP to change operations based on the presence or salvage of longfin smelt, a species listed under CESA, but not listed under the federal Endangered Species Act ("ESA"). These measures in Alternative 2 were developed by CDFW for SWP operations pursuant to the standards of CESA. While the longfin smelt is proposed for listing under the federal ESA, it is not yet listed, and may never be listed. Nor has an ESA section 7 consultation been completed regarding the effect of CVP operations on the longfin smelt. Only if the longfin smelt has been listed and Reclamation has completed consultation under ESA section 7 will it be determined what longfin smelt measures are appropriate and necessary under the ESA.

The potential for imposing CESA based requirements on the CVP under Alternative 2 may arise for any species listed under both the ESA and CESA. CDFW has taken the position that measures taken under the federal ESA may not satisfy the requirements of CESA. CDFW has interpreted CESA's requirement to minimize and fully mitigate for take (*see* Cal. Fish & Game Code § 2081(b)) to potentially require different measures from those required by the ESA. Given CDFW's application of CESA, harmonizing or reconciling CVP and SWP operations may impermissibly subject the CVP to CESA standards instead of ESA standards.

Further, the Central Valley Project Improvement Act ("CVPIA") in section 3406(a)(2) places "irrigation and domestic uses" on an equal footing with "fish and wildlife mitigation, protection and restoration purposes." This provision requires Reclamation to ensure that any fisheries mitigation or protection actions are on equal footing with and not improperly elevated above contractual and legal commitments to other water users; this provision *does not* require minimization of take. Likewise, as noted previously, the CVPIA does not authorize Reclamation to comply with CESA. *See* October 16, 2023, comment letter, discussing section 3406(b) of the CVPIA.

The 2nd Draft EIS is unclear in several respects as to whether Reclamation is proposing measures to meet CESA standards, notwithstanding the lack of support for such measures under federal law. For example, the legal authority for the proposed changes to Shasta operations to preserve cold water flows in Alternative 2 is unclear and should be clarified. To the extent that the changes at Shasta are being implemented to minimize take or mitigate for effects to the species that are not caused by discretionary actions (for example, the presence of Shasta Dam which is part of the environmental baseline) when this is not a requirement to avoid jeopardy, and will result in significant and economically disastrous reductions in deliveries to other water users, these changes cannot be implemented under existing law.

In sum, helpful changes have been made to the 2nd Draft EIS to clarify that the CVP is not subject to regulation under CESA, but Alternative 2 is still problematic. We suggest it be revised to clarify that harmonizing or reconciling CVP and SWP operations must not and will not result in imposing CESA requirements or standards on the CVP. Alternative 2 should include measures to ensure that does not happen, e.g., by exempting the CVP from measures to minimize take where doing so would require a major change to CVP operations, would be contrary to law, and is not necessary to avoid jeopardizing listed species. Absent such changes, Alternative 2 cannot be chosen as the preferred alternative because it

is contrary to Reclamation's authority and does not meet the criterion of harmonizing CVP and SWP operations "as appropriate."

One potential way to achieve the purpose of harmonizing and reconciling CVP and SWP operations without subjecting the CVP to inapplicable state laws that impair CVP purposes and obligations is to reduce the perceived need for prescriptive restrictions on CVP and SWP operations by adopting alternative measures. For example, measures for habitat improvements such as those included in the proposed Healthy Rivers and Landscapes program could be used as an alternative to more flow-centric requirements. The Water Authority plans to develop alternative measures that could be adopted in lieu of requirements in Alternative 2 and propose them in comments in response to the public version of the Draft EIS.

2. The Public Draft EIS Should Explain How Each Alternative Meets the Purpose and Need and Identify the Supporting Authority

The public Draft EIS should be updated to clearly explain how each alternative meets the three-prong purpose described in Chapter 2 of the 2nd Draft EIS (2nd Draft EIS at 2-2), and to describe whether the proposed components of each alternative are legally mandated or discretionary, and the applicable legal authority for each.

Relatedly, and to ensure that each alternative will comply with Reclamation's contractual and statutory obligations, the public Draft EIS should be refined to identify and clarify the basis for each proposed operational element of CVP operations under each alternative. Specifically, for each proposed operational element of each alternative analyzed, including mitigation actions, the EIS should identify:

- the purposes being served; and
- how each element ties to a Congressional direction, a regulatory requirement, or a contractual obligation.

This approach is important for distinguishing between actions taken to further a project purpose versus regulatory requirements and to ensure that mitigation is not undertaken for actions that are taken to meet non-project regulatory requirements. Alternatives that prevent Reclamation from being able to meet its legal and contractual obligations or that are economically infeasible should be screened out from further consideration. For example, the changes in Shasta operations pursuant to Alternative 2 will cause significant reductions in CVP exports, particularly in below normal, dry, and critically dry years. The 2nd Draft EIS, however, does not justify or demonstrate the legal basis and necessity for these proposed operational changes.

3. Specific Comments Relating to the Alternatives

First, the 2nd Draft EIS's description of Alternative 2, the so-called "Multi-Agency Consensus" alternative raises concerns that—contrary to NEPA's prohibitions on pre-commitment—Reclamation has already committed to adopt Alternative 2, or the components thereof. For example, Chapter 3 of the 2nd Draft EIS explains that "Alternative 2 (Multi-Agency Consensus) represents actions and tradeoffs made

to reach consensus among Reclamation, CDFW, DWR, NMFS, and USFWS. It includes actions and approaches identified by the state and federal fish agencies." 2nd Draft EIS at 3-45, emphasis added. This language is concerning because it indicates that an agreement has already been negotiated behind the scenes without the opportunity for other cooperating agencies to have a seat at the table.

Adding to the concern about possible predetermination of an outcome before the full NEPA analysis has been completed, the fisheries agencies have been asked to evaluate Alternative 2 as the proposed action in the process under which Reclamation is consulting with the fisheries agencies under section 7 of the ESA. *See* Long Term Operation – Biological Assessment (November 2023) at 1-2 ("Reclamation selected Alternative 2: Multi-Agency Deliberation as the Proposed Action upon which to consult. Alternative 2 contains the actions required to achieve interagency consensus from CDFW, DWR, NMFS, and USFWS."). We urge that Reclamation ask the fisheries agencies to pause their process until Reclamation has had a chance to fully evaluate the alternatives under the NEPA process, including considering and responding to public comments. Only after this has taken place will Reclamation be able to send to the fisheries agency a proposed action that reflects a full analysis of the best alternative that meets the purpose and need for the action. We will be advocating strongly for improved understanding of the pros and cons of different alternatives as part of the proposed adaptive management process and the National Academies of Science review of the EIS and Biological Opinions.

Alternative 2 is not clearly defined or described in the 2nd Draft EIS. Chapter 3 describes Alternative 2 as "actions . . . to harmonize operational requirements of CVP with California Endangered Species Act requirements for the SWP," (2nd Draft EIS at 3-2) however, neither Chapter 3 nor Appendix E include a clear description of what these actions are and how they differ from the No Action Alternative. Additionally, Chapters 4, 5, 6, 9, 10, 12, 15, 16, and 20 evaluate four variations of Alternative 2.[1] However, these variations are not described in Chapter 3 or Appendix E, and it is unclear how they differ from one another or the other alternatives.

As Chapters 4, 5, 6, 9, 10, 12, 15, 16, and 20 demonstrate, each of the four variations of Alternative 2 that were evaluated showed distinct impacts. However, without a clear description of the specific components of Alternative 2, or the four variations of Alternative 2, cooperating agencies cannot determine whether the evaluation of impacts is thorough and complete. We recommend updating Chapter 3 and Appendix E to include a complete description of the actions that are included in Alternative 2 and the four variations of Alternative 2, along with tables that provide side-by-side comparisons of the different actions included in each Alternative.

For the reasons identified in our joint October 16, 2023, comments, it is clear even without further analysis that Alternative 3 should be screened out from further consideration. "Reasonable alternatives are a reasonable range of alternatives that are technically and economically feasible, and meet the purpose and need for the proposed action." 40 C.F.R. § 1508.1(z)). Alternative 3 is infeasible. It would not comply

[1] The four variations in Alternative 2 are: (1) Alternative 2 Without TUCP Delta VA; (2) Alternative 2 Without TUCP Without VA; (3) Alternative 2 Without TUCP Systemwide VA; and (4) Alternative 2 With TUCP Without VA. Appendix H of the Draft EIS states that these variations of Alternative 2 are "phases that are considered in the assessment of Alternative 2 to bracket the range of potential impacts." However, the operational differences between each "phase" or variation of Alternative 2 are not described in either Chapter 3 or Appendix E.

with contractual obligations or Article 6(g) of the Agreement Between the United States of America and the State of California for Coordinated Operation of the Central Valley Project and the State Water Project" ("COA") and section 3411(b) of the Central Valley Project Improvement Act.

Regarding Alternative 4 ("Risk Informed Operations"), based on the available information, we believe that it would be appropriate for the fisheries agencies to evaluate Alternative 4, which would modify the 2019 proposed action to incorporate the best available science and tools that base regulatory restrictions on water supplies that are grounded in population-level effects to listed species and incorporate improved analytics for using real-time information to support water deliveries in the Delta while limiting effects on listed species. This alternative has the benefit of resulting in fewer impacts on water users, while including significant measures to protect listed species. Relatedly, the public Draft EIS should be updated to provide a clearer comparative analysis between the proposed action alternatives, particularly with respect to impacts on water supply and fish and wildlife resources.

4. The Analysis of the Trinity River Division Is Confusing and May Impermissibly Segment the Effects Analysis

As an update to the prior version**,** the 2nd Draft EIS clarifies that "alternatives in this EIS, including the No Action Alternative, incorporate the continued implementation of the 2000 Trinity River Mainstem Fishery Record of Decision (2000 Trinity ROD) and the 2017 Long-Term Plan to Protect Adult Salmon in the Lower Klamath River Record of Decision." 2nd Draft EIS at 1-7, 1-8. If the operating criteria governing Trinity River operations stay the same for all Alternatives, it is unclear why Chapters 4, 12, 13, and 17 and Appendices H, R, and T state that there would be changes to Trinity River surface water and reservoir conditions under Alternatives 1-4 that would result in potential impacts, as compared to the No Action Alternative. *See, e.g.*, *id.* at. 4-2, 12-15, 13-4, S-50, 17-5, and T-18. Yet, Chapter 5 does not identify any potential changes to Trinity River surface water and reservoir conditions. The discussion and analysis of the Trinity River Division in the 2nd Draft EIS thus remains confusing.

It is unclear that the 2nd Draft EIS's analysis with respect to the Trinity Division complies with NEPA's mandate to "evaluate in a single environmental impact statement proposals or parts of proposals that are related to each other closely enough to be, in effect, a single course of action," 40 C.F.R. § 1502.4(a), and the ESA's mandates to consider the entire agency action, including effects of the proposed action and the "consequences of other activities that are caused by the proposed action." 50 C.F.R. § 402.02. Further, as the alternatives are refined, it is essential to clarify how operations of the Trinity River Division under each alternative would impact Reclamation's ability to operate its facilities in the Sacramento/San Joaquin River watersheds to meet CVP purposes, including both fish and wildlife protection and enhancement and meeting contractual obligations to water users. This is particularly important given that one of the reasons that Congress authorized the Trinity Division was for the provision of cold water for fish species in the Sacramento River watershed.

5. The Public Draft EIS Should Acknowledge and Account For a Reduction in the Availability of Groundwater Due to SGMA

The 2nd Draft EIS fails to consider or mention the impacts of the Sustainable Groundwater Management Act ("SGMA") on groundwater pumping. Chapter 6 (Groundwater) and Appendix I do not simulate the effects of SGMA on groundwater impacts and availability. They analyze impacts to groundwater as if limitations on pumping stemming from SGMA do not exist.

The rationale for ignoring SGMA in the analysis is that "the exact details of sustainable management under SGMA for each basin and [groundwater subbasin] are not known." 2nd Draft EIS at I-77 – I-78. While exact details may not be known, that does not excuse ignoring the effect of SGMA entirely. To reasonably assess groundwater use, especially groundwater pumping to substitute for shortages of surface water, the analysis should include some estimate of whether and how much groundwater pumping will change due to SGMA. With the adoption of Groundwater Sustainability Plans ("GSPs") there are now limitations on use of groundwater that were not in place historically. It is not reasonable to assume that future groundwater will look like historical use. Any forward-looking document must account for more limited availability of groundwater in the future because of SGMA.

Likewise, the Regional Economics chapter (Chapter 14) notes that in the past agricultural contractors increased groundwater pumping to substitute for surface water supply shortages. 2nd Draft EIS at 14-5. The accompanying appendix (Appendix Q) does not account for the effect of SGMA. *Id.* at Q-37. The analysis understates economic impacts of proposed reductions to surface water supplies because it overstates the availability of groundwater supplies to compensate for loss of surfaces supplies.

6. The 2nd Draft EIS Is Unclear as to Important Aspects of Adaptive Management

The 2nd Draft EIS makes various references to "adaptive management." The concept, however, is ill-defined and uncertain and therefore raises serious questions as to the legal adequacy of the proposed action under NEPA and the ESA. For example, the 2nd Draft EIS states that Alternative 2, the "Multi-Agency Consensus" alternative that Reclamation has selected for consultation in its November 2023 biological assessment, "includes an adaptive management program still under development." 2nd Draft EIS, p. 3-60. Likewise, the 2nd Draft EIS describes the role of adaptive management in Reclamation's potential determinations as to minimum instream flows under Alternative 2. *See id.* at 3-46.

We urge Reclamation to define and disclose its proposed adaptive management program and allow cooperating agencies to comment on that program before the Draft EIS is released for public review. In particular, the public Draft EIS should clearly identify and define how adaptive management responses would be structured consistent with applicable law and agency requirements. Likewise, the public Draft EIS should clearly identify:

- What information will be used in adaptive management decision-making?
- What are the applicable thresholds for adaptive management?
- What is the adaptive management decision-making process?

- How will a change be implemented if an action is deemed not to produce the anticipated results?

- How will information about adaptive management decisions be conveyed to water users and what input will water users have in the process?

- As a way to improve transparency and confidence in decision making, would it be possible for affected water users to participate in an oversight and/or steering committee to assure that key issues are being identified, that monitoring is designed and implemented to measure success and confirm anticipated outcomes, and that improvements in understanding or reductions in uncertainties surrounding aquatic conditions will lead to increases in water supply?

7. More Specific Comments Are Included in Exhibit B

Additional and more detailed comments are attached to this letter as Exhibit B. Please note that these comments should not be considered an exhaustive list of all the defects and problems we see in the 2nd Draft EIS. Instead, this is our effort, in the limited time allowed, to identify some basic needed changes to the 2nd Draft EIS as Reclamation reconsiders its approach before releasing a draft to the public.

Conclusion

The Water Authority and its member agencies hope to work in a cooperative manner with Reclamation to ensure that the final EIS addresses the significant issues that arise from potential modifications of CVP operations and includes an appropriate range of alternatives and a robust and complete impact analysis. Reclamation's analysis ultimately must foster a workable, environmentally sound plan for continued operations of the CVP that protects and restores the socioeconomic vitality of, and minimizes the adverse environmental impacts in, the regions the CVP serves, while ensuring legally and scientifically supportable, reasonable, and effective protection mechanisms for the listed species.

The Water Authority appreciates this opportunity to submit these comments and looks forward to working with Reclamation and others in this planning process.

Sincerely,

J. Scott Petersen, P.E.
Director of Water Policy
San Luis & Delta-Mendota Water Authority

EXHIBIT A

San Luis & Delta-Mendota Water Authority Member Agencies

The Water Authority's members are:

- Banta-Carbona Irrigation District
- Broadview Water District
- Byron Bethany Irrigation District
- Central California Irrigation District
- City of Tracy
- Columbia Canal Company (a Friend)
- Del Puerto Water District
- Eagle Field Water District
- Firebaugh Canal Water District
- Fresno Slough Water District
- Grassland Water District
- Henry Miller Reclamation District #2131
- James Irrigation District
- Laguna Water District
- Mercy Springs Water District
- Oro Loma Water District
- Pacheco Water District
- Panoche Water District
- Patterson Irrigation District
- Pleasant Valley Water District
- Reclamation District 1606
- San Benito County Water District
- San Luis Water District
- Santa Clara Valley Water District (Valley Water)
- Tranquillity Irrigation District
- Turner Island Water District
- West Stanislaus Irrigation District
- Westlands Water District

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Ch. 3	3.4		45-60	The description of Alternative 2 is unclear and prevents meaningful evaluation of subsequent chapters that evaluate potential impacts. Chapter 3 describes Alternative 2 as "actions . . . to harmonize operational requirements of CVP with California Endangered Species Act requirements for the SWP," (Ch. 3, pg. 2) however, neither Chapter 3 nor Appendix E include a clear description of what these actions are and how they differ from the No Action Alternative. Additionally, Chapters 4, 5, 6, 9, 10, 12, 15, 16, and 20 evaluate four variations of Alternative 2, however, these variations are not described in Chapter 3 or Appendix E and it is unclear how they differ from one another or the other alternatives. As Chapters 4, 5, 6, 9, 10, 12, 15, 16, and 20 demonstrate, each of the four variations of Alternative 2 that were evaluated results in distinct impacts. However, without a clear description of the specific components of Alternative 2, or the four variations of Alternative 2, cooperating agencies cannot determine whether the evaluation of impacts is thorough and complete. We recommend updating Chapter 3 and Appendix E to include a complete description of the specifc flow and non-flow actions that are included in Alternative 2 (and the four variations of Alternative 2), along with tables that provide side-by-side comparisons of the different actions included in each Alternative.

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
4	4.1	P1, S1	1	Trinity River is still included.
4	4.2.1.1	P1, S1	2	Trinity River is still included.
4	4.2.1.2	P2, S2	5	Increasing flow is the only method of improving water quality that's included, are there other ways to improve water quality that are not identified in the draft? (This part is about Stanislaus, not sure if we want to comment on that river)
4	4.2.1.2	P1	8	Flows are the only thing listed that impacts water quality. Are there other strategies or programs in effect that improve water quality on the San Joaquin that we want to alert them to?

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
5	5.2.1.1	All	5-2 - 5-9	Entire impact analysis is focused on average annual deliveries, without information presented re average deliveries broken down by year type, which would be more telling. Request that year-type information also be presented.
5		5.2-1 - 5.2-7	5-2 - 5-9	Figures 5.2-1 – 5.2-7 provide all data regarding changes in water supply using bar graphs. Reclamation should revise Chapter 5 to also include a table that lists changes to water supply for each watershed (see, e.g., Table 15.2-1). Including the data in a table allows the reader to more-easily identify the specific amount of anticipated change to water supply under each Alternative.
5		5.2-1 - 5.2-7	5-2 - 5-9	The evaluation of water supply impacts associated with Alternative 3 demonstrates that it will result in drastic water supply cuts to existing water users and, therefore, is not a feasible project alternative.

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Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Chapter 6	6.1		1	The affected environment is defined as the Trinity River, Sacramento River Valley, Clear Creek, San Joaquin Valley, Sacramento Delta areas, Central Coast Region, and Southern California Region. The Central Coast and Southern California regions were included as "additional areas where CVP and SWP deliveries are exported." This description of affected areas seems to ignore other areas where CVP and SWP deliveries are exported, mainly, the description should include additional places in the extended Bay-Delta area such as the Santa Clara Valley groundwater basin. While this basin is described in Appendix I, Chp 6 and Appendix I should describe the potential impacts to this area.
Chapter 6		General		The effects of the alternatives are organized by effects to Trinity River, Central Valley, and Southern California. There is no description of the exact geographic range being considered under the Central Valley effects sections. It is unclear if it combines several of the mentioned areas in the Affected Areas section or if it is defined in some other way. Additionally, it is not clear why the Central Coast is highlighted as an Affected Area earlier in the chapter, but effects to this region are not analyzed and likely should be in a similar manner to Southern California. Lastly, all areas where CVP and SWP deliveries are exported should be analyzed and discussed.
6	6.1, 6.1.2, 6.3.2.1, 6.3.3.1, 6.3.4.1, 6.3.5.1, 6.3.5.2	General	1-2, 5, 9, 12, 13	Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
6	6.1.1	All	6-1 - 6-2	Overview focuses on average use of groundwater, without information presented re groundwater use in critical/dry years, which is more relevant to impact analysis.
6	6.1.5	3rd par.	p.6-4	Refeernces made to average percent use of groundwater, without information presented re groundwater use in critical/dry years, which is more relevant to impact analysis.
6	6.1.6	all	p.6-4	Missing any information about groundwater basins or use.
6	6.3.2.2	P1,S4	p.6-6	Statement that "Changes in surface water supply deliveries may result in changes to groundwater pumping to offset the change in deliveries" does not provide much information to the reader as to what changes may occur, and does not acknowledge the interplay with SGMA, which will limit the ability of water users to rely on groundwater in the future.
6	6.3.2.2	Table 6.3-2	p.6-8	Description of various Alternative 2s is confusing - unclear whether 3rd and 4th versions include VAs or not.
6	6.3.3.2	Table I.2-4	p.9	Table does not appear to take into account changes that could be anticipated under SGMA.
6	6.3.4.2	all	p.12	Does not take SGMA into account.
6	6.3.5.2	P1,S3	p.6-13	Statement that "On average groundwater pumping is expected to increase for all alternatives compared to the No Actin Alternative except for Alternative 1" is an oversimple conclusion, given the implementation of SGMA during the period LTO will be implemented. Discussion of potential interplay with SGMA should be added.

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Chapter 9		General		Draw conclusions. What is the threshold for a significant impact? How is it determined? Are any of these changes significant?

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Chapter 10		General		Same as general comment on Chp 9. Draw conclusions. What is the threshold for a significant impact? How is it determined? Are any of these changes significant?

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Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Chapter 12		General		Recommend developing and including a table for reference that outlines all substantial adverse impacts to Fish and Aquatic Resources across Alternatives. This would also be helpful for the terrestrial species.
Chapter 12		General		Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Chapter 12			15	With respect to the Trinity River, pg. 12-15 states that: "Alternative 2, four phases, is expected to have spatially variable effects of flow and water temperature on spawning and egg incubation, likely ranging from slightly adverse to slightly beneficial, except for Alternative 2 With TUCP Without VA in which effects would likely range from no effect to minor and adverse." Where in the document are the changes to flow on the Trinity River discussed?
Chapter 12	12.2.2.1		17	12.2.2.1 Potential changes of winter-run Chinook salmon survival of incubating eggs and alevins in the upper Sacramento River. Is content pending under this impact? Currently it is blank.
Chapter 12	12.2.2.2	P 2-5	18	Some results indicate that actions can have effects that range from adverse to beneficial. One example of this is that Alt 3 and 4 may have adverse to beneficial effects on Winter-run Chinook salmon survival from risk of dewatering redds and stranding juveniles. Is more analysis planned to elucidate whether these Alternatives are more likely to be harmful or beneficial on these fronts? What can reduce the uncertainty in these cases?
Chapter 12	12.2.3.1	P 2	25	All alternatives are anticipated to have adverse effects to Spring-run Chinook salmon spawning habitat areas on Clear Creek. Are there modifications or mitigations that need to be considered to address this impact?
Chapter 12	12.2.5		29	The only impact analyzed on the San Joaquin River is: 12.2.5.1 Potential changes of CCV steelhead and fall-run Chinook salmon migration in the San Joaquin River. Consider other fish and aquatic impacts on the San Joaquin River that may need to be analyzed.
Chapter 12	12.2.6.1	Section title	30	"Potential changes of CCV steelhead spawning area and survival of incubating eggs and alevin in the Stanislaus River". Steelhead should be changed to “salmonids” as subsections of this impact include both steelhead and Fall-run Chinook salmon.
Chapter 12	12.2.7		32	12.2.7.1 Potential changes to juvenile winter-run Chinook salmon entrainment at export facilities from water project operations. Is content pending under this impact? Currently it is blank. Same question for 12.2.7.3, 12.2.7.5, and 12.2.7.8.

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
14	14.2.1.1	P1, S3	2	Assumes that increased water costs will be passed on to water customers through incresed water rates - does not acknowledge that under Prop. 218, customers can protest and block a rate increase.
14	14.2.1.1	all	2	It would be helpful to include the cost range per acre-foot to buy replacement water in previous years.
Chapter 14	14.2.1	Table 14-1	3	Clarify – are the changes to M&I water supply costs the total annual cost increase for each region as a whole spread amongst all contractors in each area? It would be useful to have a number for the change in water supply costs to SWP and CVP deliveries as a whole as well as it is difficult for a contractor to extrapolate their specific cost impacts with the current aggregation of the data.
14	14.2.1.2	P1	5	Does not provide much information to the reader as to what changes may occur, and does not acknowledge the interplay with SGMA, which will limit the ability of water users to rely on groundwater in the future.
Chapter 14	14.2.1	Table 14-5	7	The estimated impact to Total Agricultural Revenue in Dry Conditions in the San Joaquin River Region represents a huge number and a huge range ($136M to many billions of dollars). Are all dollar values in Table 14-5 scaled correctly? For example, should the $278,060,260 value under Alt 2 read as $278.06 since the units are written as millions of dollars? If not, recommend further discussing the drivers behind these estimated impacts and, for Alternative 2, if the wide range is mostly due to the sub-Alternatives in Alt 2 varying or if there is a large amount of uncertainty. Although it is likely that more of this is discussed in Appendix Q, more context is needed in this chapter.
14	14.2.1.2	P1	p.14-5	Statement that "During past water supply shortages, agricultural contractors have typically increased groundwater pumping to substitute for reduced water supplies" is accurate, but should be followed by sentence(s) explaining that SGMA will constrain ag contractors' ability to increase or sustain/maintain groundwater pumping in the future.
14	14.2.1.2	Table 14-3	p. 14-5	Ag water supply costs shown in average conditions, but separate year types should be provided, consistent with other water supply modeling results.
14	14.2.1.2	Table 14-3, Table 14-4, Table 14-5, Table 14-6	pp. 14-5 - 14-7	Ag water supply costs on tables are in concrete numbers, but text describing tables should be revised to clarify over what time step the water supply costs would occur - 30 years? Less than that?

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
15	15.2.1.1	P1	p. 15-6	Discussion speaks only to average changes in deliveries, not via year type. Separate year type information should be described.
15		15.2-1	p. 15-2 - 15-6	The variations of Alternative 2 result in widely different outcomes with respect to agricultural impacts. For example, Figure 15.2-1 shows that the long-term average change under each variation of Alternative 2 as follows: (1) -52,808 AFA; -19,633 AFA; (3) - 54,807 AFA; and (4) +4,050 AFA. As a result, more context is needed to understand how each of these variations will operate if Alternative 2 is selected as the preferred alternative.
15	15.2.1.2	P1-2	p. 15-7	Unlcear what time step the ag acreage impacts would occur. Suggest adding to table and text.
15	15.2.1.3	P1	p.15-8	Suggest Reclamation work with contractors to consider and evaluate additional mitigation measures to help mitigate change in irrigated acres. A recommendation that water agencies diversify their water portfolios is not adequate mitigation.

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17	17.2.1.1		4	Chapter 17 recognizes that Alternative 2 will have a signficant impact on agricultural jobs in the Sacramento Valley (32.9% decrease), but states that a far smaller number of agricultural jobs will be affected by Alternative 3 (11.1%). It is unclear why agricultural job losses would be more severe under Alternative 2, as compared to Alternative 3, when Alternative 3 results in more significant water supply reductions. Chapter 17 states that: “Changes in recreational visitation resulting from low water levels in Trinity Lake could impact the local economy in Trinity County. As described in Appendix S, Recreation Technical Appendix, and Appendix T, Environmental Justice Technical Appendix, there is potential for Alternative 2 without TUCP and with Delta VA to result in the drawdown of lake elevations under certain conditions that make the boat ramps unusable . In periods when the boat ramps would be non-operational, recreational visitation is expected to decrease by up to 27%, which could affect the revenue of local businesses that rely on visitors (e.g., Shasta-Trinity National Forest, retail stores, hotels). Because Trinity County is considered a “poverty area,” a reduction in jobs and/or labor income within the tourism industry in the county could have disproportionately high and adverse effects on low-income populations.”
17	17.2.1.1		5	Where in the document are the changes to flow on the Trinity River discussed?

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22	22.3		2	Chapter 22 states that changes to flood control were not evaluated because the flood control requirements for reservoirs within the plan area would not change. However, statements in Ch. 3 regarding Alternative 2 suggest that there would be changes to reservoir operations that might affect flood control operations: •"Alternative 2 updates the table for December through February releases to require more storage in Shasta Reservoir for higher release as shown in Table 3.4-1." (Ch. 3, pg. 45.) •"Reclamation is proposing to change the balance between risks of flood control releases for Shasta Reservoir and place a higher priority on maintaining storage for drought protection. The strategy is framed around a framework adapted from the multi-year drought sequence experienced in Victoria, Australia (Mount et al. 2016, "Victorian Objectives") that establishes different objectives depending on hydrologic conditions and identifies actions that can be taken for fishery management and drought protection." (Ch. 3, pg. 46.) As a result, Chapter 3 should either be amended to clarify that the various proposals to refine reservoir operations based on the Victorian Objectives will not affect the existing flood control curve for reservoirs in the project area, or Reclamation should identify the proposed changes to reservoir operations and discuss potential flood control impact.

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Appx E	E.2.4	P6 S2	p.E-20	Sentences should be corrected to read: "It can pump up to 700 cfs from the Delta-Mendota Canal to the California Aqueduct and convey up to 900 cfs from the California Aqueduct to the Delta-Mendota Canal. This structure was built to help both federal and state water projects more effectively move water from the Delta into the California Aqueduct, the Delta-Mendota Canal, and San Luis Reservoir."
Appx E	E.2.4.5	P1-S1	P.E-26	Incorrect titles of transfer programs. Sentence should be corrected to read: "Transfers not meeting these requirements, including out of basin transfers (e.g. North to South Water Transfers, Exchange Contractors Transfers, Warren Act Transfers), follow the *Draft Technical Information for Preparing Water Transfer Proposals, as updated in 2019* (Water Transfers White Paper)."
Appx E	E.2.4.5	P3	P.E-26	Reference in first bullet should be to "North to South Water Transfers"
Appx E	E.2.4.5	P3	P.E-26	Reference in second bullet should be to "Exchange Contractors Transfers"
Appx E	E.3.1			Section is blank under heading - error?
Appx E	E.5.11.4 - E.5.11.6, E.5.13.4.5		P.E-116, E-128	Sections blank
Appx E	Throughout			Suggest changing references to "Bernice Frederic Sisk Dam" to "B.F. Sisk Dam," consistent with common use.

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F			11	In Appendix F, the "Callouts Tables" provide more detail on the flow components that are affected under the variations to Alternative 2, however, this table only identifies 3 different variations of Alternative 2 (not 4) and none of those variations include use of TUCPs.
App F Attachment 1-12.2	2.2		139	The climate change scenario include increase in both temp and precipitation. There is no mention of the potential impacts due to snow pack melt rates.
App F Attachment 1-3	2.7		148	In the previous ROC LTO, the Climate Change analysis was not sufficient for DC approval as it did not look at a long enough time frame for impacts. It was suggested to use a 50 yr projection. Only projecting to 2037 is a vunerability of the analysis and should be extended to meet the requirements for analysis and approval.
App F Attachment 1-12.3		Table 6	167	Check Table 6 - Salvage Loss. It suggests that there was no salvage loss 2020-2022. That does not seem accurate.
App F Attachment 1-3		Table 21	182	2021 indicates 0%, is that correct?
App F Attachment 1-12.5	Model Updates 15 cm of SLR		198	The SLR prediction can vary greatly based on geographic region. The 15 cm is likely an underestimate for the more vulnerable areas in relation to both salt water innundation and subsidence. Suggest increasing to max of 25 cm.

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Appendix G	G.1	P1, S2	1	Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Appendix G	G.1.2.3 Selenium	P4, S5	G-10	This sentence, "The project began in 1996 and has since reduced the selenium load discharged from the Grassland Drainage Area from 9,600 pounds (lbs) to 3,700 lbs in 2017 (Bureau of Reclamation 2017)," uses out-of-date data. We suggest replacing with the following, "The project began in 1996 and from that time to 2022, has reduced the selenium load discharged from the Grassland Drainage Area from more than 10,000 pounds (lbs) to 22 lbs in 2022 (Grassland Bypass Project 2022 Annual Monitoring Report)."
Appendix G	G.1.2.3 Selenium	P4, last sentence	G-10	This is misleading. The new EPA selenium critera do not apply to site-specific WDRs. This sentence should be the start of a new paragraph and should note that.
Appendix G	G.1.3	all	18	Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Appendix G	G.1.8.1.1 Selenium	Table G.1-18	G-46	This table presents the water quality objective in mg/L, but all other WQOs are using µg/L which may create unnecessary confusion. Suggest presenting this table in µg/L as shown in redlined image provided.
Appendix G	G.1.8.1.1 Selenium	P3, S4	G-46	This sentence, "The Grasslands Bypass Project has reduced the load of selenium discharged from the Grassland Drainage Area by 61 percent," uses out-of-date data. We suggest replacing with the following, "The Grasslands Bypass Project has reduced the load of selenium discharged from the Grassland Drainage Area by 99 percent from the project's inception in 1996 through 2022 (San Luis & Delta-Mendota Water Authority, Grassland Bypass Project 2022 Annual Monitoring Report)."
Appendix G	G.1.2.3 Selenium	P3, S5	G-46	This sentence, "Efforts to decrease the selenium loading to the San Joaquin River include the Grassland Bypass Project, which has decreased selenium loading by an average of 55% from the Grasslands Drainage Area in comparison to pre-Grassland Bypass Project conditions (1986–1996 to 1997–2011) (Grassland Bypass Project Oversight Committee 2013)," seems reduantant; suggest deleting.
Appendix G	G.1.8.1.1 Selenium	P3, S6-7	G-46	These sentences, "In the San Joaquin River below the Merced River, selenium concentrations decreased from an average of 4.1 µg/L during pre-project conditions (1986 to 1996) to 2 µg/L (1997 to 2011). The continued operation of the Grassland Bypass Project is expected to achieve the Central Valley Basin Plan objectives for the San Joaquin Valley (Bureau of Reclamation and San Luis and Delta-Mendota Water Authority 2009)," use out-of-date data. We suggest replacing with the following, "In the San Joaquin River below the Merced River, selenium concentrations decreased from an average of 4.1 µg/L during pre-project conditions (1986 to 1996) to 0.3 µg/L (2018 to 2022 (San Luis & Detal-Mendota Water Authority). The continued operation of the Grassland Bypass Project is expected to achieve the Central Valley Basin Plan objectives for the San Joaquin Valley (Bureau of Reclamation and San Luis and Delta-Mendota Water Authority 2009)."
Appendix G	G.1.8.1.1 Selenium	last paragraph of section	G-47	Water quality monitoring data is reported through the Central Valley Regional Water Quality Control board. SFEI no longer posts GBP data.
	G.1.8.1.2 Electrical Conductivity, Total Dissolved Solids, and Salinity	last sentence in section	G-49	The program is **not** the "San Joaquin River Water Quality Improvement Prgraom," it is the "San Joaquin River Improvement Project," please correct
Appendix G	G.2.5.1.6 San Joaquin River	P1, S1	G-179	Disagree that 22% is a "small" change in flow. Suggest deleting the word "small".

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Appx H	Throughout			All - modeling results should be broken down by all year types, not just average changes to deliveries, in order for changes to have meaning to contractors.
Appx H	H.2.1		H-24	Appendix H states that: "As discussed in Section H.2.1, Methods and Tools, Alternative 2 consists of four phases that are considered in the assessment of Alternative 2 to bracket the range of potential impacts. Alternative 2, Multi-Agency Consensus, provides for governance decisions that would be made at certain junctures over time, which are described as four different "phases". . . . The four phases were all evaluated to present the maximum possible effects (adverse and beneficial) resulting from operations under any singular phase. This section presents tables with both the maximum potential water supply deliveries under all phases of Alternative 2 (best-case scenario) and the minimum potential water supply deliveries under all phases of Alternative 2 (worst-case scenario)." (Pg. H-24.) However, all of the tables and accompanying text discussion in Appendix H only evaluate Alternative 2 as a single alternative and do not distinguish the water supply changes from each different phase. This is particularly strange because Chapter 5 provides water supply change information for each of the four variations of Alternative 2.
Appx H	H.2.5.1.1	Table H.2-8	H-26	Table relative to maximum contract deliveries shows -33 taf difference for settlement contractors. Explanation is required, as it is unclear how settlement contractors would have greater change than ag contractors, given contract requirements. Same comment applies to tables / results throughout Appendix H.

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Appx I	I.1.2	all	2	Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Appx I	I.2.1	all	77	States that the exact details of sustianable management under SGMA are unknown. But should also mention that SGMA may signiicantly limit potential for increased groundwater pumping.
Appx I	I.2.4		PP.I-140 et seq.	Discussion re potential effect on groundwater conditions should acknowledge that SGMA may significantly limit potential for increased groundwater pumping under Alt 2 (and other Alts).
Appx I	I.2.8	Table I.2-26	pp.I-199 - I-206	Impacts should be presented by all year types, not just average changes, in order for changes to have meaning to contractors.

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Appx O - Part 1		General		Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Appx O - Part 1	O.1	2nd par 2nd line	O-1	"Sacramento-San Joaquin Rivers Delta" to Sacramento-San Joaquin Bay-Delta
Appx O - Part 1	O.1.1	Table 0.1-1	O-3	for steelhead the State Status is listed as none but steelhead are a species of special concern(SSC) and petitioned for listing
Appx O - Part 1	O.1.2	last line 2nd par	O-5	add "and adult" between juvenile fish.
Appx O - Part 1		General		The appendix is inconstant in presenting units in English, in metric, and in both. Many of the conversions should be rounded to appropriate level e.g., 170 mm TL (6.69 inches) would be more appropriate as 170 mm (~7 inches)
Appx O - Part 1	O.1.2.7	last paragraph	O-23	add per year after 300 fish
Appx O - Part 1	O.1.2.8	1st par	O-24	Clarify if the diseases being discussed are only observed in hatcheries or are they also a know problem for fish in the wild
Appx O - Part 1	O.1.3.2	last line of section	O-26	The report identifies striped bass and American shad as important commercially but I think they are primarily recreational species in California
Appx O - Part 1	O.1.3.3	Winter-run discussion	O-26	Several important topics that are not discussed in this section are instream flow management in Sacramento River, use and operations of the TCD, gravel and habitat improvement projects downstream of Keswick for winter-run by Reclamation and others, Coldwater pool management in Shasta and temperature management down stream estimated winter-run egg mortality, JPE and JPI, RBDD RST monitoring and production/survival estimates, hatchery production and genetic management, and harvest protection in the spawning area.
Appx O - Part 1	O.1.3.3	Spring-run chinook salmon discussion, last sentence	O-28	The upstream dam releases would not be expected to manage water temperatures 100 miles downstream. This should be clarified. This section is missing a discussion of spring-run hatchery production such as the Feather River
Appx O - Part 1	O.1.3.3	Fall-/Late Fall-run Chinook Salmon discussion	O-29	This section is missing a discussion of hatchery production of fall-run and late fall-run Chinook as mitigation for SWP and CVP dams. Hatchery production to benefit commercial and recreational harvest. Removal of RBDD and installation of fish screens.
Appx O - Part 1	O.1.3.3	Steelhead discussion	O-29	This is missing a discussion of steelhead hatchery production, data from Chipps Island trawl on seasonal timing and population estimates, SWP and CVP salvage observations, and recreational harvest
Appx O - Part 1	O.1.3.3	Green sturgeon discussion, 1st paragraph	O-31	Note that a green sturgeon was captured in restoration program fyke trap upstream of Merced River in April 2020
Appx O - Part 1	O.1.3.3	Discussion of green sturgeon	O-31	The discussion should include mention that there is no hatchery production for green sturgeon, trends and observations from SWP and CVP salvage (both juvenile and adults), no commercial or recreational harvest other than incidental to white sturgeon
Appx O - Part 1	O.1.3.3	White sturgeon discussion	O-33	If available add more recent citations for white sturgeon. Most of the ones used are 20 years old.
Appx O - Part 1	O.1.3.3	White sturgeon discussion	O-33	The report cited Kolkhorst et al 1991 for a relationship between Delta outflow and white sturgeon abundance - is this data still relevant? The analysis should be updated to use data from the past 30 years. No discussion is presented on recreational harvest, no hatchery production, and no discussion of trends and observations from SWP or CVP salvage
Appx O - Part 1	O.1.3.3	Splittail, last sentence	O-34	The discussion of potential mechanisms of effect for splittail is helpful but this type of discussion is not presented for other species of fish
Appx O - Part 1	O.1.3.3	Hardhead discussion	O-34	There is no discussion of harvest (should be minimal) or trends and observations from salvage. Are hardhead common in salvage? what lifestages? Hardy? Etc.
Appx O - Part 1	O.1.3.3	Hitch discussion	O-35	Same comment as for hardhead. Many of the references throughout the appendix include a page number reference but most do not - standardize all.
Appx O - Part 1	O.1.3.3	Lamprey discussion	O-35	Same comment as for hardhead.
Appx O - Part 1	O.1.3.3	Western river lamprey discussion	O-36	Same comment as for hardhead.

Appx O - Part 1	O.1.3.3	Shad discussion	O-36	Since American shad are a favorite game fish in the Sacramento, Feather, and American Rivers which also serve as spawning habitat the discussion should be expanded. Is there a flow survival relationship for eggs and larvae in the rivers? Are they salvaged in high numbers? what lifestage is salvaged? Would changes in reservoir operations or water temperature management for salmonids impact shad spawning?
Appx O - Part 1	O.1.3.3	Threadfin shad discussion	O-37	The last paragraph is a good example of how salvage could be discussed for other species.
Appx O - Part 1	O.1.3.3	Striped bass discussion	O-37	The discussion of striped bass as a predator on salmon and other fish should be expanded. Discuss predation removal studies at both the SWP and CVP and effects on fish salvage and predation mortality. Striped bass in the rivers during spawning overlap with salmonid migration and lead to greater predation mortality. Predation at the salvage release sites. Add discussion of trends and observations at SWP and CVP salvage.
Appx O - Part 1	O.1.3.3	Black basses discussion, 2nd par 2nd line	O-38	revise "established streams and reservoirs" to established populations in streams and reservoirs
Appx O - Part 1	O.1.3.3	Bass	O-38	Discuss how fluctuations in reservoir storage (especially in the spring) elevation impact the success of bass spawning and nest dewatering
Appx O - Part 1	O.1.3.3	Missing section	O-40	Need to include a discussion of Delta and longfin smelt! Major species of concern
Appx O - Part 1	O.1.3.4	2nd par 3rd and 7th lines	O-41	in addition to discussing urban encroachment, agricultural reclamation and land use changes should also be included in the discussion
Appx O - Part 1	O.1.3.4	1st line	O-41	Add discussion of the work by Reclamation and others for spawning gravel augmentation as part of CVP restoration activities. The discussion of spawning limits on line 7 is true for anadromous salmonids but not for striped bass or American shad. Be more specific.
Appx O - Part 1	O.1.3.4	Spawning habitat discussion, last sentence	O-41	The report says that spawning habitat decreases with distance downstream and likely limits spawning in the lower river. This is true only for some species (salmonids and sturgeon) not for many others (splittail, Delta smelt, longfin smelt, etc., that all spawn downstream.
Appx O - Part 1	O.1.3.4	Water Temp discussion	O-42	There is substantially more literature on water temperature and its effects on fish. This will be a critical issue in the effects analysis for downstream of Shasta, Feather River, American River, Trinity River, Stanislaus, etc. This needs stronger support and links to the most recent literature. Discuss Reclamation annual temperature management planning, operations, TCD, monitoring, modeling, etc.
Appx O - Part 1	O.1.3.4		O-43	Add discussion of USBR restoration program in the Sacramento and American rivers by John Hannon. Update to current activities and restoration funding (MOFO)
Appx O - Part 1	O.1.3.4	2nd paragraph, 2nd line	O-43	Instream flow is important in spawning site selected but I think water temperature is equally important for winter-run below Keswick
Appx O - Part 1	O.1.3.4		O-43	Throughout: same comment as above regarding importance of water temperature not just instream flow
Appx O - Part 1	O.1.3.4	Discussion	O-43	The discussion of spawning habitat is really salmonid centric. Why no discussion of spawning habitat for other species including Delta and longfin smelt, sturgeon, splittail, etc.
Appx O - Part 1	O.1.3.4	Rearing Habitat Discussion	O-45	Expand discussion of the operations and benefits of the flood control bypasses for juvenile salmon rearing and growth, splittail spawning, food production. The discussion sat the end of paragraph 4 says rearing habitat is essential for the recovery …. referring to only green sturgeon. This statement is true for all species of interest. The section does not address rearing habitat in the lower river, Delta, and bays or the San Joaquin River?
Appx O - Part 1	O.1.3.5	2nd paragraph last sentence	O-45	add "and increase the risk of predation mortality" after intake and before (National
Appx O - Part 1	O.1.3.5	2nd par	O-45	Major diversions that are now screened include RD108, Sutter Mutual, RBDD. The discussion should be updated.
Appx O - Part 1	O.1.3.5	Discussion	O-45-46	The discussion focuses on the upper Sacramento River. What about conditions downstream of the I Street Bridge and through the lower river, Delta, Bays, San Joaquin River?
Appx O - Part 1	O.1.3.7	Discussion	O-48	add discussion of the hatchery review program, production of spring-run, fall-run, late fall-run, and steelhead at Coleman, Feather River, American River, Merced River, and Mokelumne River hatcheries to be complete. Also include the Delta smelt culture facility and the plans for Delta smelt culture at Rio Vista
Appx O - Part 1	O.1.3.8	Discussion	O-49	Briefly discuss disease risk in the hatcheries that are well documented and can be treated in contrast to wild populations where severity of disease/mortality is largely unknown.
Appx O - Part 1	O.1.3.9	Discussion	O-49-50	Expand the discussion on predation mortality. Chinook salmon and steelhead survival studies show high losses thought to be from predation. The NMFS predation study. The EBMUD Mokelumne River predation study, Clifton Court Forebay studies, predation studies at CVP, etc.
Appx O - Part 1	O.1.4	Discussion	O-50	In addition to Battle Creek discuss active restoration in other major creeks like Deer, Mill, Butte that support spring-run and salmon and steelhead in Feather, Yuba, American, Mokelumne, Stanislaus rivers

Appx O - Part 1	O.1.4.1	All	O-50	It seems more logical to combine this discussion with Section 0.1.3.6 on Hatcheries as well as discuss FR and Nimbus
Appx O - Part 1	O.1.5	Map	O-52	Make label of Clear Creek stronger
Appx O - Part 1	O.1.5.1	Flow Discussion	O-53-54	Why is flow not discussed similarly for other rivers effected by CVP and SWP operations?
Appx O - Part 1	O.1.5.1	Water Temp Discussion	O-54	The discussion of water temperature and criteria for Clear Creek is more detailed than for the Sacramento, Feather, American, Stanislaus, and San Joaquin rivers. River temperature will be a key issue in the effects analysis of alternatives
Appx O - Part 1	O.1.5.2	Figure title	O-56	modify the figure title to say 1998-2022
Appx O - Part 1	O.1.5.2	all	O-55-59	Much in this discussion is redundant with discussion of fish in Sections above. Can these all be consolidated and then individual sections can cross-reference and delete the redundancy? Leave in material that is relevant to the topic in individual sections
Appx O - Part 1	O.1.6.2	Hardhead	O-67	Redundant - see comment above
Appx O - Part 1	O.1.6.2	White sturgeon	O-68	Update this section. There should be more recent information on white sturgeon from CDFW and others
Appx O - Part 1	O.1.6.2	Black bass	O-68	This entire section is redundant with earlier discussions. Cross-reference and then delete this text. Add discussion related to bass in Lake Natomas and the American River. Water elevation fluctuations in the reservoirs during spring impact bass spawning success. What is relevant to the effects analysis?
Appx O - Part 1	O.1.6.2	Aquatic habitat discussion	O-69	Expand and update discussion of habitat enhancement actions implemented by Reclamation and others over the past decade in the lower American River
Appx O - Part 1	O.1.6.2	3rd par	O-71	This discussion implies that Reclamation controls the DCC gate operation but I don't think it needs to be in compliance with D-1641 from February 1 to May 20 with more flexible operations the rest of the year in consultation with agencies
Appx O - Part 1	O.1.6.2	6th par	O-71	The discussion of the hatchery destroying all surplus eggs was not included for either Coleman or Feather River
Appx O - Part 1	O.1.7		O-74	It would be helpful to add an introduction that briefly shows its location and linkage to CVP facilities
Appx O - Part 1	O.1.7.1	5th para	O-75	occurrence should be concurrence
Appx O - Part 1	O.1.7.1	Tables	O-77-82	Why is there so much detail on daily instream flows for the Stanislaus but very little for all the other rivers. Suggest delete the tables
Appx O - Part 1	O.1.7.2	1st sentence	O-84	How can it say that DO of 7 mg/L is required to be met year-round and then specify only from June 1 to September 30?
Appx O - Part 1	O.1.7.2		O-85	Parts of this discussion are redundant with earlier discussion and can be cross-referenced and deleted
Appx O - Part 1	O.1.7.2	Entire threadfin shad section	O-88	This discussion is redundant with earlier discussions and can be cross-referenced and deleted here. Add discussion related directly to threadfin shad in the Stanislaus and reservoir.
Appx O - Part 1	O.1.7.2	Black Bass discusion	O-89	Add discussion related directly to bass in the Stanislaus and reservoir. Discuss the key mechanisms to be evaluated in the effects analysis and lay the foundation here - goes for all species and locations
Appx O - Part 1	O.1.7.3	1st para in spawning and rearing habitat	O-90	Note that these remnant gravel mining pits are frequently predation hot spots for juvenile salmon and steelhead
Appx O - Part 1	O.1.8	3rd par	O-92	Add striped bass to the species list on line 2. Spring-run like salmon have been reported from SJR tributaries so saying they no longer exist in the river may be too strong. Update this discussion since spring-run have been introduced from the Feather river and have returned as adult, spawned, and produced juveniles below Friant Dam as part of the restoration program. It is considered to be an experimental population by NMFS. This ,ay be covered later in the discussion
Appx O - Part 1	O.1.8.1	Water Temp Discussion	O-93	Water temperature is a key factor considered when recommending instream flow releases as part of the restoration program. This discussion should be updated to reflect the current planning and operations. The instream flows, although prescribed in the Settlement, are now determined by the Restoration Administror, in consultation with the TAC, as recommendations for implementation by Reclamation. These can change throughout the year as new conditions and information is available. Water storage and coldwater pool in Millerton are important considerations.
Appx O - Part 1	O.1.8.2	Species list	O-93	The first bullet in the species list should be spring-run Chinook salmon since they are the primary target species for the restoration program. They are not even on the list. Need to add a section in O.1.8.2 for Spring-run Chinook Salmon.
Appx O - Part 1	O.1.8.2	all	O-93-97	Most of the discussion in these sections focusses on the San Joaquin River downstream of the Stanislaus River. This discussion needs to be updated and expanded to cover the river upstream to Friant Dam as well as Millerton Lake
Appx O - Part 1	O.1.8.2	Steelhead discussion	O-94-95	The Mokelumne River has a steelhead run but is not included as a San Joaquin River Tributary?
Appx O - Part 1	O.1.8.2	P1, S4	O-95	This sentence needs to be rewritten since it did not make sense as presented
Appx O - Part 1	O.1.8.2	Green sturgeon	O-95	Update to include the capture of a green sturgeon in a fyke net upstream of the Merced by the restoration program in April 2020
Appx O - Part 1	O.1.8.2	White sturgeon	O-95	Update to include the capture of a white sturgeon in a fyke net upstream of the Merced by the restoration program in April 2020
Appx O - Part 1	O.1.8.2	P1-2	O-95	1st paragraph is redundant with earlier discussion. Cross-reference and delete. The 2nd paragraph is useful in describing the potential mechanisms for the effects analyses and should also be added to the discussion of Pacific lamprey

Appx O - Part 1	O.1.8.2		O-96-97	Many redundancies with earlier section. Cross-reference and delete. Expand discussion if they have been collected in the CDFW restoration program fish surveys or others
Appx O - Part 1	O.1.8.2	P1	O-97	Striped bass can be abundant in the lower San Joaquin River. FISHBIO has studies predation on salmon by striped bass in the river.
Appx O - Part 1	O.1.8.3	After 1st par	O-98	Insert a discussion here on the habitat between the Stanislaus River and Friant Dam. The discussion throughout this section focusses on the Stanislaus River downstream.
Appx O - Part 1	O.1.8.4	all	O-98	Expand the discussion of fish passage upstream of the Stanislaus River to Friant Dam. There are many major fish passage issues in the restoration area such as Sack and Mendota dams, flood control channels and bifurcation structures, road crossings, and others
Appx O - Part 1	O.1.8.5	all	O-98	Both the conservation hatchery and CDFW Friant trout hatcheries are impacted by Millerton operations and coldwater storage
Appx O - Part 1	O.1.8.7	Missing section	O-98	Add a discussion of habitat conditions etc. upstream in Millerton Lake
Appx O - Part 1	O.1.8.7	Organization	O-98	Move the discussion of these dams and reservoirs to Section O.1.7 Stanislaus River
Appx O - Part 1	O.1.9	P1	O-99	reference the North Delta arch-Cache Slough complex the mainstem Sacramento River and Delta channels as key habitat elements. Suisun Bay, marsh, and lower bays should also be discussed in this section. A map of the area would help. Why focus on the Yolo Bypass in the introduction to the exclusion of other areas? Much of the literature throughout this section is relatively old and can be updated
Appx O - Part 1	O.1.9.1	P2	O-101	note that plankton nets and larval nets (20 mm) provide valuable data as well but are not included under survey methods. Electrofishing has also been used near shore
Appx O - Part 1	O.1.9.1	Discussion	O-101	It would be good to add a discussion of Delta outflows required by D-1641/ BiOps/ITP as mechanisms regulating instream flows for fish habitat within the Delta and downstream bays
Appx O - Part 1	O.1.9.1	Discussion	O-101	Add a discussion of predation on adult winter-run by marine mammals in the Delta, predation on juvenile salmon by largemouth bass and striped bass and others, unscreened diversions in the Delta, changes in flows and current patterns, loss of shallow water rearing habitat, salvage trends and observations for winter-run, problems with juvenile identification and age-at-date vs genetic testing for salvage and other monitoring in the Delta
Appx O - Part 1	O.1.9.1	Spring-run, P2, last sentence	O-102	The text says DCC closure to reduce adult straying but my understanding is that the gate closure is primarily aimed at reducing juvenile migration into the central Delta where mortality is greater - clarify
Appx O - Part 1	O.1.9.1	Spring Run	O-103	Add a similar discussion to the winter-run section
Appx O - Part 1	O.1.9.1	Fall/Late Fall Run	O-103	In addition to reporting the entire seasonal distributions (e.g., December-June) it would be helpful to include the peak seasonal period of migration not just the extremes.
Appx O - Part 1	O.1.9.1	Fall/Late Fall Run	O-103	Add discussion of the Georgiana Slough barrier studies with citations. This has been included in the BiOp
Appx O - Part 1	O.1.9.1	Green sturegon	O-106	Suggest adding a sentence at the end that says something like "The direct impact of bioaccumulation of contaminants on the health, survival, and reproductive success of green sturgeon is unknown."
Appx O - Part 1	O.1.9.1	Green sturegon	O-106	Suggest adding a sentence like "Actions have recently been taken at theYolo Bypass Freemont Weir to provide upstream and downstream sturgeon passage."
Appx O - Part 1	O.1.9.1	white sturgeon	O-107	The sentence that says white sturgeon are most abundant in the Bay-Delta region citing Moyle 2002 is not very helpful. Where in the Bay-Delta are they most abundant (typically most fishing is in San Pablo and Central San Francisco Bays). Or is this a comparison between the Bay-Delta and other areas like the Klamath River?
Appx O - Part 1	O.1.9.1	Figure legend	O-108	add to the end of the ledgend "based on otter trawl sampling"
Appx O - Part 1	O.1.9.1	sturgeon	O-108	add a sentence noting that the eggs are adhesive and spawned over larger gravel and cobble substrate in the deep cool water pools of the Sacramento River
Appx O - Part 1	O.1.9.1	sturgeon	O-108	Note that CDFW reeduced harvest by implementing a length slot limit to better protect immature sturgeon and older large reproductive sturgeon. See the proposed addition to green sturgeon regaring the Freemont Weir
Appx O - Part 1	O.1.9.1	P1, after first sentence	O-109	Add a sentence noting the Delta smelt are listed as an endangered species under CESA. After the next sentence (Sommer et al, 2007a) suggest adding "reffered to as the Pelagic Ogansims Decline (POD)."
Appx O - Part 1	O.1.9.1	2nd par at end	O-109	Suggest adding a sentence noting that recent sampling by Gramaldo et al. showed that larval Delta smelt are present in shallow water inshore habitats. Update the discussion
Appx O - Part 1	O.1.9.1	P2, S1	O-113	Add Salinity Control Gate after Suisun Marsh
Appx O - Part 1	O.1.9.1	Discussion	O-113	Add Grimaldo et al. 2021 to the discussions - Re-Examining Factors That Affect Delta Smelt (Hypomesus transpacificus) Entrainment at the State Water Project and Central Valley Project in the Sacramento–San Joaquin Delta
Appx O - Part 1	O.1.9.1	Discussion	O-114	Add discussion on low Delta smelt population abundance resulting in non-detection in the salvage and use of surrogates for export operations
Appx O - Part 1	O.1.9.1	P1	O-114	Suggest adding "Longfin smelt currently are listed as a threatened species under the CESA. USFWS declined to list longfin smelt in ____ under the Federal ESA but currently USFWS is re-evaluating the species status and listing decision."

Appx O - Part 1	O.1.9.1	P2	O-114	Add that recently evidence has been reported of longfin smelt smelt spawning in the lower Petaluma River, Alviso Slough, and South Bay salt pond restoration area. Cite Hobbs and Moyle and others
Appx O - Part 1	O.1.9.1	discussion	O-115	The FMWT is not the best index of longfin smelt abundance since the survey does not cover the entire geographic distribution of the species and only part of the seasonal distribution
Appx O - Part 1	O.1.9.1	Figure legend	O-116	add to theledged that these results are from the FMWT, also add this to the text in the paragraph above the figure for clarity
Appx O - Part 1	O.1.9.1	discussion	O-116	Note that as part of CAMT Pete Smith recently re-evaluated the proportional entrainment index (PEI) for adult Delta smelt and found results consistent with Gross et al. and Kimmerer
Appx O - Part 1	O.1.9.1	Discussion	O-117	Add discussion noting that restoration of shallow water areas within the Delta and upstream in the Yoly Bypass (e.g., Big Notch project and others) are expected to benefit a number of native fish including Sacramento splittail. Also note that there is some recreational fishing for splittail to use as bait for striped bass.
Appx O - Part 1	O.1.9.1	Hardhead	O-118	Add relevant informaiton on abundance in Delta
Appx O - Part 1	O.1.9.1	Hitch	O-118	Add relevant informaiton on abundance in Delta
Appx O - Part 1	O.1.9.1	American Shad	O-118	Why are data from only 2010 and 2011 presented? Better to discuss general trends in salvage to give a more representative picture than just two individual years out of context. Also note that there is no recreational harvest of American shad in the Delta
Appx O - Part 1	O.1.9.1	Threadfin Shad	O-119	Is there a commercial fishery for threadfin shad for bait in the Delta?
Appx O - Part 1	O.1.9.1	Striped Bass	O-120	Why are data from only 2010 and 2011 presented? Better to discuss general trends in salvage to give a more representative picture than just two individual years out of context.
Appx O - Part 1	O.1.9.1	All	O-120	Add relevant informaiton on abundance in Delta. Largemouth bass support an impoartant economic recreational fishery in the Delta. The Delta is becoming a world class bass fishery support a large number of tournaments each inlcuding several that are nationally televised. The abundance and size of bass in the Delta shows an increasing trend. There are several papers that discuss bass in the Delta and potential predation onlisted species
Appx O - Part 1	O.1.9.1	P1	O-120	Add a short discussion of why starry flounder are being included in the discussion and not other estuarine species (e.g., why no discussion of northern anchovey or Pacific herring?). This discussion needs a link to the LTO effects analysis - are starry flounder collected in salvage? Any evidence of impacts from SWP/CVP facilities or operations on starry flounder?
Appx O - Part 1	O.1.9.2	P3	O-122	The list of species presented that have an outflow-abundance relationship relies on many old studies and preliminary analsyses. Several of these relatinsips are known to have changed over time (e.g., longfin smelt) and relationsips before the POD may no longer be valid. This needs more discussion and context rather than just a long list of species and references that may be out of contrext with current conditions. If this fundamental assumption of increased abundance in wet years with high Delta outflow is correct your should see a marked increase in their abundance in recent wet years based on FMWT and Bay Study catches. This should be done to help put this in context and avoid a false foundation for the effects analyses
Appx O - Part 1	O.1.9.2	P5	O-122	Throughout the appendix there are a number of refences to Feryer et al. regarding the relationsip between quality and availablity of low salinity habitat and Delta outflow. As here these early analysis were used as part of the basis of the 2008 USFWS BiOp. The Feryer et al. studies and BiOp were challenged in Federal court and Judge Wanger found it to be flawed and unreliable and remanded the BiOp to USFWS. The discussion should make it clear that not all study results are equal and need to be evaluated for their strenths and weaknesses before use in either the conceptual models and effects analyses.
Appx O - Part 1	O.1.9.2	P1	O-123	As mentioned above, in many recent years many of the Bay-Delta species have not increased in abundance in response to wet year hydrology and increased Delta outflows. This contradicts the hypothesis and conceptual model of flow-abundance relationships under current conditions in the Delta. Expand and update the discussion to provide a balanced presntation of current conditions and the foundation for the effects analyses
Appx O - Part 1	O.1.9.2	Yolo Bypass	O-124	Add a brief discussion of the recent experiment lead by Sommer to see if increased flow through the Yolo Baypass tow drain would result in increased phytoplankton and zooplankton production and food subsidies dowanstream in the Sacramento River. Aslo mention the Big Notch project and its benefits it increasing the magnitude, frequency and duration of floodplain inundation, the Freemont Weir fish ladder passge improvements and restoration activities and environmental easements in the Yolo Bypass to benefit fish and wildlife
Appx O - Part 1	O.1.9.2	Suisun Bay & Marsh	O-123	Add discussion of the salinity control gate operation and potential benefits to Delta smelt habitat, the State diverisons from Suisun Mash, and ongoing restoration projects in the area. Discuss the UCD long-term fishery monitoring program in the marsh and trends

Appx O - Part 1	O.1.9.2	Discussion	O-124	Add discussion to address impacts of non-native SUV (water weed) and floating vegetation (hyocine) on turbidty in the Delta. Aslo discuss how SWP and CVP export operation is now managed based on turbidty to reduce the risk of forming a turbidty bridge and increasing the risk of adult Delta smelt entrainment at the export facilities
Appx O - Part 1	O.1.9.5	Discussion	O-126	Add brief discussion of current human health warning about consumption of Delta fish as a result of contaminant bioaccumulation. Also note concerns regarding potential impacts to fish from the discharge of birth control products at wastewater treatment plants. Add UCD and fish health studies like the 2023 study Delta Smelt stress responses during fish salvage at the John E. Skinner Delta Fish Protective Facility, California and the 2022 study Investigation of Molecular Pathogen Screening Assays for Use in Delta Smelt and the study Contaminant and food limitation stress in an endangered estuarine fish as examples
Appx O - Part 1	O.1.9.6	1st par	O-127	At the end I suggest adding "These findings are consistent with the synthesis of salmon and steelhead survival studies by the CAMT Salmon Scoping Team (2017) and ongoing acoutic tag survival investigations."
Appx O - Part 1	O.1.9.6	North Delta Fish Passage & Entrainment	O-127	Add brief discussion of results of the EBMUD Mokelumnne River pulse flow operations to provide cues for upstream attraction by adults and downstream migration by juveniles.
Appx O - Part 1	O.1.9.6	North Delta Fish Passage & Entrainment	O-128	It seems unlikely to exceed these temperatures when most salmon are migrating upstream - has this been reported as a problem or issue? If so briefly discuss
Appx O - Part 1	O.1.9.6	North Delta Fish Passage & Entrainment	O-128	Did monitoring show that Delta smelt were present very often? How many times has pumping been reduced in the past 10 years as a result of Delta smelt in the area?
Appx O - Part 1	O.1.9.6	Yolo Bypass, P1 after first sentence	O-129	Suggest adding "Delays in upstream migration by adult salmon and sturgeon in the past by the Freemont Weir have resulted in increased legal and illegal harvest (snagging fish) in the pool downstream of the weir."
Appx O - Part 1	O.1.9.6	Yolo Bypass, P2, last sentence	O-129	Suggest deleting with the addition recommended above
Appx O - Part 1	O.1.9.6	Yolo Bypass, P3	O-129	Suggest adding at the end "As the Yolo Bypass flood water receeds fish present in the floodplain are exposed to decreasing water depths and increased risk of predation by birds."
Appx O - Part 1	O.1.9.6	Central and South Delta Fish Passage & Entrainment	O-129	Suggest adding discussions of results of CCWD fish monitoring with the new fish screen at Old River and Rock Slough; breif discussion of VAMP survival lstudies; discussion of Kevin Clarke acoustic tag studies of South Delta Temporary Barriers; recent NMFS predation studye; and summary of CDFW CHTR studies and salvage facilities and USBR studies and CVP
Appx O - Part 1	O.1.9.6	P2	O-130	The discussion of results of the Cunningham et al. 2015 studies or analyses is really questionable. This sounds like a hypothetical modelling analysis with no validation. Given the high variablity in what we do it is implausalbe to have real results showing an effect of 57.8% Note that this study has not been peer reviewed nor published in the scientific literature and should not be reliad upon for the effects analsyysis
Appx O - Part 1	O.1.9.6	P2, 5th line	O-130	Results of the 6-year steelhead survival study have been published by Buchanan et al. in 2021 titled Outmigration survival of a threatened steelhead population through a tidal estuary. This should be included with a brief summary of key results.
Appx O - Part 1	O.1.9.6	P3	O-130	Suggest expanding the discussion to summarize results of the study seperatley for each of the salmon races for use in the effects analysis
Appx O - Part 1	O.1.9.6	P4	O-130	Suggest expanding the discussion to note that results of the analyses found routing at junctions to generally be proportional to the flow split
Appx O - Part 1	O.1.9.6	P2	O-131	Add that current export management is sensitive to the lifestage, geographic distribution in the Delta, OMR levels, and risk assessments on a frequent basis by technical teams that recommend operational changes to protect various species of fish
Appx O - Part 1	O.1.9.6	Suisun Bay & marsh	O-133	Suggest adding a brief discussion of the two evaluations of the salinity control gate operations on adult Chinook salmon migration and on changes in salinity and Delta smelt habitat conditions within the marsh. Add habitat restoration actions ongoing and completed
Appx O - Part 1	O.1.9.7	Disease, P2	O-133	Global change from Mississippi silverside to inland silverside. Add more recent study results to update this discussion
Appx O - Part 1	O.1.9.8	Discussion	O-134	Briefly discussion the Boating and Waterways control efforts that are ongoing that are expected to improve fish habitat quality. Note that water hyacinth creats a debris handling and disposal problem at eth SWP and CVP trash racks. SWP needs to periodically chemically treat the forebay to reduce Brizian waterweed growth.
Appx O - Part 1	O.1.9.9	Discussion	O-135	Add information on the FISHBIO striped bass predation study that has been going on in the San Joaquin River and tribs as well as the EBMUD striped bass predation study downstream of Woodbirdge dam. The predation studies on salmon and steelhead as well as Delta smelt in CCFB (e.g., Clarke et al.) and removal efforts are relevant
Appx O - Part 1	O.1.9.9	Discussion	O-135	Suggest adding information from the Cavallo et al. predator removal study on the Mokelumne River and the NMFS predator removal study. Note that Anderson et al. also identified and impoartant relahipship between migration rate (exposure time) and the risk of predation mortality as part of one of the SWP/CVP reviews

Appx O - Part 1	O.1.10	Organization	O-137	Does the EIS also cover the SWP and CVP canals and downstream storage? If yes that discussion should go here
Appx O - Part 1	O.1.10	P2, last sentence	O-137	The discussion that SCVWD does not store SWP and CVP water should be checked and updated to current operations
Appx O - Part 1	O.1.10.3	P1	O-138	Shoulf fishing in the quary lakes used by ACWD for recharge be included and discussed?
Appx O - Part 1	O.1.11.1	P1	O-138	Does the Trinity River and reservoir need to be discussed in the appendix? Will potential impacts to fisheries on the Trinity be included in the effects analyses - if so they should get an equal level of discussion as the other river and reserovir systems
Appx O - Part 1	O.1.11.1	P2	O-139	This provides a good discription of the listing status on killer whales - a similar staus update would be helpful as part of the initial discussion of eahc listed fish species
Appx O - Part 1	O.1.12	Entire section	O-141	I suggest this discussion be moved before the killer whales and ocean discussion
Appx O - Part 1	O.1.12.4	Missing section	O-143	I suggest a new section be added that discusses the SWP California Aqueduct and CVP Delta-Mendota Canal. Briefly describe that these facilites suppoprt an active recreational fishery for Largemouth and striped bass.
App O - Part 2			O-62	Include the list of real-time monitoring from the 2020 ROD or FEIS with reference
App O - Part 2			O-63	Add the reference or link to the Drought Toolkit and the section of the 2020 PA
App O - Part 3			O-33	Last paragraph- when the modeling change is this minor (ex. <3%) this needs to be put into context of the detectable change, sensitivity analysis, or confidence intervals… (Alpha = 0.05). When these results are added to the impact summary, it would be useful to explain these limitations.
App O - Part 3			O-53	Greatly appreciate the inclusion and differentiation of the LAD vs genetic for winter-run. This will be helpful as we move towards the genetic analyses as the dominant identifier.
App O - Part 3	Green Sturgeon Delta		O-142	The discussion mentions the correlation btw green and white sturgeon. Due to the current consideration for the petition to list white sturgeon, please add language specifying that the white sturgeon are only being used as a proxy or indicator species for this analysis. It can easily be interpretted as impact analysis on white sturgeon in the delta
App O - Part 3	Longfin smelt		O-158	If LFS have a salinity range 0.5-6 ppt, then X2 without distant buffers for 6 ppt would not provide sufficient analysis to determine suitable habitat and the relation to the alternative.
App O - Part 3	White Sturgeon		O-214	Suggest changing "Because incubation time for white sturgeon is so short" How short ? Is only 4-6 weeks?
App O - Part 4	Water Temperature Analysis	P 4	O-201	Given the seasonal timing of kelt migration (February-June) the results for Alt 2 with TUCP without VA for a water temperature threshold of 66.2 F for migration indicate that 0 month-water year combinations provided favorable conditions. Water temperatures during the winter months of February and March are characteristically cool and should provide suitable temperatures for kelt migration (water temperatures in all years at this time of year would typically be in the 50s F). It seems unrealistic that during February water temperatures would not be below 66.2 F. Similar questions arise from the temperature analyses presented for many of the species and life stages in the EIS. For example that same paragraph reports that no favorable conditions exist for kelt survival (lethal limit of 69.8 F) in February-March? Without explanation these results impact the credibility of the effects analysis.
App O - Part 4	Summary	P1	O-216	Results of the entrainment analyses for adult green sturgeon "show possible adverse effects". Given the spacing on the trash racks at both facilities are adult green sturgeon ever actually collected in fish salvage after being entrained?
App O - Part 4	USFWS Delta Smelt Life Cycle Model	P1	O-217	The report concludes that the life cycle model predicts that both the no action and Alt 2 "resulted in population growth rates greater than 20% per year on average". If this life cycle model estimate is correct why has the Delta smelt population declined so dramatically in recent years? This does not seem like a credible result.
App O - Part 4	Potential changes to entrainment of Delta smelt	P1	O-219	The report states that although capable of assessing adult Delta smelt entrainment mortality the USFWS life cycle model was not used in the effects analysis. As mentioned above the USFWS life cycle model was used to assess population growth rate (page 217) but no explanation is given regarding why it was not used for entrainment. This applies to several of the Delta smelt effects analyses. The omission of the USFWS life cycle model from this element of the effects analysis raises questions about excluding results that may not be favorable.
App O - Part 4	Potential changes to entrainment of Delta smelt	P1	O-219	The last line of this section states "evaluate changes between Alternative 1 and the No Action Alternative". The appendix discussion is regarding Alterative 2. Is the reference to Alt 1 an error?
App O - Part 4	Maunder and Deriso Life Cycle Model	P1	O-221	The use of the Maunder - Deriso Delta smelt life cycle model in this analysis but the exclusion of the USFWS life cycle model could suggest to some readers selective (cherry picking) of results presented in this assessment. A brief explanation would help avoid this issue.
App O - Part 4	Potential changes to entrainment of Delta smelt	P1	O-222	The report finds that differences in flow between alternatives "may have effects on entrainment of Delta smelt eggs and larvae". Delta smelt eggs are adhesive and are layed on substrate particles (sand, vegetation, rocks, etc.). I am not aware of any data suggesting these eggs are vulnerable to entrainment?
App O - Part 4	OMR bins	P1	O-223	The report finds that potential entrainment under the -5000 cfs bin is up to 5% higher under Alternative 2 for the -3500 cfs OMR bin (72 vs. 69%).This finding is confusing since 72-69% = 3% and not the 5% reported.

App O - Part 4	Potential changes to longfin smelt from seasonal operations	P1	O-229	The report states that differences in flows between the alternatives "may have effects on longfin smelt eggs and larvae including X2 position and prey availability". I am not aware of any data that indicates longfin smelt eggs, which are adhesive, are adversely effected by changes in Delta outflow, X2 location, or prey availability
App O - Part 4	Potential changes to longfin smelt from seasonal operations	P1	O-233	The finds differences in flows "may have an effect on juvenile longfin smelt including X2 position, abundance, and prey availability". The abundance - outflow analysis concludes that there are only small differences between the Alternative 2 actions and the No Action Alternative following the same format as for other species. Some may argue that this is not the appropriate conclusion since the No Action Alternative is already insufficient to provide adequate flows for longfin smelt and should not be used as the baseline standard for comparison to the Alternatives. Further, Entrainment should be added to the list of factors since it is included on page 235.
App O - Part 4	Redd Dewatering Analysis	P2	O-240	The final statement in this section provides a finding that dewatering risk is similar under the No Action and Alternative 1. This section addresses Alternative 2. Is this an error?

2021 LTO Cooperating Agency Draft EIS Comment Matrix				
Agency/Commenter Name/Title:				
Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
App P	P.2.4.1.2	Giant Garter Snake	P-64	The GGS currently has challenges with available data for analyses. This section needs to include the assumptions and limitations associated with the cited studies. The discussion seems a bit circular.
App P	General			This appendix should be formated to mirror the analysis approach for the aquatic species. Include tables to indicate the pos/neg impacts of the Alts on each species. At minimum, bold or sub-title the species in the discussion. This will assist with the cumulative effects analysis.

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Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Appx Q	Q.1.1.1	all	1	Considering that a prior section states that the Trinity will not be evaluated in this document, please clarify Trinity's evaluation in this document.
Appx Q	Q.2.1.2	all	18	Does not provide much information to the reader as to what changes may occur, and does not acknowledge the interplay with SGMA, which will limit the ability of water users to rely on groundwater in the future.
Appx Q	Q.2.4.1.3	P1-S2	p.Q-37	Typo - reference to Alternative 1 should be changed to Alternative 2 in this sentence.
Appx Q	Q.2.4.1.3	P1-S4-S5	p.Q-37	Sentence indicating there would be reduction in water supply costs and water rates is misleading. Although water supply costs could decrease with less water, water rates would not necessarily decrease, as OM&R costs would be spread across a smaller number of AF/deliveries, potentially increasing the rate. It is unlikely that decreased water supply would result in an increase in disposable income and more discretionary income.
Appx Q	Q.2.4.2.3	Table Q.2-27	p.Q-48	Table's reference to average and dry conditions should be expanded to show impacts in various water year types, to have more meaning to contractors. Same comment applies to the rest of the tables in the appendix.

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Agency/Commenter Name/Title:				
Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
Appx R	R.2.3.1	Throughout		Reference to average changes in CVP/SWP deliveries should be expanded to include changes in specific year types.
Appx R	R.2.7	P1	p. R-68	Suggest Reclamation work with contractors to consider and evaluate additional mitigation measures to help mitigate change in irrigated acres. A recommendation that water agencies diversify their water portfolios is not adequate mitigation.
Appx R	R.2.8	Table R.2-36	p. R-71	Suggest that decreases are not likely to resut in the conversion of ag land to non-ag uses with the implementation of MM AG-1 is not supported by the text in this document. It is unlikely that water users will be able to develop adequate quantities of alternaitve sources of water to avoid the conversion of ag land, especially with implementation of Alternative 2 or Alternative 3.

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Agency/Commenter Name/Title:				
Date:				
Chapter Number/ Appendix Letter	**Section Number and Title**	**Paragraph (P) #, Sentence (S) #, Figure #, or Table #**	**Page Number**	**Comment/Text Insert**
T			All	Appendix T states that "Multiple phases make up Alternative 2: the Without Temporary Urgency Change Petition (TUCP) Delta Voluntary Agreements (VA) phase, the Without TUCP and Without VA phase, the Without TUCP Systemwide VA phase, and the With TUCP and Without VA phase. Alternative 2 may include a combination of these phases, although the With TUCP and Without VA phase would only be implemented as a backstop during drought." The remainder of the analysis in Appendix T then proceeds without any discussion of the variations of Alternative 2.

Combined NMFS/USFWS LTO Biological Opinion Schedule

Subject to change

Milestone	NMFS Completion Date	FWS Completion Date	Note
WIIN Act Coordination Meeting #1	**April 29, 2024**		Describe BiOp schedule and status update
WIIN Act Coordination Meeting #2	**July 4th week**	**June 24th week**	Overview of draft BiOp structure for WIIN review
Draft BiOp	**July 26, 2024**	**June 28, 2024**	First draft for Peer/WIIN/Stakeholder Review
WIIN Act Review	**August 12, 2024**	**July 15, 2024**	2 week WIIN act review
Peer Review	**August 30, 2024**	**July 29, 2024**	1 month Independent Peer Review
WIIN Act Coordination Meeting #3	**3rd week of August**		Post Review Meeting with PWAs
Final Biological Opinion	**December 6, 2024**	**October 15, 2024**	Finalize and Rollout. Assumes No J/Adverse Mod

Trinity River Interested Party Technical Meeting

April 18, 2024

Welcome and Tribal Joint Lead Introductions

- Hoopa Valley Tribe
- Yurok Tribe

Meeting Purpose

- Engagement with Interested Parties
- Update on the progress Reclamation and the Joint leads have made
- Upcoming opportunities for involvement

Coordination Forums

- Informal Technical Meetings (Today)
  - Coordination for discussion and dialogue
  - Input will be accepted throughout the process
  - Input provided now is not formal for NEPA purposes
- Next public meeting is the WIIN Act 4004 Quarterly Update Meeting in June
- Formal comments should be provided during the Cooperating Agency Draft EIS and Public Draft EIS

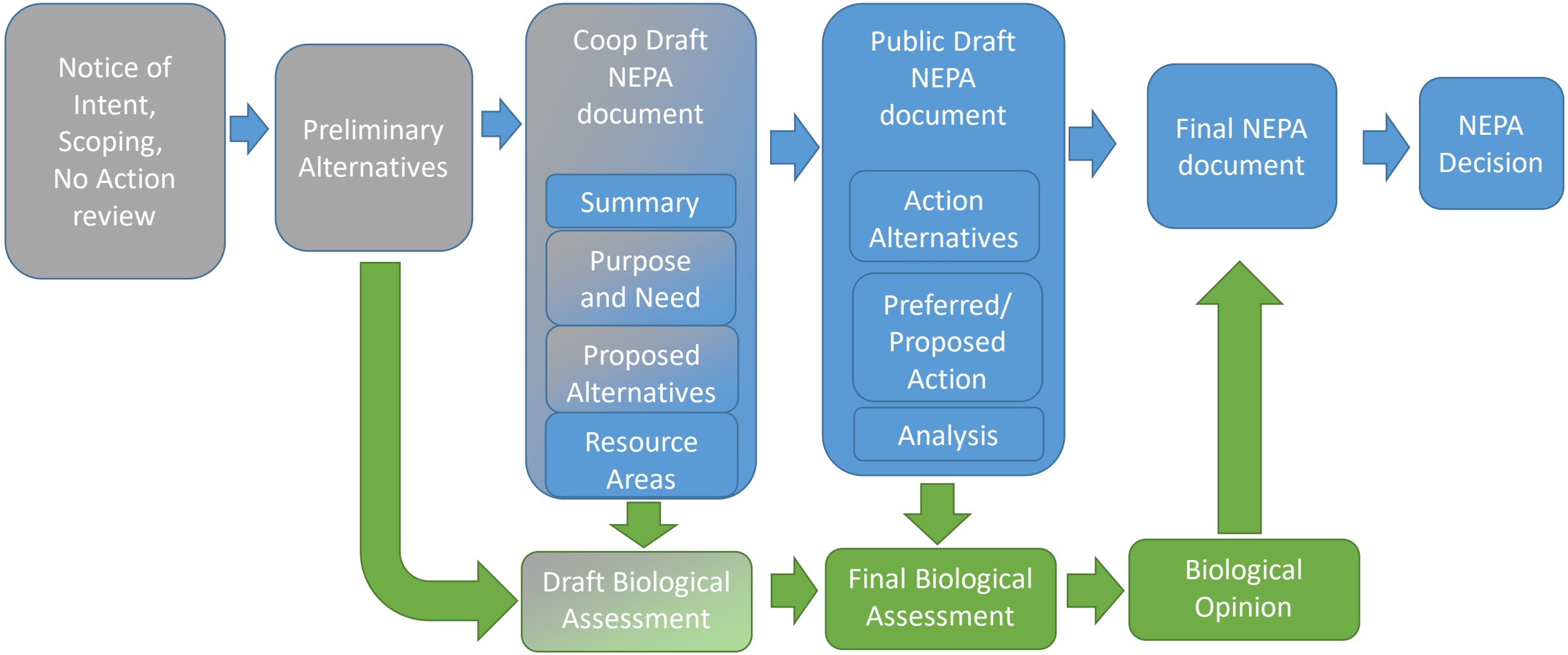
Group Dynamics – Participation Guidelines

- Designated group representative(s) please use “raise hand” feature to request to speak
- Mute microphones when not speaking
- Questions, input, and feedback are encouraged following the presentation
- Follow-up discussions are welcome and can be scheduled for individuals and/or groups
- Email: sha-mpr-bdo@usbr.gov for Trinity reconsultation inquiries

Agenda

1. Welcome
2. NEPA and ESA Process Diagram
3. Purpose and Need
4. Screening Criteria
5. Draft Alternatives
6. Knowledge Base Papers
7. Next Steps and Schedule

TRD NEPA and ESA Process



Trinity River Division Joint Lead Monthly Meetings

August 2023	• Proposed Action Perspectives, Purpose and Need, Initial Alternatives
October 2023	• EIS Framework, BA Framework, Screening Criteria, Knowledge Base Papers
November 2023	• Seasonal Operations, Initial Alternatives
December 2023	• Consensus Alternative
January 2024	• Biological Assessment Foundation, Knowledge Base Paper, Screening Criteria
February 2024	• Knowledge Base Papers, Species Deconstruction, Interested Party Planning, Environmental Baseline
March 2024	• NEPA affected environment, Interested Party Meeting Planning, Species Deconstruction, Environmental Baseline
April 2024	• Interested Party Meeting Planning, Species Deconstruction, Initial Alternatives

Revised Purpose and Need

- The purpose of the action considered is to continue the operation of the CVP and the SWP, for authorized purposes, in a manner that:
  - Meets requirements under federal Reclamation law; other federal laws and regulations; and State of California water rights, permits, and licenses pursuant to Section 8 of the Reclamation Act;
  - Satisfies Reclamation contractual obligations and agreements; and
  - Implements authorized CVP fish and wildlife project purposes *and meets federal trust responsibilities to tribes, including those in the Central Valley Project Improvement Act (CVPIA)*
- Operation of the CVP and SWP is needed to meet multiple authorized purposes including: flood control and navigation; water supply; fish and wildlife mitigation, protection, and restoration and enhancement; and power generation. Operation of the CVP and SWP also provides recreation and water quality benefits.

Revised Purpose and Need

- The purpose of the proposed action is to continue operations of the Trinity River Division (TRD) of the Central Valley Project in order to meet requirements identified in authorizing legislation (e.g. 1955 Act, P.L. 84-386) and subsequent federal law (e.g. Central Valley Project Improvement Act, P.L. 102-575).
- Authorized purposes of the TRD include storage and delivery of water to both downstream and out-of-basin users, power generation, and restoration of salmon and other native fishes below Lewiston Dam on Trinity River.

Screening Criteria

- Purpose and Need
- Completeness
- Technically and Economically Feasible
- Value Added

Preferred Alternative Selection Criteria

- Natural production
- In-river and ocean fishing opportunities
- Tribal access
- Balancing impacts
- Continued operation of the TRD
- Limit flooding

Preliminary Alternatives Development

- No Action Alternative – 2020 ROD / 2000 ROD / 2017 ROD
- Alternative 1 – Water Quality Control Plans
- Alternative 2 – Multi-Agency Deliberation
- Alternative 3 – Modified Natural Hydrograph
- Alternative 4 – Risk-Informed Operations
- Alternative 5 – Low Emissions with Flexible Management
- Alternative 6 – Trinity County Local
- Alternative 7 – Maximum Flow

Trinity River – Storage Management, Minimum Pool

- No Action Alternative – 600 TAF as described in 2000 Record of Decision
- Alternative 1 – No minimum pool
- Alternative 2 – 1.2 MAF and provide contingency storage for multi-year drought (Year 1 = 1.2 MAF; Year 2 = 900 TAF; Year 3 = 750 TAF (minimum))
- Alternative 3 - Same as Alternative 2
- Alternative 4 - 750 TAF
- Alternative 5 – Year 1 = 1.5 MAF; Year 2 = 1.3 MAF; Year 3 = 1.1 MAF, Year 4 = 1.0 MAF; Year 5= 900 TAF; Year 6 = 825 TAF; Year 7 = 750 TAF
- Alternative 6 – Planning minimum that meets temperature objectives (same targets as Alt 5); Carryover ROD water from year to year
- Alternative 7 – 750 TAF

Trinity River – Storage Management, Trans-Basin Diversion Season

- No Action Alternative – Timing of exports based on best use of limited volume of Trinity River export (in concert with releases from Shasta Reservoir) to help conserve coldwater pool and meet water temperature objectives on the upper Sacramento and Trinity rivers, as well as power production economics
- Alternative 1 – Water diverted as needed to supply CVP needs
- Alternative 2 – Releases in spring/early summer will prioritize meeting Trinity River flow and temperature objectives; diversions to meet other CVP needs would occur after, subject to minimum pool
- Alternative 3 - Same as Alternative 2
- Alternative 4 – Same as No Action Alternative
- Alternative 5- Same as Alternative 2 with long term targets for 50-50 split
- Alternative 6- Same as No Action Alternative
- Alternative 7 – Late June – late Oct to maintain 56F in TRH; SOD

Trinity River – Variable Instream Flows, Base Flows

- No Action Alternative - Winter = 300 cfs; summer = 450 cfs
- Alternative 1 – 300 cfs year-round
- Alternative 2 – Winter and summer base flows are the same as NAA, but the timing of when ramp up from winter base flows and ramp down to summer base flows would shift
- Alternative 3 - Seasonally oscillating hydrograph
- Alternative 4 – Same as Alternative 2
- Alternative 5 – Same as Alternative 2
- Alternative 6 – Same as No Action Alternative
- Alternative 7 – Dependent on EOS 50% storage forecast (>1.2 MAF = >300cfs; .750 – 1.2 MAF = >150 cfs; <750 TAF = 100 cfs

Trinity River – Variable Instream Flows, Restoration Flow Releases

- No Action Alternative – Total volume of water released to the Trinity River will range from 369 TAF to 815 TAF depending on the annual hydrology (water-year type) determined as of April 1st of each year
- Alternative 1 – 340 TAF identified in pre CVPIA flow study provides for minimal releases above baseflow
- Alternative 2 – Volumes the same as No Action Alternative; timing of releases will result in approximately 50% occurring around April 15
- Alternative 3 – Seasonally oscillating hydrograph
- Alternative 4 – Same as No Action Alternative
- Alternative 5 – Managed by the Trinity Management Council with ability to adopt synchronized flows in Alternative 2
- Alternative 6 – Same as No Action but allow for portion of ROD flows shifted to subsequent water year(s).
- Alternative 7 – 70% of inflow to reservoir

Trinity River – Variable Instream Flows, Lower Klamath Flow Augmentation Releases

- No Action Alternative – May release supplemental flows from Lewiston Dam to prevent a disease outbreak lower Klamath River
- Alternative 1 – Not included
- Alternative 2 –Action components equal to or less than the volumes described in NAA and could also be leveraged to address a fish mortality event risk in the lower Trinity River
- Alternative 3 – Same as Alternative 2
- Alternative 4 – Same as No Action Alternative
- Alternative 5 – Same as No Action Alternative
- Alternative 6 – Same as No Action Alternative
- Alternative 7 – Same as No Action Alternative

Trinity River – Temperature Management

- No Action Alternative - Target 60°F at Douglas City gage from July 15 - Sept 15 and 56°F from Sept 15 - Sept 30; from Oct 1 - Dec 31, operations target 56°F at the Trinity River above North Fork gage
- Alternative 1 – WRO 90-5
- Alternative 2 – WRO 90-05 with additional targets at Lewiston Dam (53.5°F Sept 15 - Oct 31, 50°F Nov 1 - Dec 31, and 48°F Jan 1 – March 1)
- Alternative 3 – Same as Alternative 2
- Alternative 4 – Same as No Action Alternative
- Alternative 5 – Same as No Action Alternative
- Alternative 6 – Same as NAA plus revised temperature objectives at Lewiston
- Alternative 7 – Same as Alternative 2

Knowledge Base Papers

The purpose of these reports is to compile datasets, literature, and models for analyzing the range of potential effects of key topics.

1. Trinity River Division Temperature Management – Chinook and Coho Salmon Migration and Survival
2. Trinity River Harvest Management – Chinook and Coho Salmon Migration and Survival
3. Trinity River Habitat Restoration Effects on Salmonid Growth and Survival

Trinity Consultation Schedule

Alternatives Development	• Ongoing • Summer 2024
Modeling	• Targeting September 2024
NEPA/Biological Assessment	• Early 2025
Public Draft NEPA	• Spring 2025
Biological Opinion	• Late 2025
Final NEPA	• Late 2025
NEPA Decision	• Late 2025

Next Steps

- Knowledge Base Papers
- Coordinate future Interested Party technical meetings
  - Alternatives Chapter
  - Preliminary modeling of range of alternatives
- WIIN Act 4004 Quarterly Update Meeting – June 11, 2024
  - Visit https://www.usbr.gov/mp/bdo/ for updates
- For Trinity Interested Party Communications
  - email sha-mpr-bdo@usbr.gov

Questions and Input

Thank you

SAN JOAQUIN VALLEY WATER
Collaborative Action Program

Date

Secretary Wade Crowfoot
California Natural Resources Agency
715 P Street
Sacramento, CA 95814

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Secretaries Crowfoot and Ross:

We, members of the San Joaquin Valley Water Collaborative Action Program (CAP),[1] are writing to request the support of the administration to advance policies supportive of utility-scale solar projects and related energy transmission infrastructure in the San Joaquin Valley (Valley) to achieve California's significant renewable energy targets and benefit local communities, farmers, and the Valley's economy. Our multistakeholder group anticipates that this form of land repurposing will be important as our State manages through challenging land use changes associated with water scarcity, including implementing the Sustainable Groundwater Management Act (SGMA).

Studies by the Public Policy Institute of California (PPIC) have indicated that at least 500,000 acres of productive farmland will need to go out of production in the Valley over the next twenty years as a result of water scarcity.[2] If left unmanaged, this land use change could lead to an array of negative impacts (i.e., invasive weeds, pests, and dust) and devastate the Valley's economy, including job losses and reduced state and local tax revenues. Proactive management and strategic repurposing of these lands could provide opportunities to create an array of public benefits, including renewable energy.

Recently passed laws also require that all of California's future retail electricity be from carbon-free sources by 2045, with an even more aggressive target of 100% carbon-free electricity by 2035 for the State's largest electricity user: the Department of Water Resources. To achieve these objectives, the rate of solar and wind development in California will need to triple from its current rate for the next 20 years, and the Valley will play a vital role in meeting these targets.

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[1] A coalition of over 80 leaders from agriculture, water agencies, environmental justice organizations, environmental organizations, academia, and state and federal agencies, is focused on developing actions that can lead to a more resilient water and land management in the Valley.

[2] Managing Water and Farmland Transitions in the San Joaquin Valley - Public Policy Institute of California (ppic.org)

Executive Summary

The CAP supports the potential for utility-scale solar projects and related energy transmission infrastructure to be incorporated into land use changes throughout the Valley. It has identified specific policy improvements needed to increase the efficiency with which these projects are developed:

1. **Accelerate Permit Approvals**. Improve the pace of regulatory approvals of utility-scale solar projects and related energy transmission infrastructure while striking the right balance among environmental, socioeconomic, and cultural resource considerations.
2. **Williamson Act Modernization**. Provide clarity that counties may consider utility-scale solar projects and related energy transmission infrastructure compatible uses under the Williamson Act, leaving decision-making at the local level.
3. **Resume Subvention Funding.** Resume the issuance of subvention funds to counties with active Williamson Act contracts, including for lands in utility-scale solar (where compatible). If not universally resumed, subvention funding should be resumed for contracted lands before an agreed-upon date.
4. **Williamson Act Non-Renewal.** The State should adopt a policy to allow counties where solar is not a compatible use to offer non-renewal of Williamson Act contracts for solar development projects rather than requiring them to cancel contracts with a 12.5 percent cancellation fee.
5. **Funding Research and Development on the Coexistence of Utility-Scale Solar Projects and Water Recharge**. Support the research and development of how utility-scale solar projects and water recharge projects can co-exist on the same land (adjacent to or underneath solar facilities).
6. **Funding for Job Training**. Support and sustain workforce development programs that can assist displaced farm workers in pursuing jobs to support the construction and maintenance of utility-scale solar projects and related energy transmission infrastructure.
7. **Solar Energy for Disadvantaged Communities**. Incentivize solar developers to provide renewable energy developed in the Valley to disadvantaged communities to mitigate the risks associated with land use transitions and rising traditional energy costs.

Accelerate Permit Approvals

In order to strategically synchronize the development of renewable energy and land use repurposing due to water scarcity, California should streamline the approval process for utility-scale solar projects and related energy transmission infrastructure. The CAP recommends the following:

1. **Invest Funds and State Resources in Expanding Energy Transmission Infrastructure**. Renewable energy projects must be strategically sited near energy transmission infrastructure to convey the energy from the Valley to where it is needed most (i.e., major urban centers). PPIC and others have identified that the current energy transmission infrastructure level is inadequate to address the State's energy consumptive needs or its 2045 objectives. California should increase (a) State funding and improve the permitting process for energy transmission infrastructure development and construction and (b) cooperation between the California Energy Commission (CEC), California Public Utilities Commission (CPUC), California Independent System Operator (CAISO), Department of Water Resources (DWR), electric utilities, developers, and land use planning agencies for coordinated planning of energy transmission infrastructure and strategic siting.
2. **Programmatic Permitting Process and Terms**. The California Department of Fish and Wildlife (or another appropriate Federal and State agency) should be supported and engaged in developing

a programmatic permitting process for utility-scale solar projects and related energy transmission infrastructure, with uniform timelines and terms and conditions that offer satisfactory protections for endangered species but allow for the expedited development and long-term operation of these facilities.

Williamson Act Modernization

Landowners with Williamson Act contracts face difficult decisions when considering whether a utility-scale solar project is a financially suitable alternative land use for their property, as certain counties have determined that utility-scale solar is incompatible with the Williamson Act. The result of this county-by-county approach is that property taxes increase in some Valley counties when agricultural land is repurposed for utility-scale solar projects, thereby disincentive those wishing to utilize the property to meet the State's clean energy objectives. At the same time, counties struggle with the revenue implications of retaining the Williamson Act on land repurposed for utility-scale solar. The result is that the solar development community faces inconsistency on a county-by-county basis, and landowners and counties find themselves in conflict over property taxes. The CAP recommends the following:

1. **Reinstatement of Subvention Funds**. The State should reinstate subvention funds to supplement lost tax revenues in counties impacted by repurposing farmland to utility-scale solar. The intent is for this form of land repurposing to be revenue-neutral to the counties. The CAP recognizes that this is a costly proposal. Still, it suggests that, at a minimum, subvention funding be resumed for contracted lands before an agreed upon date and consider establishing a specific period during which subvention funding will resume.
2. **Non-Renewal Option.** The state should develop a policy allowing counties, where solar is not compatible with providing a non-renewal pathway for solar development projects on Williamson Act, contracted lands rather than the required cancellation. Non-renewal results in a gradual ramp-up of increased property taxes over a nine-year period rather than an immediate cancellation requiring a cancellation fee of 12.5 percent of the cancellation valuation or 25 percent in a Farmland Security Zone.
3. **Compatibility of Utility-Scale Solar with the Williamson Act**. The State should provide counties with assurances for determining that utility-scale solar projects may be compatible with the Williamson Act to create more consistency among the counties. Utility-scale solar project permits require project operators to return the property to its pre-project condition after its useful life. The return of the property to this condition would return it to an open-space status with the potential to be placed again into agricultural production. While the non-agricultural use is long-term, it is fundamentally temporary.

Funding Research and Development on the Coexistence of Utility-Scale Solar Projects and Underground Water Storage Projects

Underground storage of surface water in wet years (in the form of water banking or water recharge) is an increasingly popular strategy for landowners and water managers in the Valley to reduce the volatility of water supply and water costs. Land repurposing efforts in the Valley – including the development of utility-scale solar projects and related energy transmission infrastructure – should not impede these efforts to store water. Generally, solar developers avoid properties with soil suitable for underground storage. However, with adequate data and decision-making tools, utility-scale solar and water banking and recharge can co-exist. The CAP recommends that the State fund research and develop strategies that

may render co-located water banking and recharge projects more desirable to landowners, water managers, and utility-scale solar project operators. This would include studying sublateral irrigation methods or other applications to reduce or eliminate the period when a utility-scale solar project site is flooded.

Funding for Job Training

The CAP seeks supportive programs for farm workers experiencing job displacement due to water scarcity, driving land use changes. Utility-scale solar projects and related energy transmission infrastructure provide an opportunity to expand the job market in the most heavily impacted communities. The CAP recommends that the State allocate funds to support workforce development programs to prepare displaced farm workers for management, electrical, and construction jobs related to utility-scale solar projects and related energy transmission infrastructure.

Solar Energy for Disadvantaged Communities

In addition to workforce development benefits, the CAP sees a strategic opportunity to develop utility-scale solar projects and related energy transmission infrastructure to benefit the surrounding communities. The CAP recommends the following:

1. **Establish Incentive Program**. The State should develop an incentive program to encourage solar developers to make a certain amount of renewable energy available to nearby communities at affordable long-term rates that are favorable to rates available from utilities.
2. **Simplify Local Utility Policies**. The state should develop simplified local utility rules and policies regarding supplying energy to local communities not to impede the provision of renewable energy to disadvantaged communities.

The CAP believes the recommendations above can substantially improve the utility-scale solar project and related energy transmission infrastructure development process. Given the similar planning horizons of SGMA and SB 100, the CAP requests that these recommendations be given thorough and timely consideration so that project planning and development can proceed. The CAP leadership is available to discuss or consult on these issues.

Sincerely,

Ann Hayden
Environmental Defense Fund

Sarah Woolf
Water Wise

Co-Chairs
San Joaquin Valley Water Collaborative Action Program

FACTSHEET

Sierra San Joaquin Jobs Investment Plan Spring Sprint

Join us and infuse your voice, expertise, and experience in this regional effort as we address our most pressing challenges head-on, THINK BIG and design the trajectory of our region together!

Want to learn more, read below. Ready to join the coalition? Click here.

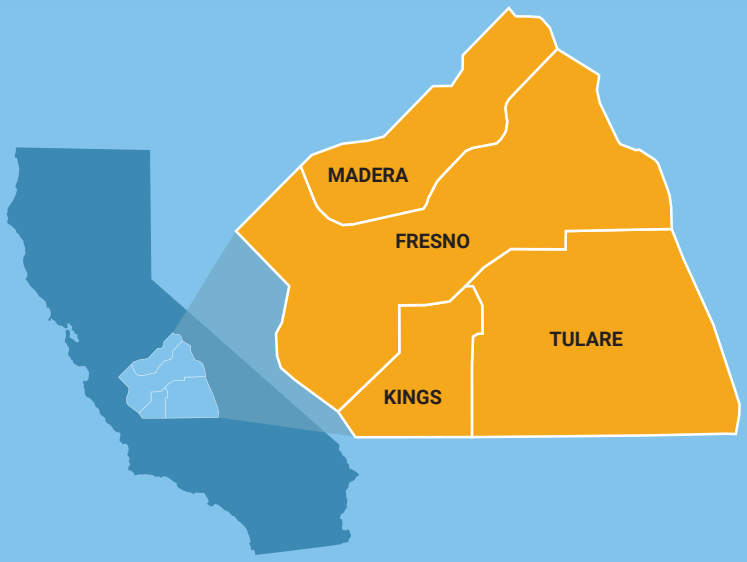
In 2023, the Sierra San Joaquin Jobs Initiative (S2J2), formerly known as Valley CERF, embarked on an intensive, community-led process, fueled by data, to identify regional goals and economic opportunities in line with the State's 'Jobs First' objectives. Data showed that despite having abundant natural resources and a young, growing working population, the Central San Joaquin Valley suffers some of the worst economic, health, and social disparities in the country. Fueled by an unwavering commitment to improve the place we call home, our coalition set out to answer the question:

"What will it take to fundamentally transform our region and forge an inclusive, resilient, and climate-forward economy."

As a Coalition, we identified eight key regional priority areas that require robust coordination for the viability of our region. Recognizing the scale of our challenge, we are committed to taking URGENT, expert, and transformative action!

Here's how we need your help. Participate in our coalition where for the next eight weeks, we will build a bold, comprehensive, and actionable regional investment plan. This plan will outline our vision, develop key strategies, and identify necessary investments and policy changes needed to realize our vision while centering equity, good jobs, and environmental stewardship.

- CLIMATE SOLUTIONS
- RESPONSIBLE FOOD & AG SYSTEMS
- CIRCULAR MANUFACTURING
- WATER
- BROADBAND
- SMALL BUSINESS & MICROENTERPRISE
- COMMUNITY HEALTH
- EDUCATION & SKILL BUILDING



Developing a regional investment plan requires involvement from stakeholders across the region!

That's why we're assembling Regional Workgroups composed of the best and brightest (like you!) across the four-county region, state, and nation!

With over **320 organizations and agencies** already signed up and recommended to participate, we can't wait to launch our collective effort!

To ensure the success of our Regional Workgroups, we've created the following roles:

- **Workgroup Participants** will provide local expertise and engage stakeholders for input and plan refinement.
- **Data and Technical Experts** will ensure relevant data and tools inform meetings and the plan.
- **Workgroup Convener** will drive effective communication, collaboration, and progress.
- **The facilitator** will ensure successful workgroup meetings and engage key stakeholders.
- **Administrative Support** will manage meeting logistics and workgroup communication.
- **CVCF Lead** will manage consultant relationships and stakeholder involvement.

Are you interested in participating in the coalition by drafting, staying updated, or providing feedback on the regional investment plan? Let us know by completing our Regional Workgroup Submission Portal.

Regional Workgroup Submission Portal

May

- May 9th – Investment Plan Spring Sprint KICK-OFF! "Join us during the launch of this bold and ambitious regional endeavor!"
- Week 1 – Problem Statement and Key Questions
- Week 2 – Stakeholder Inventory
- Week 3 – Strategies

June

- Week 4 – SMART Goals
- Week 5 - Investment Opportunities
- Week 6 – Key risk and Mitigation strategies
- Week 7 – Financial Model

July

- Week 8 – Finalize DRAFT for regional review.
- Input and Feedback Opportunities!

August

- Update, finalize and submit to the State on August 30th

**Tentative timeline, subject to change based on regional workgroup input and needs.*

Next Steps!

Join us for the Investment Plan Spring Sprint on May 9th!

Learn more about the eight-week sprint and gain insights into the regional priority areas. Help shape the future by joining our Regional Workgroups.

All are welcome but RSVPs are required. To learn more and RSVP visit valleycerf.org.

Help Us Spread the Word!

Share our May 9th event invitation with other individuals and organizations dedicated to fostering an inclusive, resilient, and climate-forward economy.

Share the invitation here.