Valley Water

SANTA CLARA VALLEY WATER DISTRICT

NON-AGENDA

January 17, 2020

Board Policy EL-7 Communication and Support to the Board
The BAOs shall inform and support the Board in its work.

Board correspondence has been removed from the online posting of the Non-Agenda to protect personal contact information. Lengthy reports/attachments may also be removed due to file size limitations. Copies of board correspondence and/or reports/attachments are available by submitting a public records request to publicrecords@valleywater.org.

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To: **Board of Directors**
From: **Norma J. Camacho, CEO**

Week of January 10 – January 16, 2020

Board Executive Limitation Policy EL-7:
The Board Appointed Officers shall inform and support the Board in its work. Further, a BAO shall 1) inform the Board of relevant trends, anticipated adverse media coverage, or material external and internal changes, particularly changes in the assumptions upon which any Board policy has previously been established and 2) report in a timely manner an actual or anticipated noncompliance with any policy of the Board.

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1. Compliance with California Senate Bill 88 Telemetry Requirements

California Senate Bill 88 (Water Rights Measurement Regulation) was adopted and put into law in 2016. Valley Water has been implementing the requirements of the bill since it was passed. Valley Water has successfully met the latest requirement that, by January 1, 2020, the measurement device output data used for water right reporting be publicly available via a website. The website can be accessed using the following instructions:

1) Go to the Valley Water website: https://www.valleywater.org/
2) Click on the "Your Water" heading
3) Select "Local Dams and Reservoirs"
4) Scroll mid page and select "Telemetered measurement device data used for calculating water rights diversions"

Alternatively, the website can be accessed directly at: http://alert.valleywater.org/scada/sgi.php

For further information, please contact Aaron Baker at (408) 630-2135.

2. Hazardous Materials Business Plan Submittals

The goal of the Hazardous Materials Business Plan (HMBP) program is to protect both human and environmental health from adverse effects as a result of the storage, use, and possible release of hazardous materials. This is done primarily by documenting significant amounts of hazardous materials so that emergency responders can effectively protect the public. HMBPs also satisfy Community Right-to-Know laws for public accessibility. A Hazardous Materials Business Plan (HMBP) contains basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of by businesses operating in the State of California.

The HMBP includes three basic elements:

I. Business Activities and Owner/Operator Identification
II. Hazardous Material Inventory and Site Map
III. Emergency Response Plan and Employee Training

Here at Valley Water, annual HMBP reviews and updates were completed and submitted to the California Environmental Reporting System for the following facilities:

1. Almaden Dam
2. Anderson Dam
3. Calero Dam
4. Chesbro Dam
5. Coyote Dam
6. Guadalupe Dam
7. Lenihan Dam
8. Stevens Creek Dam
9. Uvas Dam.

For further information, please contact Tina Yoke at (408) 630-2385.

3. Joint Emergency Action Plan with San Jose Training and Exercise

On January 6, 2020 the Office of Emergency Services (OES) provided an internal training on the Joint Emergency Action Plan (EAP). OES has developed Training Supplements for the Joint EAP which help guide users to appropriate portions of the plan. These tools were utilized during the internal training. Topics included during the training were Preparedness, Purpose of EAP, EAP Objectives, Multi-Agency Coordination, Flood Condition Levels, Mobilization of EAP, and Hydrology/Hydraulics and Hotspots. Valley Water participants for the training included representatives from Watersheds Operations and Maintenance (O&M) Field Operations, Watersheds O&M Engineering Support, Field Information Team (FIT) Lead, Hydrology Hydraulics and Geomorphology, Government Relations/Public Information Officer, Raw Water, Water Supply and OES.

On January 9, 2020 OES hosted a joint field drill at Ross Creek and Cherry Ave. The drill included staff from both Valley Water and City of San Jose. From Valley Water, participants included Watersheds O&M, FIT, Hydrology Hydraulics and Geomorphology, and OES. From San Jose, participants included Public Works, Department of Transportation, and Office of Emergency Management. The drill included discussing field operations from each department/unit, reporting flows, internal coordination, and joint coordination between Valley Water and San Jose. The drill

was very effective in clarifying the different field operation goals from each of the different departments/units from Valley Water and San Jose. Information from this drill will be used during the Joint EAP Tabletop Exercise, which will occur on January 16, 2020 with staff from Valley Water and City of San Jose.

For further information, please contact Tina Yoke at (408) 630-2385.

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4. Management 101 Training Series

On January 9, 2020 Talent Development kicked off the Management 101 training series with twenty-two (22) participants. This set of classes are tailored for new supervisors and managers (although any supervisor or manager is welcome to attend). Management 101 addresses basic Valley Water processes, policies, and procedures. Classes include: Performance Management, Leaves of Absence, Reasonable Accommodation, Labor Relations, Workers' Compensation, Hiring Process, Board Meetings, Budget, Ethics, Emergency Management, and Procurement/Contracts.

For further information, please contact Anna Noriega at (408) 630-3089.

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5. Public outreach to present draft Environmental Impact Report for the Almaden Lake Improvement Project

Valley Water conducted two presentations during the week of January 6, 2020 on the draft Environmental Impact Report (EIR) for the Almaden Lake Improvement Project.

The first presentation was part of a January 8, 2020 public meeting held in the Valley Water headquarters building boardroom. The second was to the City of San Jose's District 10 Leadership Coalition on January 11, 2020 at the Almaden Community Center. At both events, Valley Water Chair Linda J. LeZotte provided remarks.

Assistant Officer Rechelle Blank presented the background and overview of the proposed project and Associate Water Resources Specialist Michael Martin presented on the potential environmental impacts and associated measures to avoid or minimize the impacts. San Jose City Councilman Johnny Khamis, who represents District 10, attended the January 8, 2020 public meeting.

The January 8, 2020 public meeting drew 65 people and attracted 138 views during the live stream on Facebook. Questions raised by the public focused on mercury, imported water source, funding availability and the long-term potential for swimming at the lake.

Fifteen (15) residents attended the January 11, 2020 presentation, with representation from neighborhood organizations such as Almaden Lions Club, Almaden Senior Association, Almaden Community Association and Citizens for Fiscal Responsibility. Neighborhoods represented included Greystone, Shadowbrook, Glenmont and Santa Teresa foothills. Residents asked about project cost and funding source, mercury, lake circulation, imported water source, the return of fish to the lake following construction and plans for continued impact to festivals at the park during construction.

The community has until January 27, 2020 to provide written comments on the draft EIR.

For further information, please contact Rick Callender at (408) 630-2017.

6. Rinconada Water Treatment Plant Storm Water/Sludge Spill to Nearby Smith Creek

On December 26, 2019, Valley Water staff at the Rinconada Water Treatment Plant noticed some sludge around a storm drainage ditch that potentially washed into Smith Creek. Valley Water reported the discharge to the State of California Office of Emergency Services (OES) and initiated clean-up activities.

A follow-up investigation revealed that a combination of a failed storm pump and a significant rainfall event, caused the process water (sludge) to pool in the storm drain system and spill over into Smith Creek. Based on the initial field inspection and cleanup activities, it appears that the amount of rainwater/sludge mixture released to Smith Creek was limited with minimal impact to the waterway.

Valley Water followed up with notifications to West Valley Clean Water Program (serves as the local storm water inspection agency for the Town of Los Gatos) who also conducted a site inspection with no additional findings. Valley Water is continuing to work on identifying the root cause of the storm pump failure as well as potential for other similar incidents and will be implementing corrective actions to mitigate future occurrences.

For further information, please contact Bhavani Yerrapotu at (408) 630-2735.

7. Update on Local Solar Development and Almaden Campus Solar Settlements

In 2016, Valley Water was notified of a class action settlement related to the solar panels installed during the Almaden Campus Solar Project in 2004. Due to claims that the solar panels were defective and prone to junction box failures, the solar panel manufacturer, BP Solar International (BP Solar), initiated a settlement offer for the Headquarters carport solar installation and a separate settlement offer for the Administration Building rooftop solar installation.

On March 27, 2018, the Board of Directors authorized District Counsel to accept the settlement offer from BP Solar for the replacement of all solar panels used in the Headquarters carport installation. The carport solar panels were removed in January 2019 to meet the conditions of the settlement letter.

In preparation of the settlement, Valley Water through its joint powers authority, the Power and Water Resources Pooling Authority (PWRPA), released a Request for Proposals (RFP) to solicit interest in the anticipated solar rehabilitation efforts for Almaden Campus. Valley Water subsequently began negotiations with the highest-ranked solar developer (Developer), with the project structured as a power purchase agreement (PPA) in which Valley Water only pays for the energy generated by the upgraded solar installations at a fixed PPA rate.

In August 2019, the Developer notified Valley Water that they could not proceed without increasing the cost associated with the PPA by 50 percent based on their recent small project experience.

As a result, Valley Water began working with PWRPA to find new ways to lower development costs by partnering with other PWRPA participants. PWRPA released a new RFP in October 2019 and Valley Water is currently in negotiations with the highest-ranked respondent. Valley Water and the solar developer are nearing an agreement in principle on development scope and power purchase agreement structure. Valley Water plan to bring this project for Board approval in Spring 2020 with construction anticipated in Summer 2020.

For further information, please contact Bhavani Yerrapotu at (408) 630-2735.

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8. Water Management Agreements Executed in December 2019

Pursuant to EL-5.1.6 and EL-5.3.3, the CEO is required to inform the Board on a timely basis when imported water management agreements are executed. Imported water management agreements executed in December 2019 are summarized below.

- December 12, 2019 - San Joaquin River Exchange Contractors Water Authority (Authority) Water Transfer Agreement providing for 2,000 acre-feet (AF) of water from the Authority in 2019 and a return of 1,500 AF from Valley Water through 2020.

- December 26, 2019 - Westlands Water District Transfer Agreement and Blue Sky Farms Water Purchase Agreement for Temporary Transfer – providing a water transfer of up to 1,050 AF of water from Valley Water to individual farmers within Westlands Water District Service Area.

- December 26, 2019 - U.S. Bureau of Reclamation Temporary Warren Act Contract and Associated Agreements -- providing for Valley Water to introduce up to 60,000 acre-feet per year of non-Project water into Central Valley Project facilities for delivery to Valley Water through 2024.

For further information, please contact Jerry De La Piedra at (408) 630-2257.

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9. WiFi at Penitencia Water Treatment Plant

After over a year of planning, design and construction, the long-awaited wireless network at Penitencia Water Treatment Plant (PWTP) has been completed. Valley Water staff at the facility can now enjoy connectivity in several critical areas of the property. This new implementation will allow plant operators and maintenance crews to view schematics and drawings, communicate and complete other work in the field without having to access a wired-computer terminal.

For further information, please contact Tina Yoke at (408) 630-2385.

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Report Name: Board Member Requests

Request	Request Date	Director	BAO/Chief	Staff	Description	20 Days Due Date	Expected Completion Date	Disposition
I-19-0022	12/16/19	Kremen	Callender	Hoang	Provide Director Kremen with all District 7 Access Valley Water comments for the last 24 month.	01/05/20		
I-19-0024	12/20/19	Kremen	Hawk	Yerrapotu	What has been the all in cost of water/acre-foot from our recycling plant in the last 12 and 24 months? Please show calculations including cost on bonds, final capital costs, all O&M, membrane reserve etc? What is the name plate rating on water production and what have we produced in the last 12 and 24 months?	01/09/20		
I-20-0001	01/06/20	Kremen	King	Spin	Director Kremen requests staff to provide a list of Public Records Act Requests received in 2019.	01/26/20		
R-19-0014	11/12/19	Varela	Camacho	Chinte	Director Varela requesting the CEO provide a report to the Directors via one-on-one meetings or confidential memo on the cancellation of the October 28, 2019 Joint SCVWD/Morgan Hill/Gilroy Board/Council meeting.	12/04/19		

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Report Name: Correspondence (open)

Correspond No	Rec'd By District	Rec'd By COB	Letter To	Letter From	Description	Disposition	BAO/ Chief	Staff	Draft Response Due Date	Draft Response Submitted	Writer Ack. Sent	Final Response Due Date
C-20-0002	01/05/20	01/06/20	All	DALE TIBBILS	Email from Dale Tibbils to the Board dated 1/5/20 regarding recent Valley Water Communication on "Protecting communities from flooding due to climate change."	Refer to Staff	Callender	Hoang	01/14/20	01/14/20	n/a	01/20/20
C-20-0003	01/06/20	01/06/20	All	SHAWN STORM	Letter from Shawn Storm to the Board received 1/6/20 (dated 1/1/20) regarding water conservation opportunities.	Refer to Staff	Hawk	Hall	01/14/20	01/15/20	n/a	01/20/20
C-20-0007	01/09/20	01/09/20	All	DHRUV KHANNA	Email from Dhruv Khanna to the Board dated 1/9/20 Farming versus Cement/Asphalt/semiconductors/software production.	Refer to Staff	Camacho Callender	Taylor	01/17/20		n/a	01/23/20
C-20-0009	01/10/20	01/10/20	All	JEFF WATT	Email from Jeff Watt to the Board dated 1/10/20 regarding Almaden Lake and Remediation Strategies for Mercury Contaminated Lakes and Reservoirs Within the State of California.	Refer to Staff	Richardson	Nguyen	01/18/20		n/a	01/24/20
C-20-0010	01/13/20	01/13/20	Cc: Kremen	RAYMOND WHITE	Email suggesting Valley Water issue a caution of risk of fluoride and conveying RRWhite Biology Newsletter dated Dec. 2019.	Refer to Staff	Hawk	Bramer	01/21/20		n/a	01/27/20
C-20-0011	01/13/20	01/13/20	All	DAVID BINI SANTA CLARA & SAN BENITO COUNTIES BUILDING & CONSTRUCTION TRADES COUNCIL	Requesting stakeholders, including SC and SB Counties Building and Construction Trades Council, be allowed to participate in selection process for CEO and requesting VW Board consider add action to adopt a Project Labor Agreement.	Refer to Staff	King	Kwok-Smith	01/21/20		n/a	01/27/20
C-20-0012	01/14/20	01/14/20	Cc:	RICHARD	Request for status report on	Refer to	Richards	Gin	01/22/20		n/a	01/28/20

Correspond No	Rec'd By District	Rec'd By COB	Letter To	Letter From	Description	Disposition	BAO/ Chief	Staff	Draft Response Due Date	Draft Response Submitted	Writer Ack. Sent	Final Response Due Date
			Estremera	MCMURTRY private citizen	Singleton Road and Valley Water plans and schedule for sending design information to the city and regulators.	Staff	on					
C-20-0013	01/13/20	01/13/20	Cc: Keegan	DON LIEBERMAN	Notice of debris clog on Coyote Creek behind 120 Arroyo Way.	Refer to Staff	Callende r	Hoang	01/21/20		n/a	01/27/20

Valley Water

MEMORANDUM

FC 14 (08-21-19)

TO: Board of Directors

FROM: Nina Hawk

SUBJECT: Comments on Draft Environmental Impact Report for Proposed Long-Term Operations of the State Water Project

DATE: 1/10/2020

On November 21, 2019, the California Department of Water Resources (DWR) released its draft environmental impact report (Draft EIR) on long-term operations of the State Water Project (SWP) for 45-day public review under the California Environmental Quality Act (CEQA). DWR's proposed project is substantially the same as the project described in the biological opinions and permits issued by the federal fish and wildlife agencies in October 2019. In the Draft EIR, DWR concludes that the proposed project has no significant and unavoidable impacts, and therefore no mitigation is required under CEQA. DWR also includes four project alternatives in the Draft EIR. DWR's project alternatives differ substantially from the project alternatives evaluated in the final environmental impact statement released in December 2019 by the U.S. Bureau of Reclamation (Reclamation) for long-term operations of the Central Valley Project (CVP) and SWP.

In addition, on December 17, 2019, DWR posted its application to the Department of Fish and Wildlife (CDFW) for an incidental take permit under the California Endangered Species Act (CESA Application). The project described in the CESA Application includes components from a couple of the project alternatives in the Draft EIR along with some new components that are not described or analyzed in the Draft EIR.

Valley Water staff worked with the State Water Contractors (SWC) on detailed comments on the Draft EIR and CESA Application which were submitted by the January 6, 2020 Draft EIR deadline. (Attachment 1). The key points in the SWC comments are:

- The SWC agree with DWR's conclusion that the proposed project has no significant and unavoidable impacts.
- The Draft EIR project alternatives are not legally or biologically necessary and are insufficiently analyzed. Additional analysis is required to fully disclose potential impacts before DWR can select any of the proposed project alternatives.
- DWR should have submitted the proposed project in the Draft EIR for its CESA Application. The project proposed in the CESA Application incorporates mitigation into the project description that is not legally or biologically necessary. In addition, the project proposed in the CESA Application is not analyzed in the Draft EIR. Additional analysis is required to fully disclose potential impacts before CDFW can issue a permit for the project described in the CESA application.
- The letter includes additional scientific explanations for why the alternatives, including the project proposed in the CESA Application, are not biologically justified.

The San Luis & Delta-Mendota Water Authority (SLDMWA) and Reclamation also submitted comment letters that highlight the inadequacy of the analysis of the project alternatives (Attachments 2 and 3). Reclamation's letter also states that DWR did not coordinate with Reclamation on development of the Draft EIR and that DWR's proposed alternatives will make coordinated operations and sharing of obligations between the SWP and CVP challenging. Reclamation encourages DWR to consider seeking a Consistency Determination under CESA, as they have in the past, and welcomes the opportunity to work together on permitting for continued coordinated operations.

DWR has posted all of the comment letters on the Draft EIR to the following website: https://water.ca.gov/News/News-Releases/2019/November/Long-Term-Operations-of-State-Water-Project

Nina Hawk
Chief Operating Officer
Water Utility Enterprise

Attachment 1: SWC Comment Letter
Attachment 2: SLDMWA Comment Letter
Attachment 3: Reclamation Comment Letter

January 6, 2020

Delivered via email: LTO@water.ca.gov

Mr. You Chen (Tim) Chao, PhD, PE, CFM
Executive Division
California Department of Water Resources
PO Box 942836
Sacramento, CA, 94236-0001

Re: Long-Term Operations (LTO)of the State Water Project (SWP) Project

Dear Mr. Chao:

The State Water Contractors ("SWC") appreciate this opportunity to comment on the Draft Environmental Impact Report for the Incidental Take Permit Application for On-Going State Water Project Operations ("DEIR"). The Proposed Project identified in the DEIR avoids jeopardizing the continued existence of covered fish species and includes measures to minimize and fully mitigate the impacts of the proposed taking. (See Cal. Fish & Game Code 2081(b), (c); Cal. Code Regs., tit. 14, § 783.2(a)(7)-(8).) DWR concluded that the Proposed Project identified in the DEIR has no significant and unavoidable impacts, and therefore no mitigation is required under the California Environmental Quality Act ("CEQA"). The SWC concurs with this conclusion.

Since DWR concluded that the Proposed Project has no significant environmental impacts, no additional alternatives should have been included in the DEIR as there are no significant effects requiring mitigation. Similarly, DWR should not have proposed anything beyond the Proposed Project in its incidental Take Permit Application for the Long-Term Operation of the California State Water Project ("CESA Application") because the Proposed Project already satisfies CESA. By incorporating portions of the project alternatives into the CESA Application, DWR is incorporating mitigation into the project description that is not in proportion with the effect of the project and is therefore in excess of legal requirements. (Cal. Fish & Game Code §2081(b)(2) ["The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species," and, "...measures required shall maintain the application's objectives to the greatest extent possible."") The Proposed Project identified in the DEIR already includes the legally necessary and scientifically-based operational requirements to avoid jeopardizing the continued existence of covered species and to minimize and fully mitigate the impacts of the proposed taking of covered species including approximately $450,000,000 worth of mitigation measures, in addition to the upwards of approximately $1 billion of mitigation measures contained in the CVP/SWP Biological Opinions, some of which DWR is also responsible for implementing.

In addition, neither the alternatives in the DEIR nor the project described in the CESA Application can be selected without additional analysis to fully disclose the resultant effects to the public and decision makers as required by CEQA.

I. The project in DWR's CESA Application is biologically unjustified; the Proposed Project satisfies CESA.

To the extent the CESA Application differs from the State's Proposed Project in the EIR, the SWC object. The SWC and its member agencies do not share an interest in pursuing the project DWR described in its CESA Application, which includes additional mitigation described as adaptive management, but unrelated to the effects of the SWP. The permit application is not based on the best scientific and other information that is reasonably available in spite of DWR's legal obligation to do so under Cal. Code Regs., tit. 14, § 783.2(b).

The SWC support adaptive management of the SWP, including the Proposed Project's Adaptive Management Program. In fact, the SWC have consistently supported collaborative scientific investigations and adaptive management in the Delta, through programs such as the longfin smelt settlement investigations, the Collaborative Science and Adaptive Management Program, the Interagency Ecological Program, and many independently-funded scientific investigations. The SWC continue to support testing hypotheses as part of these forums or through future implementation of the Voluntary Agreements, where multiple parties are collaborating to provide sizable assets to implement environmental actions in a rigorous scientific framework. However, there is no legal or scientific basis for the actions set forth in the Adaptive Management section of the CESA application, section 3.3.16.1, specifically those that require more outflow than the Proposed Project, and would be the sole responsibility of the SWP.

The CESA Application's Adaptive Management section includes, and the SWC object to, the partial implementation of Action IV.2.1 (the San Joaquin River I:E ratio) of the 2009 NMFS RPA for the protection of Central Valley steelhead in April and May. Steelhead is not a state-listed species under CESA. The SWC object to any suggestion that the SWP is legally required to fully mitigate for species that are not protected under CESA and/or mitigate for future operations of the Central Valley Project.[1]

To the extent that the 2009 NMFS RPA for steelhead and the resulting change in outflow could affect other species, it should be acknowledged that the modeling of the Proposed Project does not include all the operations included in the Proposed Project. As such, the modeling results do not reflect actual expected operational differences in April-May outflow, and the Proposed Project likely over mitigates for any modeled biological effect. Specifically, the modeling of the Proposed Project fails to include the OMR management for larval and juvenile delta smelt, and the OMR

[1] Central Valley steelhead is protected under the federal Endangered Species Act, and the SWP protects steelhead through its federal permit. The SWC objection is to any alleged state authority over steelhead under CESA.

management for larval and juvenile longfin smelt as described in the Proposed Project. Therefore, April-May outflow will likely be higher than suggested by DWR's modeling.

Regardless of modeled changes in outflow, there is a paucity of evidence that this change in outflow due to export constraints for steelhead using the I:E ratio provided any secondary benefits for other species. For example, DWR's own analysis shows that the statistical relationships between longfin smelt abundance and outflow/X2 are so uncertain that any measureable change in species abundance related to the implementation of the Proposed Project identified in the DEIR is unlikely. Several researchers who presented at the November 2019 Longfin Smelt Symposium, including Dr. Fred Feyrer, made clear that even if Delta exports were completely eliminated in April and May, it is unlikely that there would be any significant abundance response; most researchers focused on habitat, including spawning and rearing habitat, and ocean conditions as important management and research topics. (See Section IV(A), below.) Even if there were a potential change in April-May outflow and a potential impact on longfin smelt from that change, those effects are already fully mitigated by the additional habitat included in Proposed Project identified in the DEIR in addition to several other conservation measures.

The SWC object to the excessive mitigation that DWR included in section 3.3.16.1 of its CESA Application for summer-fall delta smelt habitat. The Proposed Project identified in the DEIR is based on the best available scientific and other information, and already includes new habitat actions in summer, which have never been part of SWP operations. The Proposed Project identified in the DEIR also provides delta smelt habitat actions in below normal water year types, and new summer food actions, which have not been previously required. The SWC support the Proposed Project's summer habitat Adaptive Management actions to better understand rearing habitat conditions necessary for delta smelt. However, as even the CESA Application acknowledges, summer actions are not mitigating a summer effect of SWP operations because the SWP (and the CVP) have been supplementing summer flows for decades, and the Proposed Project identified in the DEIR does not cause any new effects during this time of year. There is no scientific or legal basis that would justify DWR's decision to add new required summer-fall outflows.

As proposed, the SWC also object to DFW having final decision-making authority on all real-time operational decisions when operations are within the bounds of the incidental take statement because the CESA Application lacks a clear definition of the scope of DFW's discretion.

II. The CESA Application is inconsistent with DWR's project objective.

The goal of no increases in SWP water exports as stated in DWR's press release for the issuance of the DEIR, and repeated by DWR in numerous other forums, is disconnected from legal requirements and contrary to the DEIR's stated project objective of seeking to "optimize water supply and improve operational flexibility" while protecting fish and wildlife based on the best available scientific information in order to deliver water pursuant to its contracts "up to full contract quantities." (DEIR, p.3-1.) In its CESA Application, DWR assumes an overly simplistic relationship between species protection and rate or volume of SWP exports. This simplistic relationship is not based on best available scientific information, and is contrary to the necessity for the SWP to operate under increasingly extreme climate change conditions. Over the last decade,

the scientific community has substantially improved its understanding of how to minimize take, and the Proposed Project identified in the DEIR is a reflection of that experience and the best available science.

An environmental impact report must include a statement of objectives. (Cal. Code Regs., tit. 14, § 15124.) Both the DEIR and the CESA Application include the identical statement of project objectives:

> The objective of the Proposed Project is to continue the long-term operation of the SWP consistent with applicable laws, contractual obligations, and agreements. DWR proposes to store, divert, and convey water in accordance with DWR's existing water rights to deliver water pursuant to water contracts and agreements up to full contract quantities. DWR seeks to optimize water supply and improve operational flexibility while protecting fish and wildlife based on the best available scientific information.

(DEIR, p. 3-1; ITP Application, p. 3-1.)

Unfortunately, DWR contradicts this statement of objectives in places throughout both the DEIR and the CESA Application, which creates ambiguity regarding the project objectives and inhibits the public's ability to comment meaningfully on the Proposed Project. For example, in the press release issued with the DEIR, DWR states that the agency "does not seek to increase SWP exports" in the DEIR. (News Release, dated Nov, 21, 2019.) This statement cannot be reconciled with the project objective to "convey water in accordance with DWR's existing water rights to deliver water pursuant to water contracts and agreements up to full contract quantities." (DEIR, p. 3-1; CESA Application, p. 3-1.)

III. The DEIR's analysis of project alternatives is legally insufficient.

The Proposed Project has no potentially significant impacts, and therefore no analysis of additional alternatives is required. Nevertheless, DWR chose to include additional project alternatives; but it did so without providing sufficient analysis to support its conclusions. DWR also chose to incorporate components of the project alternatives and other measures into the CESA Application; the DEIR does not sufficiently evaluate these new components of the project description.

A. The DEIR project alternatives have not been modeled, which conceals their potentially significant impacts and precludes informed decision-making and public comment.

The DEIR fails to model any of the project alternatives. Without modeling the alternatives, DWR has no basis for determining whether or not the alternatives would result in potentially significant impacts. (Cal. Code Regs., tit. 14, § 15088.5, subd. (a)(4).) For example, Alternative 4 includes major changes to flows in the summer, including in drier water years. Alternative 4 could result in changes in upstream reservoir operations that have not been evaluated. Changes in upstream reservoirs could affect upstream storage volumes, which could result in changes in water quality and biological or other impacts in subsequent water years; these potential impacts have not been

disclosed. It is also possible that Alternative 4 could so significantly change south of Delta export deliveries that there would be impacts to groundwater as water users are forced to shift to alternative supplies. Alternatives 2a and 2b also have not been modeled so it is unknown if there would be impacts to reservoir operations. Alternatives 2a and 2b have more restrictive OMR and new summer delta smelt habitat actions as compared to the No Project Alternative, so there could be significant adverse effects that have not been previously disclosed. As a further example of previously undisclosed impacts, Alternative 3 would also likely have impacts because operating the Head of Old River Barrier would have an impact on Central Valley Project operations; these potential impacts to the CVP have not been disclosed or evaluated. In addition to these alternatives not being fully evaluated, as explained in Section IV, these alternatives are not mitigating project effects, and are unnecessary and uncertain mitigation measures.

Before DWR can adopt any of the alternatives (Alternatives 2-4 or any variation thereof), and before DFW can impose any permit conditions relying on the alternatives analysis in the DEIR, the DEIR requires a more thorough analysis of the alternatives, including modeling. If any of the alternatives or a combination thereof results in any significant adverse impacts, DWR would be required by CEQA to adopt the proposed project as a feasible alternative that avoids the significant impacts.

B. The DEIR incorrectly assumes that the SWP can meet specific OMR requirements without coordination with the Central Valley Project, which renders certain alternatives infeasible.

The DEIR incorrectly assumes that the SWP can achieve a specific OMR without coordination with the CVP. For example, if DFW seeks -3,500 cfs OMR, and total allowed south Delta exports for -3,500 cfs OMR is 4,000 cfs, given the San Joaquin River flow; even if the SWP is diverting at the 600 cfs for minimum human health and safety pumping, CVP could be diverting at their maximum pumping ability of 4,200 cfs, which will not result in -3,500 cfs OMR. The DEIR should disclose this limitation of the SWP, and the explicit recognition that the SWP cannot fully satisfy OMR or outflow requirements independent of the CVP.

The DEIR also mistakenly assumes that the state could utilize Water Code section 1707 to require the CVP to reduce exports when the CVP has a right to divert. The operational relationship and water rights of the SWP and CVP are not such that section 1707 is a feasible option. For example, when there are excess flows in the Delta, the SWP and CVP have an equal right to that water. The SWP cannot instantaneously declare that it would have diverted up to a specific quantity of water, but instead chose to leave that water in the river, and seek to stop the CVP from diverting that water. The CVP has an equal right to excess flows in the Delta up to its export capacity. The DEIR should acknowledge that SWP export cuts likely will not result in the full quantity of that water showing up as outflow. The DEIR should disclose this limitation.

Furthermore, if the SWP is required to operate to a different OMR or outflow relative to the CVP, then the operations may not be fully consistent with the 2018 COA Amendment.

C. The project description in the CESA Application is not analyzed in the DEIR.

The project in the CESA Application, which is a combination of alternatives, has not been evaluated in the DEIR. In addition to the limitations identified below for the alternatives, the project described in the CESA Application was not evaluated because none of the DEIR alternatives include holding water over until the next year for use in the subsequent year. (CESA Application, pp. 3-55 to 3-57.) It is unclear how water that is moved into a subsequent water year would be used, thus those unknown potential uses have not been analyzed in the DEIR, nor have the potentially significant impacts on water supplies from carrying over water to a subsequent water year been disclosed or analyzed.

The DEIR also fails to analyze the CESA Application's implementation where the DFW makes all final decisions regarding real-time operations. The Proposed Project in the DEIR includes a framework for DFW discretion (DEIR, p. 3-24)[2] that was removed from the CESA Application (CESA Application, p. 3-19), and the SWC object. The CESA Application is devoid of any framework describing the nature and extent of the decisions that DFW would be making at each real-time operation decision-point. Even the 2008 FWS biological opinion had some description of agency decision-making that included an operational range and a decision-matrix. The modeling in the DEIR is based on assumed implementation of real-time decision-making; and while OMR could be reduced for the entire season at DFW's behest, such a reduction is not reflected in the modeling, thus the DEIR does not disclose the resultant effects to the public and decision makers as required by CEQA.

The project alternatives cannot be selected without further analysis. The analysis of alternatives includes insufficient modeling and analyses. While a variety of project alternatives were analyzed in the DEIR, none of the analyzed project alternatives includes all of the features now included in the project as described in DWR's CESA Application. Specifically, the CESA Application Adaptive Management Program includes moving water from one water year to the next, switching the purpose of actions between species in unspecified ways, and suspending an alternative similar to Alternative 2(b) in wet years. (CESA Application, pp. 3-55 to 3-57.)

IV. The Alternatives in the DEIR are unnecessary and are not required to fully mitigate the authorized incidental take resulting from the effects of the Proposed Project.

The Proposed Project identified in the DEIR includes limitations on State Water Project ("SWP") diversions that are more protective than those limitations included in the 2008 Fish and Wildlife Service ("FWS") and 2009 National Marine Fisheries Service ("NMFS") biological opinions and associated reasonable and prudent alternatives ("RPAs"). In fact, the Proposed Project includes more protective versions of a number of the same limitations included in the 2008 and 2009 RPAs, with proposed operations designed to provide for greater protections based on scientific and other

[2] DEIR, p. 3-24 ["CDFW provides explanation and supporting documentation on how off-ramping the turbidity bridge avoidance action or not implementing this action would result in take that would not be minimized or fully mitigated."]

information developed in the decade since issuance of the RPAs. In addition, as a back-stop, performance objectives are set to ensure losses remain less than or equal to incidental take that occurred over the last decade during implementation of the RPAs, a decade that already had very low incidental take of covered salmonids. For example, winter-run Chinook salmon escapement has increased and decreased over the last decade in response to a variety of conditions, showing stable species escapement over-all. Winter-run Chinook salmon escapement was 8,033 in 2019 as compared to 1,596 in 2009, which illustrates the escapement variation over the last decade. See Table 1, below.

Table 1. California Central Valley Chinook Population Database Report. CDFW. Source: http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=168640&inline=1. Winter-run Chinook Salmon. 5/8/19.

Dec	2009	to	Aug	2010	1,596
Dec	2010	to	Aug	2011	287
Dec	2011	to	Aug	2012	2,671
Dec	2012	to	Aug	2013	6,084
Dec	2013	to	Aug	2014	3,015
Dec	2014	to	Aug	2015	3,440
Dec	2015	to	Aug	2016	1,547
Dec	2016	to	Aug	2017	977
Dec	2017	to	Aug	2018	2,639
Dec	2018	to	Aug	2019	8,033

Tables 1 through 6 in Attachment 1 to this letter compare the Proposed Project to the RPAs in the 2008 and 2009 BiOps and illustrate the enhanced protectiveness of the State's Proposed Project. As these tables illustrate, the Proposed Project substantially minimizes incidental take of state listed species at the SWP (thereby also minimizing the impacts of authorized incidental take on listed species as CESA requires), improving upon the 2008 and 2009 biological opinions based on best available scientific information.

The minimization provided by the Proposed Project's operational limitations are supplemented by mitigation that includes habitat restoration and other conservation measures, thereby satisfying CESA.

A. The Proposed Project fully mitigates potential impacts of authorized incidental take of longfin smelt and avoids jeopardy.

It is unlikely that the Proposed Project will have a meaningful negative impact on longfin smelt abundance. Nevertheless, DWR has already committed to 8,000 acres of tidal marsh, and 800 acres of mesohaline habitat.[3] There is strong evidence that longfin smelt use tidal marsh based on Dr.

[3] DWR'S original commitment was to mitigate 30 years of project operations, even though only 10-years of project operations occurred. The remainder of this habitat obligation is to mitigate the next ten years of project operations.

Hobbs research in the Alviso Marsh in the South Bay, where Dr. Hobbs and his team have observed longfin smelt larvae. (Lewis et al 2019.)[4] The Proposed Project satisfies CESA with respect to longfin smelt.[5]

The scientific information presented in the Draft EIR and CESA Application demonstrate that the Proposed Project will not result in a meaningful change in species abundance as a result of the predicted change to April-May outflow. (DEIR, pp. 4-179 to 4-180; CESA Application, pp. 4-59 to 4-61.)) The Nobriga and Rosenfield model and the Kimmerer regression model both show only a small potential difference in median abundance. The median difference is very low when compared to the range of the abundance predictions for both models, as expressed by the signal-to-noise ratio in the Draft EIR. Using either model, the signal to noise ratio is between 0-2 percent. (*Ibid.*) The large range of the abundance predictions in both models suggests that Delta outflow explains only a portion of the variability in the longfin abundance, making them poor tools for effective management decisions that can improve longfin abundance. When this 0-2 percent signal-to-noise ratio is combined with the uncertainty associated with the CALSIM II model outputs, which are the source data for the predictions, including the fact that not all April-May actions are in the model, it is clear that the models do not provide support for the proposition that the Proposed Project will result in any change in the species' abundance.

As Dr. Kimmerer has explained:

> The fish-X2 relationships are retrospective, not predictive. If the physical configuration of the estuary changes, these relationships may change in ways that cannot now be predicted. The nature of the relationships and underlying mechanisms are major uncertainties regarding these relationships.

(Kimmerer 2004, p. 90.)[6] The fact that the modeled relationship has changed over time, such that there are fewer and fewer longfin smelt predicted for the same level of outflow, See e.g., Tamburello et al. 2019[7], supports Dr. Kimmerer's caution in interpreting the relationship. The change in the longfin smelt: X2 relationship was illustrated by the State Water Resources Control Board's expert panel during its Flow Policy workshops in 2010. See Figure 1, which shows how the longfin Smelt relationship has changed over-time, indicating less species abundance for the same quantity of outflow. As the figure illustrates, species abundance in the survey area (which

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[4] Lewis, L. S., Willmes, M., Barros, A., Crain, P. K., & Hobbs, J. A. (2019). Newly discovered spawning and recruitment of threatened longfin smelt in restored and under-explored tidal wetlands. *Ecology*.

[5] The CESA Application added an additional 750 acres of low salinity zone habitat. By itself, this additional habitat is more mitigation than is legally required since it was calculated to provide full mitigation of the entire change in April-May outflow based on the combined operation of the CVP and SWP. (CESA Application, p. 5-5.)

[6] Kimmerer WJ. 2004. Open water processes of the San Francisco Estuary: from physical forcing to biological responses. San Francisco Estuary and Watershed Science [online serial].Vol. 2, Issue 1 (February 2004), Article 1.http://repositories.cdlib.org/jmie/sfews/vol2/iss1/art1

[7] Tamburello, N., Connors, B. M., Fullerton, D., & Phillis, C. C. (2019). Durability of environment–recruitment relationships in aquatic ecosystems: insights from long-term monitoring in a highly modified estuary and implications for management. *Limnology and Oceanography*, *64*(S1), S223-S239.

does not represent the species full range) has continued to decline (compare green points to purple points) for the same outflow. Based on this relationship, providing more outflow would not provide significant species benefits, rather determining the reason for the decadal shift downward would be more informative of future management actions. Spring Delta outflow does not appear to be the direct mechanism explaining this relationship.

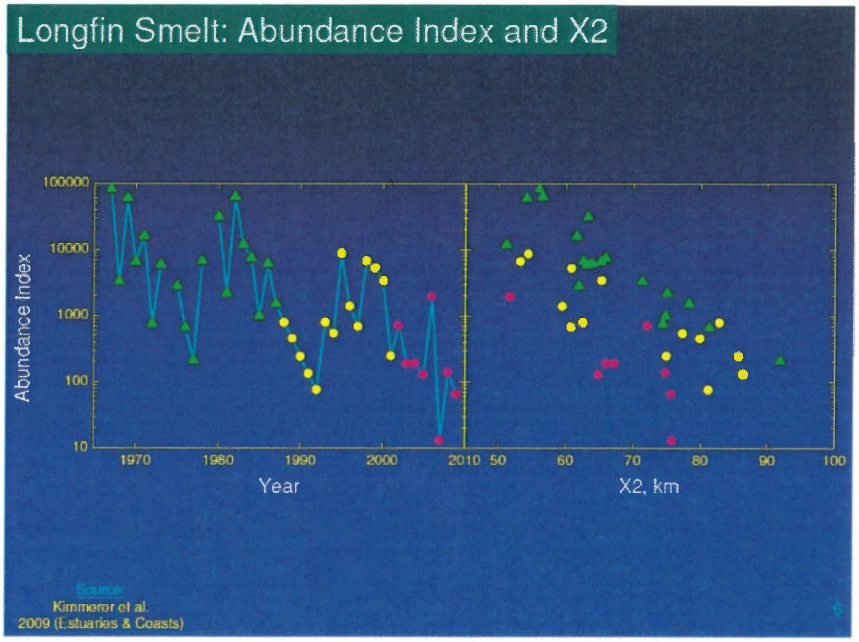

Figure 1. Dr. Wim Kimmerer, Delta Environmental Flows Group Presentation, SWRCB Flow Policy, Workshop 1. [8]

To further illustrate the limited predictive ability of the model, Dr. Feyrer showed a preliminary draft analysis at the recent Longfin Smelt Symposium comparing the predicted change in abundance if all water diversions in the system were eliminated, not just the SWP. While this analysis still needs further review, it indicates that there may only be a small predicted increase in abundance if all diversions are eliminated. See Longfin Smelt Symposium, at 2:03:55, Figure 2. It is therefore not surprising that the substantially smaller change in outflow related to the Proposed Project would not result in a significant change in species abundance.

[8] Delta Environmental Flows Group Introductory Presentation, March 22, 2010. Presentation by Kimmerer, W., Life-History Responses to Freshwater Flow at slide 6, https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/presentations/intro_4.pdf

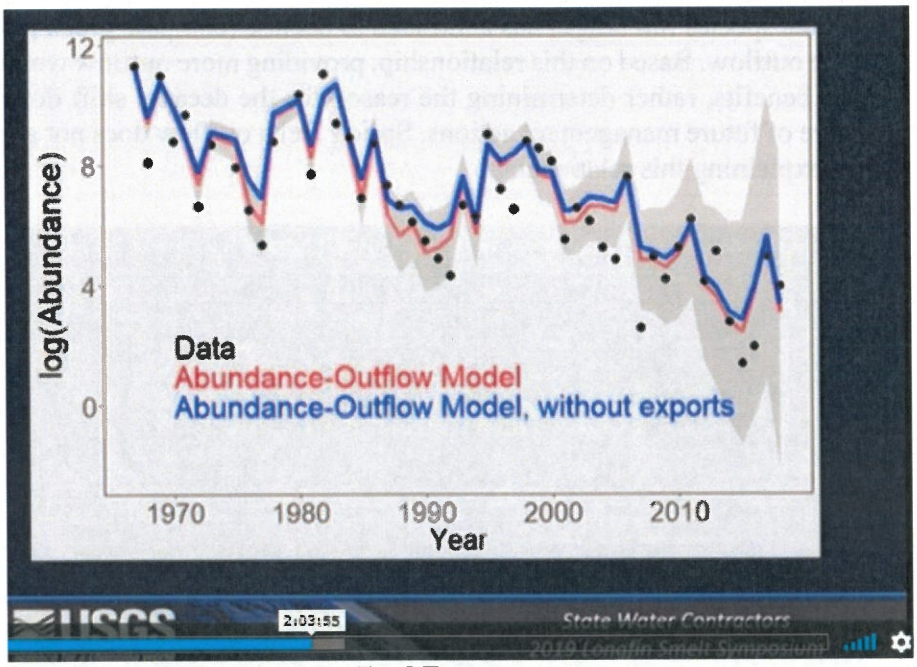

Figure 2, Longfin Smelt Symposium, Dr. Fred Feyrer.

Dr. Feyrer's prediction is consistent with the relative flatness of the relationship between winter-spring X2 and species abundance. As another way to view the relationship, the Delta Science Program's Delta Outflow Panel Report recommended that the longfin smelt relationship also be considered on a linear scale, thereby removing the log-scale from the original relationship. The result is a fairly flat relationship, particularly within the range of flows at issue for the Proposed Project Figure 3.

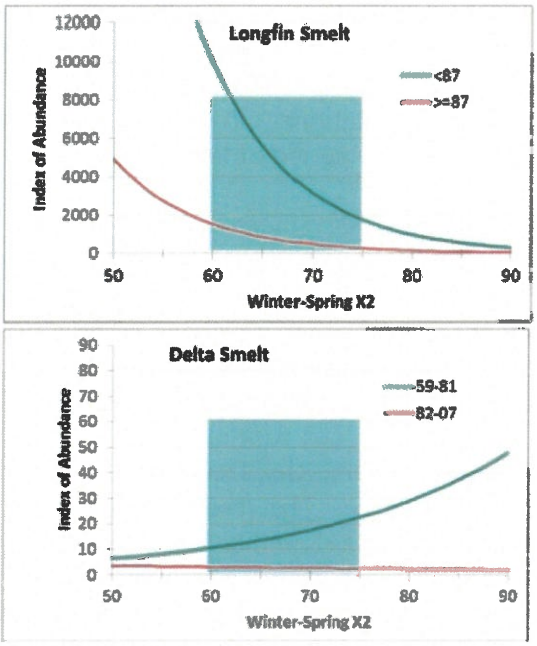

Figure 3. Relationships between Longfin (upper panel) and Delta Smelt (lower panel) abundance indices (mid water trawl and tow net series respectively) and average X2 over the winter-spring period during two different periods of time (before 1987 and after 1986 for Longfin Smelt; 1959-1981 and 1982-2007 for Delta Smelt). These relationships are based on parameters from Table 2 of Kimmerer et al. (2009) transformed from $\log_{10}$ to linear space. The blue boxes represent the X2 range required to achieve low salinity conditions in Suisun Bay.

Figure 3. Delta Science Program, Delta Outflow Panel Report, 2014 (Figure 3).

In addition, as Dr. Kimmerer and others have explained, the interpretation of the results of any biological model is uncertain when the underlying biological mechanism is unknown. (Kimmerer 2002[9] ["The flow relationships that form the basis of the current salinity standard provide no guidance about how they [species] may respond to such a major change in the configuration of the estuary. Predicting these responses is contingent on understanding the mechanisms underlying the flow relationships."], see also, Delta Outflow Panel Report, p. 64 ["…correlations can be misunderstood and over interpreted because they are specific to a set of conditions and do not provide information on causality…."] There is no single flow management action that is known to benefit all species, including all species with an abundance:X2 relationship. This is true for longfin smelt as well. For example, experts cannot reliably predict how longfin smelt abundance would respond to changes in reservoir releases, as compared to changes in outflow originating from wet hydrology, because the biological mechanism that would explain the observed statistical relationship is unknown. If the biological mechanism is, for example, turbidity then increasing reservoir releases will have no effect because turbidity does not increase with reservoir releases. Kimmerer 2002, p. 1284-1285, explains:

> Even for a single species the timing and duration of flow-based management should coincide with the mechanism by which the species responds to flow. This implies

[9] Kimmerer, W.J. 2002, Physical, Biological, and Management Responses to Variable Freshwater Flow in the San Francisco Estuary. *Estuaries*, Vol 25, No. 6B, pp. 1275-1290.

> knowledge of the species mechanism. A mechanism involving an increase in brackish habitat during the rearing season (mechanism 10, Table 1) may require a long period of increased flow, and opportunities for efficiency will be limited; a mechanism involving tidal stream transport and gravitational circulation in the lower estuary (mechanism 11) may occur over a relatively brief period of larval or juvenile recruitment into the estuary.
>
> As a more specific example, Sacramento splittail clearly respond to increasing flow through inundation of floodplains during early spring (Sommer *et al* 1997). This effect may occur through access to spawning habitat, in which case the period of effectiveness would be fairly brief, or rearing habitat, which would require a longer period of inundation. Distinguishing between these mechanisms and determining their importance to overall abundance of the species are important research objectives…."

The longfin smelt life cycle model by Drs. Rick Deriso and Mark Maunder further illustrates this point. (Maunder and Deriso (2015).)[10] The results of that model suggest that flow may be important to species abundance, but just as Kimmerer 2002 observed above, the question is "which flow?" Precipitation, outflow, X2 and flows into San Francisco Bay tributaries are cross-correlated. The Maunder and Deriso model selected Napa River flow, which could be used as a surrogate for San Francisco Bay inflow, as being the strongest predictor of increased longfin smelt abundance. If the model is correct, the most effective longfin smelt management action may be restoration activities within the San Francisco Bay's tributaries or restoration of the marshes around the Bay.

There have been many studies attempting to identify the biological mechanism(s), but the mechanism(s) so far remains unidentified. The Delta Regional Ecosystem Restoration Implementation Plan ("DRERIP")[11], which is the working conceptual model for the fishery agencies and Bay-Delta scientific community, concludes at p. 9 stating:

> The mechanism behind this relationship is not completely understood, and it is quite likely that more than one mechanism is behind the overall effect. High flows may increase available spawning habitat, increase hatching success, decrease predation on LFS larvae, increase success of larval-juvenile transformation (e.g., by increasing food sources), or some combination of these factors. Baxter (1999) and Dege and Brown (2004) observed that larval densities did not respond significantly to freshwater flow conditions. This argues against mechanisms that produce positive correlation between egg-larval and increase in available spawning territories or improved egg hatching success) and for mechanisms that increase success of larvae-juvenile transition….

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[10] Maunder, M.N., Deriso, R.B., Hanson, C.H. 2015. Use of State-Space Population Dynamics Models in Hypothesis Testing: Advantages Over Log-linear Regression for Modeling Survival Illustrated with Application to Longfin Smelt (*Spirinchus thaleichthys*). *Fisheries Research*, Vol. 164: 102-111. http://doi.org/101016/J.Fisheries. 2014.10.017.

[11] Rosenfield, J.A. 2010. Life history conceptual model and submodels for longfin smelt, San Francisco Estuary population. For the Delta Regional Ecosystem Restoration Implementation Plan. May 2010.

As explained in the DRERIP model, longfin smelt spawning in the upper estuary is not correlated well with outflow. In wet years, there are generally low numbers of larvae captured in the upper Estuary, a likely explanation is that longfin smelt descend downstream of the Delta to spawn. Recent studies show that longfin smelt are spawning and rearing in tributaries throughout San Francisco Bay during wetter periods, suggesting mechanisms underlying abundance in wetter years is related to habitat conditions seaward of Suisun Bay and Delta. (Grimaldo et al. 2017[12]; Lewis et al. 2018[13]) Therefore, it is unlikely that increased spawning and larvae survival in the upper estuary in high outflow years is the biological mechanism behind the longfin smelt abundance: X2 relationship. In Dr. Hobbs recent presentation, he showed that longfin smelt are primarily spawning downstream of the Delta, in the Bay tributaries, including the South Bay in wet years, and utilizing the Delta more heavily in drier years. (Longfin Smelt Symposium, Dr. Hobbs, https://www.swc.org/in-the-news/2740/longfin-smelt-science-symposium, at 1:13:48 to 1:34:40.) This suggests that the mechanism underlying the relationship is likely downstream of the Delta. (Ibid.)

Kimmerer et al. (2013)[14] evaluated the relationship between the spatial extent of the low salinity zone and species abundance and concluded for longfin smelt that "the observed X2–abundance relationships are inconsistent with a mechanism that involves extent of low-salinity habitat." (Kimmerer et al. 2013 at p. 12). Therefore, it does not appear that the spatial extent of low salinity habitat is the underlying biological mechanism.

Latour (2016) [15]suggested suspended sediment concentration is more statistically supported than Delta outflow as a predictor of longfin smelt trends in catch per unit effort. Latour's (2016) study noted that the relationship with suspended sediment concentration could reflect detection of longfin smelt by the sampling gear, and Peterson and Barajas (2018)[16] also identified suspended sediment concentrations as a factor affecting the detection of longfin smelt; studies are underway to reduce this area of scientific uncertainty (Feyrer et al. 2019 in prep). The Delta Science Program's Outflow Panel Report also recognized the importance of investigating the ability of the surveys to reliably estimate abundance. (Delta Outflow Panel Report, p.32.) Investigations into other mechanisms such as changes in retention and entrainment at SWP and CVP are also ongoing (Gross et al. 2019, in prep).

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[12] Grimaldo L, Feyrer F, Burns, J, Maniscalco D. 2017. Sampling Uncharted Waters: Examining Rearing Habitat of Larval Longfin Smelt (*Spirinchus thaleichthys*) in the Upper San Francisco Estuary. Estuaries and Coasts 40:1771-1784.

[13] Lewis LS, Willmes M, Barros A, Crain P, Hobbs JA. 2019. Newly discovered spawning and recruitment of threatened Longfin Smelt in restored and under-explored tidal wetlands. The Scientific Naturalist, available at https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecy.2868

[14] Kimmerer, W.J., M.L. MacWilliams, and E.S. Gross. 2013. Variation in fish habitat and extent of the low-salinity zone with freshwater flow in the San Francisco Estuary. San Francisco Estuary and Watershed Science, 11(4).

[15] Latour, R.J. 2016. Explaining patterns of pelagic fish abundance in the Sacramento-San Joaquin Delta. Estuaries and Coasts 39:233-247.

[16] Peterson, J. T., & Barajas, M. F. (2018). An Evaluation of Three Fish Surveys in the San Francisco Estuary, 1995–2015. San Francisco Estuary and Watershed Science, 16(4).

Longfin smelt entrainment in the SWP is also unlikely to have a population level effect. As Dr. Kimmerer explained at the recent Longfin Smelt Symposium, he is not particularly concerned about longfin smelt entrainment since the species distribution, as shown in the larval survey, which is a particularly vulnerable life stage, is such that it is unlikely that entrainment in the SWP is a driver of species abundance. (Longfin Smelt Symposium, https://www.swc.org/in-the-news/2740/longfin-smelt-science-symposium, time 3:15-3:47.) Whereas previous studies suggested most spawning was concentrated in fresh water of the north Delta, more recent research has shown that spawning occurs in a much wider range of salinity throughout the Bay. (Hobbs et al. 2010,[17] Grimaldo et al. 2017[18]; Hobbs et al. 2019[19]; Grimaldo et al. 2019, in prep).

The potential effects of the Proposed Project's authorized incidental take of longfin smelt are small and highly uncertain. Nevertheless, the DEIR Proposed Project includes ample measures to fully mitigate any effects that might occur.

B. The Proposed Project fully mitigates potential impacts of authorized incidental take of delta smelt and avoids jeopardy.

It is unlikely that the Proposed Project would have an impact on delta smelt abundance. Nevertheless, the Proposed Project already includes measures that most likely would fully mitigate any potential impacts of the Proposed Project. Assuming that the location of X2 in the fall is related to delta smelt abundance, a point the SWC do not agree with based on the science described below, the Proposed Project fully mitigates for this potential effect because the Proposed Project moves X2 to 80 km in September and October of above normal water years, which is downstream of the 2008 RPA location, and adds delta smelt habitat enhancement actions in summer and in below normal water years, including food enhancement actions. These habitat enhancements are in addition to restoration of 8,000 acres of tidal marsh, and 800 acres of mesohaline habitat, including many restoration projects that were completed in 2019. The Proposed Project satisfies CESA with respect to delta smelt.

There are no published studies that suggest that summer outflow or X2 has any relationship to delta smelt abundance. Similarly, there is no reliable evidence indicating that fall outflow or X2 has any relationship to delta smelt abundance.[20] Regardless, the Proposed Project does not result in changes in summer outflow, and causes only some changes in some fall months following wetter

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[17] Hobbs, J. A., Lewis, L. S., Ikemiyagi, N., Sommer, T., & Baxter, R. D. (2010). The use of otolith strontium isotopes (87 Sr/86 Sr) to identify nursery habitat for a threatened estuarine fish. *Environmental biology of fishes*, *89*(3-4), 557-569.

[18] Grimaldo, L., F. Feyrer, J. Burns, and D. Maniscalco. 2017. Sampling uncharted waters: Examining rearing habitat of larval Longfin Smelt (Spirinchus thaleichthys) in the Upper San Francisco Estuary. Estuaries and Coasts, 40:1771-1784

[19] Hobbs, J.A., Lewis, L.S., Willmes, M. *et al.* Complex life histories discovered in a critically endangered fish. *Sci Rep* **9**, 16772 (2019) doi:10.1038/s41598-019-52273-8

[20] The CESA Application cites a conceptual model, suggesting that X2 or outflow is related to abundance, survival and growth, CESA Application, p. 4-34, but fails to explain that there is no reliable evidence supporting this model and therefore the CESA Application should be amended accordingly.

years. Nevertheless, the DEIR includes alternatives for new summer and fall outflow, which are incorporated into the CESA Application, without nexus to SWP impacts.

Numerous studies using diverse multivariate approaches have explored how both physical and biotic factors, including outflow and X2, affect the abundance of delta smelt and none found evidence that the location of low salinity in the fall determined the performance delta smelt. (MacNally et al. 2010[21]; Thomson et al. 2010[22]; Maunder and Deriso 2011[23]; Miller et al. 2012[24]; Hamilton and Murphy 2018.[25]) The only model that has been relied on to suggest an X2 to abundance relationship is Feyrer et al. 2007, which was included in the 2008 FWS biological opinion. The Feyrer et al. model has been criticized, see e.g., NRC 2010, p. 53,[26] being a biologically inappropriate linear model where new delta smelt can originate from zero adults. The Feyrer et al. model itself is therefore unreliable evidence. However, as was shown in ICF 2017, even if the Feyrer et al. 2007[27] model was biologically appropriate and was applied, a change in wet water-year outflow from 74km (2008 RPA) to 80km (Proposed Project) would not be expected to result in a change in delta smelt abundance, showing instead an equally likely chance of an increase in species abundance or a decrease in species abundance. (ICF, 2019, pp.33-38.)[28]

The ongoing adaptive management studies also have failed to identify strong evidence of a species benefit resulting from implementation of the 2008 Fall Habitat RPA, which required that X2 be located at 74km in wet years and 81 km in above-normal water years from September-October (with a November pass-through requirement). The results of the adaptive management studies have generally been inconclusive. The 2014 FLaSH Report, which showed some evidence that delta

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[21] MacNally R, Thomson JR, Kimmerer WJ, Feyrer F, Newman KB, Sih A, Bennett WA, Brown L, Fleishman E, Culberson SD, Castillo G. 2010. Analysis of pelagic species decline in the upper San Francisco Estuary using multivariate autoregressive modeling (MAR). Ecological Applications 20:1417–1430.

[22] Thomson JR, Kimmerer WJ, Brown LR, Newman KB, Mac Nally R, Bennett WA, Feyrer F, Fleishman E. 2010. Bayesian change point analysis of abundance trends for pelagic fishes in the upper San Francisco Estuary. Ecological Applications 20:1431–1448.

[23] Maunder, MN Deriso RB. 2011. A state–space multistage life cycle model to evaluate population impacts in the presence of density dependence: illustrated with application to delta smelt *(Hyposmesus transpacificus*). Canadian Journal of Fisheries and Aquatic Sciences 68:1285-1306.

[24] Miller WJ, Manly BFJ, Murphy DD, Fullerton D, Ramey RR. 2012. An investigation of factors affecting the decline of delta smelt (*Hypomesus transpacificus*) in the Sacramento-San Joaquin Estuary. Reviews in Fisheries Science 20:1-19.

[25] Hamilton SA, Murphy DD. 2018. Analysis of Limiting Factors Across the Life Cycle of Delta Smelt (*Hypomesus transpacificus*). Environmental Management 62:365-382.

[26] National Research Council. 2010. A Scientific Assessment of Alternatives for Reducing Water Management Effects on Threatened and Endangered Fishes in the Delta. Committee on Sustainable Water and Environmental Management in the California Bay-Delta. ISBN: 978-0-309-12802-5.

[27] Feyrer F, Nobriga M, Sommer T. 2007. Multidecadal trends for three declining fish species: habitat patterns and mechanisms in the San Francisco estuary, California, USA. Canadian Journal of Fisheries and Aquatic Sciences, 64:723-734.

[28] ICF. 2017. Public Water Agency 2017 Fall X2 Adaptive Management Plan Proposal. Submitted to United States Bureau of Reclamation and Department of Water Resources. Draft. August 30. (ICF 00508.17.) Sacramento, CA.

smelt abundance was improved after the 2011 wet water year and cool summer, stated that, "In general, the FLaSH investigation of the mechanisms linking X2 and delta smelt abundance has been somewhat inconclusive as of the writing of this report." (Brown et al. 2014 at p 66).[29] The results for 2017, the only other wet water-year after the 2008 BiOp for which there are study results, showed no evidence that delta smelt abundance benefitted from the wet conditions. (Draft FLOAT-MAST, p. 91 ["In 2017, recruitment was low, very similar to the previous year and substantially lower than recent years 2014-2015.]".)[30] Similarly, there was no evidence of increased food availability in 2017. (Draft FLOAT-MAST, p. 99 ["Overall, the data do not support our prediction that during wet years food availability will increase resulting in greater food consumption by Delta Smelt. Gut fullness was high in the wet year of 2017 but the wet year of 2011 had gut fullness similar to drier years."].) For 2017, it appears that temperatures appeared to be the most significant factor affecting delta smelt habitat quality. (Draft FLOAT-MAST, p. 101 ["Water temperatures appear to have been a major factor limiting the success of Delta Smelt in 2017."].) However, there does not appear to be a relationship between water temperature and outflow as wet years can be warm or cool, *Ibid.*, as was the case in 2006 and 2017 when water temperatures were elevated in the summer. Regardless, the SWP has no ability to affect water temperatures in the estuary. (Kimmerer 2004.)[31]

Not only are the DEIR alternatives and CESA Application's inclusion of additional summer and fall outflow for delta smelt not scientifically justified, this additional outflow would not be mitigating for any actual effect of the Proposed Project. The 2008 FWS biological opinion did not include a summer delta smelt habitat RPA as it properly acknowledged that the SWP and CVP do not negatively affect outflow in the summer. (2008 biological opinion, p. 195 ["Further, summer and early fall inflows (PCE #2, #3 and #4) may be increased over natural hydrograph as reservoirs release stored water to support export operations."].)[32] DWR's CESA application also acknowledges that the SWP and CVP do not negatively affected summer outflow, stating:

> Historically, the long-term trend in Delta outflow in the summer is positive (Hutton et. al., 2017a p. 8). Since the 1950s, Delta outflow in July and August has increased, with June and September outflow showing no long-term trend (Hutton et. al., 2017b p. 7). The positive outflow change is attributed primarily to the effects of the SWP and CVP operations, which have more than fully attenuated impacts of diversions by non-SWP/CVP

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[29] Brown, L.R., Baxter, R., Castillo, G., Conrad, L., Culberson, S., Erickson, G., Feyrer, F., Fong, S., Gehrts, K., Grimaldo, L., Herbold, B., Kirsch, J., Mueller-Solger, A., Slater, S., Souza, K., and Van Nieuwenhuyse, E. 2014. Synthesis of studies in the fall low-salinity zone of the San Francisco Estuary, September–December 2011: U.S. Geological Survey Scientific Investigations Report 2014–5041, 136 p., http://dx.doi.org/10.3133/sir20145041.

[30] Management, Analysis, and Synthesis Team (FLOAT-MAST). 2019. Synthesis of data and studies relating to Delta Smelt biology in the San Francisco Estuary, emphasizing water year 2017. IEP Technical Report XXXX-XX. Interagency Ecological Program, Sacramento, CA. Preliminary Draft March 2019.

[31] Kimmerer, W. 2004. Open water processes of the San Francisco Estuary; from physical forcing to biological responses, San Francisco Estuary and Watershed Science, 2(1).

[32] U.S. Fish and Wildlife Service. 2008. Endangered Species Act consultation on coordinated operation of the Central Valley Project and State Water Project. December 15, 2008.

> diversion (Hutton et. al., 2017b p 7). Moreover, as shown in the DEIR, the Proposed Project is not expected to decrease June through August outflow as compared to baseline.

(CESA Application at p. 3-56). Similarly, the CVP and SWP do not negatively affect fall outflow. As the DEIR states, "compared to pre-project conditions, Hutton et al. (2015) found no trend in X2 in July, October, and November, and the water projects were making conditions fresher in August and September." (DEIR at 4-69.) The Proposed Project only minimally affects fall outflow in the wettest water years and in Novembers following wet water years. For the reasons described above, this project related change in outflow would not be expected to negatively affect delta smelt or result in "take."

The potential effects of the Proposed Project on delta smelt habitat are small and highly uncertain. Nevertheless, the Proposed Project includes ample measures to fully mitigate any effects that might occur, as described in the DEIR.

C. There is little evidence that the Head of Old River barrier improves salmonid survival; regardless the SWP is not required to seek authorization for the experimental take of spring-run Chinook salmon.

The DEIR's Alternative 3 includes the Head of Old River Barrier and a non-physical barrier at Georgianna Slough. These barriers are not required to satisfy CESA.

The only state-listed salmonid species originating from the San Joaquin River is the federally designated nonessential experimental population of spring-run Chinook salmon. The SWP does not require authorization under CESA for taking of this population. California Fish and Game Code section 2080.4 states that no state authorization for taking of the nonessential experimental spring-run Chinook salmon population is required if the federal authorization allows the taking and the Director of DFW finds that the federal regulations are protective. The federal regulations allow taking of the spring-run Chinook salmon nonessential experimental population by otherwise lawful activities such as operations of the SWP (78 FR 79622), and the Director of DFW determined that the regulations met the requirements of section 2080.4 in a March 18, 2014 determination letter (CDFW file No. 2080-2014-005-04).[33] The CESA Application should also be amended to acknowledge that DWR is not seeking take authorization for the experimental spring-run population originating from the San Joaquin River.

Even if the SWP were required to seek take authorization, the Proposed Project is not affecting the experimental population. The Head of Old River barrier is intended to protect salmonids out-migrating from the San Joaquin River. However, as the DEIR states, "acoustic tagging studies have not reported significant differences in survival between the Head of Old River route and the San Joaquin mainstem route. The San Joaquin Delta SDM model incorporates acoustic tagging

[33] California Regulatory Notice Register 2014, No 13-Z. March 28, 2014. Department of Fish and Wildlife. California Endangered Species Act Consistency Determination No. 2080-2014-005-04. Nonessential Experimental Population Designation and 4(d) Take Provisions for Reintroduction of Central Valley Spring–Run Chinook Salmon to the San Joaquin River Below Friant Dam.

data in the south Delta including fish entrained into the facilities. This model found higher survival under the proposed project [] with uncertainty but suggests survival would not be impaired for fish routed into Old River." (DEIR at p. 5-22) Therefore, even if take authorization was necessary, the Proposed Project does not result in a significant difference in survival.

Even if the Proposed Project did result in a change in species survival, and that change in survival involved a species requiring further take authorization, it is unclear whether the Head of Old River Barrier would be effective mitigation. The Delta Science Program is responsible for reviewing implementation of the 2008 and 2009 biological opinions; and after review of the science underlying the implementation of the barrier, their panel concluded, "Lacking evidence to the contrary, it is difficult to conclude that the HORB provided equal or greater protection for smolts."[34] It is therefore uncertain whether barrier installation benefits species.

V. Conclusion

The SWC agree with DWR's analysis and conclusions establishing that the Proposed Project does not have any potentially significant impacts. We will continue to support adaptive management activities that help us to better understand and manage the Delta ecosystem and water supply. However, the SWC objects to the inclusion of project alternatives that are not necessary for mitigating project effects and the scientifically unsupported project outlined in DWR's CESA Application. Additionally, by proposing more mitigation than is legally required, DWR is not fulfilling its contractual obligations to the SWC member agencies. Despite these objections, we hope to support DWR in the future as it seeks legally and scientifically sound solutions.

Sincerely,

Jennifer Pierre
General Manager

cc: Karla Nemeth
Michelle Banonis
Dean Messer

[34] Anderson, J.J., Gore, J.A. Kneib, R.T., Lorang, M.S., Nester, J.M., Van Sickle, J.V. 2012. Report of the 2012 Delta Science Program Independent Review Panel (IRP) on the Long-Term Operations Opinions (LOO) Annual Review. Prepared for the Delta Science Program. p. 30.

Attachment 1: Tables and Figures

Table 1. Comparing 2008 and 2009 BiOps to State Proposed Project, OMR Initiation Triggers.

Management of Salvage in South Delta	Current 2008/09 BiOp OMR	State Proposed Project	Rationale for Difference
Initiation of Salmon OMR	Jan. 1 = -5,000 OMR	Jan. 1= -5,000 OMR once 5% of any salmonid species present in Delta	Refinement to reflect species presence
End of Salmon OMR	June 15th, or daily water temperatures at Mossdale exceed 77°F for 7 consecutive days during June	More than 95 percent of salmonids have migrated past Chipps Island, daily water temperatures at Mossdale exceed 77°F for 7 days during June (7 days do not have to be consecutive) or June 30th	Refinement to reflect species presence
Initiation of Delta Smelt OMR	Triggered by First Flush Action	Triggered by First Flush Action	Basically the same
End of Delta Smelt OMR	June 15 or daily water temperatures at CCF exceed 72°F for 3 consecutive days	June 30 or daily water temperatures at CCF exceed 72°F for 3 consecutive days	Basically the same

Table 2. Comparing 2008 and 2009 BiOps to State Proposed Project, Delta Smelt Adult and Juvenile Minimization Measures.

Management of Salvage in South Delta	Current 2008 BiOp OMR	State Proposed Project	Rationale for Difference
"First Flush" Limitation ("FF")	Trigger: • Start: Dec.-Jan. • Three-day average turbidity at three locations or salvage risk • 14-days of -2,000 cfs OMR • Triggered once	Trigger: • Start: Dec. – Jan. • Flow and turbidity at Freeport, or salvage risk • 14-days of -2,000 cfs OMR • Triggered once	State PP approach triggers operational reductions more often than 2008 BiOp
"Turbidity Bridge Avoidance" Limitation	Trigger: • Start: After FF • Operate within OMR range (-1,250 to -5,000 cfs) based real-time salvage risk • End: spawning	Trigger: • Start: Feb or after FF • Maintain less than 12 NTU daily turbidity at Bacon Island; • -2,000 cfs OMR for 5-days or longer based on real-time salvage risk • End: spawning	State PP approach triggers operational reductions more often than 2008 BiOp

Table 3. Comparing 2008 and 2009 BiOps to State Proposed Project, Delta Smelt Larval Protection Measures.

Management of exports in south Delta	Operation	Rationale
2008 BiOp operation for Delta Smelt larval protection	Operate within OMR range (-1,250 to -5,000 cfs OMR) based on real-time considerations like larvae distributions and entrainment risk	Protect Delta Smelt Larvae
State PP operation for Delta Smelt larval protection	Operate to OMR based on FWS life cycle model results and real-time considerations like larval distributions and entrainment risk.	Protect Delta Smelt larvae and Improve scientific basis by relying on life cycle modeling or other modeling tools

Table 4. Comparing 2008 and 2009 BiOps to State Proposed Project, Winter-run Chinook Salmon Minimization Measures.

Management of Salvage in South Delta	Current 2009 BiOp OMR	State PP	Rationale for Difference
Winter-Run Chinook Salmon	Trigger is a quantity of allowable loss based on percent of allowable incidental take per thousand acre-feet. First threshold reached = -3,500 cfs OMR Second threshold reached= -2,500 cfs OMR. These actions are for a minimum of 5-days. OMR flow may increase to -5,000 cfs after trigger has not been exceeded for 3-days.	Trigger is avoid exceeding an annual loss threshold equal to 90% of the greatest annual loss from 2010-2018. First threshold reached= -3,500 cfs OMR Second threshold reached= -2,500 cfs Reclamation and DWR could increase diversion based on salvage risk assessment. (10-year cumulative target)	The recent historic take has been low and intent is to maintain same actual levels of species loss.

Table 5. Comparing 2008 and 2009 BiOps to State Proposed Project, Spring-run Chinook Salmon Protection Measures and Storm Flexibility.

Management of Salvage in South Delta	Current 2008/09 BiOp OMR	State PP	Rationale for Difference
Spring-run Chinook salmon protections	As a result of technical limitations, there is no OMR based RPA solely for SR. Protection is provided through limits on loss of surrogate release groups.	As a result of technical limitations, there is no OMR based RPA solely for SR. Protection is provided through limits on loss of surrogate release groups.	Based on informational limitations, could not improve approach
Storm Flexibility	Originated through WINN Act. Implementation was not explicitly defined in act.	If no other limit in place and SR surrogate losses cannot exceed 0.5% and no other indicator of species effect	Implementation required definition

Figure 6. Comparing 2008 and 2009 BiOps to State Proposed Project, Delta Smelt Habitat Actions.

Management of exports in south Delta	Operation	Rationale
2008 BiOp Delta Smelt Habitat RPA	Wet = X2 at 74 km (Sept.-Nov.) Above normal = X2 at 81km (Sept.-Nov.)	
State PP approach to Delta Smelt Habitat	Wet = X2 at 80 km (Sept.-Oct.) Above normal = X2 at 80km (Sept.-Oct.) SMSCG= June-October (up to 60-days) (Wet, Above Normal and Below Normal) Food Actions- All years Turbidity study.	Expanding actions into larger number of water-year types and into summer; Including a larger range of habitat actions from Delta Smelt Resiliency Strategy.

* Longfin smelt export operations are the same as the 2009 Incidental Take Permit.

January 6, 2020

Sent via E-Mail to: LTO@water.ca.gov

You Chen (Tim) Chao, PhD, PE, CFM
Executive Division, California Department of Water Resources
PO Box 942836
Sacramento, CA, 94236

Dear Mr. Chao:

The San Luis & Delta-Mendota Water Authority ("Water Authority") appreciates the opportunity to provide comments on the Draft Environmental Impact Report ("Draft EIR") for Long-Term Operation of the California State Water Project ("Proposed Project"). The Water Authority is a joint-powers authority that serves two important roles: 1) to provide unified representation on common interests of its 28 member agencies; and 2) to operate and maintain the Central Valley Project (CVP) facilities that the Water Authority's member agencies depend on for delivery of their water supply, including the Jones Pumping Plant, the Delta-Mendota Canal, and the O'Neill Pumping Plant. The Water Authority's member agencies contract with the U.S. Bureau of Reclamation for a portion of their water supply and provide water to approximately 1.2 million acres of irrigated agriculture in the San Joaquin Valley, over 2,000,000 people in the Silicon Valley, and approximately 200,000 acres of managed wetlands of critical importance to the Pacific Flyway.

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The California Department of Water Resources' ("DWR") Proposed Project reflects State Water Project ("SWP") operations that would be coordinated with new proposed operations of the Central Valley Project ("CVP") that are very similar to the federal Biological Opinions issued pursuant to the Reinitiation of Consultation on Long-Term Operations (ROC on LTO) of the CVP and SWP, which we fully support. The Water Authority supports the operations changes in the Proposed Project, as well as the conclusions of the Draft EIR that the Proposed Project has no significant adverse environmental impacts. However, we have concerns regarding the adequacy of information provided in the Draft EIR, particularly regarding the identified project alternatives. Specifically, we are concerned that the Draft EIR lacks clear descriptions of basic components of the identified alternatives and lacks sufficient detail in the analysis of their impacts. For instance, the Draft EIR does not provide a sufficient level of detail to understand how each of the identified alternatives would be implemented through coordinated SWP and CVP operations and fails to sufficiently describe the environmental difference between the identified alternatives and the Proposed Project.

Lack of Clear Project Description

CEQA Guidelines require an environmental impact report's description of alternatives, like the proposed project, to identify and describe each alternative's technical, economic, and

environmental characteristics, and other details necessary to allow an evaluation and to review the alternative's environmental impacts[1].

In order to describe and analyze the impacts of each alternative and the Proposed Project, the details of coordination between SWP and CVP facilities must be described. Unfortunately, the Draft EIR provides an insufficient level of necessary detail to evaluate the environmental impacts of the alternatives or Proposed Project. For example, the Draft EIR refers to "proportional share" of regulatory requirements and "equitable" coordination between SWP and CVP operations but does not define either term, does not describe whether and how requirements imposed only on the SWP impact coordinated operations, and lacks sufficient description regarding impacts to CVP operations. The Draft EIR does not provide sufficient information to enable interested parties or DWR to fully understand the alternatives and compare them to the Proposed Project.

Insufficient Analysis of Impacts

The Draft EIR also fails to provide sufficiently detailed analysis of potential environmental impacts. CEQA Guidelines also require an environmental impact report to contain enough information about each alternative to allow for an evaluation of the relative merits of each alternative and a comparison between each alternative and the Proposed Project[2]. The Draft EIR fails to provide sufficient analysis of the impacts of each alternative. Notably, the Draft EIR does not contain a summary or technical detail regarding modeling results or provide an explanation regarding how CVP operations may be affected by implementation of each alternative. For example, the Draft EIR fails to sufficiently analyze the impacts of each alternative on CVP operations and delivery of water supplies to its contract holders, or the impacts to CVP upstream storage required to meet regulatory and contractual obligations. This lack of adequate analysis prevents the Water Authority and others from being able to meaningfully comment and prevents decision-makers from meaningfully evaluating and understanding the environmental impacts of each alternative.

In summary, the Draft EIR lacks sufficient detail and analysis, particularly as it pertains to the identified alternatives. Important elements regarding DWR's coordination with Reclamation are insufficiently described and reasonably foreseeable environmental impacts, particularly the impacts of the alternatives on the CVP, are not disclosed[3]. As a result of this insufficient level of detail in the draft EIR, we were not able to provide detailed comments and are concerned that DWR will not have the information available to decide between the Proposed Project or one of the alternatives. We encourage DWR to work with Reclamation to address the deficiencies identified above prior to approving the Proposed Project or an alternative.

Thank you for the opportunity to comment on the Draft EIR for long-term operations of the State Water Project. If you have any questions, please do not hesitate to contact Scott Petersen at 916-321-4526.

Regards,

Federico Barajas, Executive Director
San Luis & Delta-Mendota Water Authority

[1] CEQA Guidelines, § 15124(c)
[2] CEQA Guidelines, § 15126.6(a)
[3] Pub. Resources Code, § 21100(a)(1); CEQA Guidelines, §§ 15126.2, 15144

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United States Department of the Interior

BUREAU OF RECLAMATION
Bay-Delta Office
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IN REPLY REFER TO:
BDO-100
ENV-6.00

JAN 06 2020

Mr. You Chen Chao
California Department of Water Resources
Executive Division
PO Box 942836
Sacramento, CA 94236-0001

Subject: Comments on the Draft Environmental Impact Report for Long-Term Operation of the California State Water Project

Dear Mr. Chao:

The Bureau of Reclamation (Reclamation) submits this letter in response to the California Department of Water Resources' (DWR) November 22, 2019, Draft Environmental Impact Report (DEIR) for Long-Term Operation of the California State Water Project (SWP), pursuant to the California Environmental Quality Act (CEQA). Reclamation understands the Proposed Project described in the DEIR to be similar to Alternative 1 in the Reinitiation of Consultation on the Coordinated Long-term Operation (ROC on LTO) of the Central Valley Project (CVP) and SWP Environmental Impact Statement (EIS), but with critical exceptions as described below.

Reclamation is concerned about differences in the proposed operations with respect to reverse flow rates of Old and Middle Rivers (OMRs), proposed fall and spring Delta outflows, physical and non-physical barriers for both fish and salinity, and prescribed real-time management. In addition, we are concerned that these differences were not analyzed in coordination with Reclamation and that we were unable to find where these re-directed impacts were fully analyzed or disclosed in the DEIR.

Moreover, Reclamation is concerned that the proposed alternatives in the DEIR could result in different operations of the CVP and SWP. The proposed different operating criteria for the San Francisco Bay-Delta and the CVP and SWP shared facilities would make our mutual obligation for coordinated operations challenging under the critical Coordinated Operations Agreement (COA). The sharing of and accounting for modified mutual obligations for the coordinated operation of the CVP and SWP would be determined through coordination and discussions between Reclamation and DWR. DWR did not coordinate with Reclamation on the development of this DEIR and has not yet initiated discussions with Reclamation on the sharing of obligations included in the DEIR. Without an understanding of how the new obligations included in the DEIR would be met and accounted for (which would create different objectives on the same system), the impacts of these actions on both the CVP and SWP cannot be analyzed. In addition, these differing operations would also challenge compliance with applicable State Water Resources Control Board orders, terms and conditions of the Suisun Marsh Preservation

Agreement, Federal endangered and threatened species regulations, and related United States Army Corps of Engineers' (Corps) permits.

Reclamation understands that the DEIR will also be used by California Department of Fish and Wildlife (CDFW) to authorize an Incidental Take Permit (ITP) under the California Endangered Species Act (CESA), and that the ITP will provide an exemption for the SWP for incidental take of fish species listed under CESA (i.e., Delta Smelt, Longfin Smelt, Winter-run Chinook Salmon, and Spring-run Chinook Salmon). While the DEIR acknowledges that Reclamation is not legally required to comply with state endangered species laws, including Longfin Smelt protective measures (e.g., restricted OMR reverse flows and spring Delta outflows), and describes separate operations, the additional outflow included in the DEIR alternatives may impact CVP operations and water supply, and presents issues for accounting under the COA. Reclamation is concerned that - as currently described - the DEIR and its alternatives designed to comply with the CESA protections may impact CVP operations, and without any proposed mitigation measures.

Much of the Proposed Project described in the DEIR will need to be coordinated with Reclamation, the U.S. Fish and Wildlife Service (FWS), and/or the National Marine Fisheries Service (NMFS). Reclamation, with DWR as our applicant, completed consultation on the ROC on LTO with FWS and NMFS, culminating with the issuance of Biological Opinions on October 21, 2019 (2019 BOs). There are several components in the DEIR that are not included in the BOs. While Reclamation understands DWR has identified the Corps as the Federal lead for permitting of several of these components, DWR needs to clarify how it intends to address the Federal ESA obligations related to the operational impacts to the CVP and SWP.

Overall, the DEIR lacks necessary details and does not adequately describe how DWR and Reclamation's proposed operations of the CVP and SWP will work in concert. Since the DEIR was developed in the absence of dialogue with Reclamation, it is speculative to draw conclusions about how the differences in proposed joint operation between the EIS and DEIR will be resolved, and the resulting environmental conditions are therefore unknown.

Reclamation provides the following specific comments for consideration on the DEIR:

- Additional outflow requirements described under the alternatives would require accounting under COA to be compared to accounting without the alternatives, to understand any effects to the CVP. As mentioned above, the accounting has not yet been discussed and therefore these effects cannot be considered.
- The Federal ESA compliance for outflow, barriers (Head of Old River Barrier [HORB] and Georgiana Slough), and monitoring would be required. DWR has not coordinated the intended ESA process for these components with Reclamation or stated whether it intends to seek separate compliance.
- Given CESA does not apply to Reclamation, we would like to see more detail in the DEIR on the steps, including mitigation measures, DWR and CDFW would take as part of this process to ensure CVP operations and water supply are not impacted.
- The Adaptive Management Plan groups are described as participating in a technical and policy advisory capacity, which may present issues for federal members from a Federal Advisory Committee Act (FACA) perspective. This should be addressed in the DEIR.

- Some sections reference "future biological opinions" and some sections reference the "finalized BOs". References need to be updated to consistently reflect the biological opinions issued by FWS and NMFS on October 21, 2019.
- The Proposed Project needs additional details on the way DWR plans to coordinate with Reclamation, including the proposed Adaptive Management Plan.
- The DEIR lacks analysis of effects to the CVP, including operations for meeting Federal ESA requirements. Reclamation cannot identify from the document whether there are impacts to CVP reservoir operations, including river temperatures, or the ability to deliver CVP water.
- The DEIR should include the risk reduction strategies consistent with the 2019 BOs implementation of the Delta Fish Species Conservation Hatchery.
- The DEIR's Proposed Project CalSim model does not fully analyze the following Proposed Project elements which may impact the CVP:
    - The salvage-based onset of OMR management for longfin smelt protection after December 1;
    - The calendar-based adult longfin smelt entrainment protection (14-day average OMR requirement of -5,000 cfs), including its flow-based offramps;
    - The OMR storm flexibility cannot occur when the calendar-based adult longfin smelt entrainment protection is occurring from December to end of February. However, the model assumes storm flex to occur in January and February, the same implementation as the Proposed Action (PA) in the EIS.
    - Salvage-based "Additional Real-time Consideration for Adult Longfin Smelt" that could require a more positive 14-day average OMR flow than -5,000 cfs. Historic data is not used to understand frequency of occurrence of such action, the OMR requirement is not defined under such conditions; therefore, it is difficult to understand how often these conditions would occur, what additional protection would be provided in addition to what has been analyzed in the EIS, or what the water supply cost of these actions would be.
- The DEIR's Proposed Project CalSim model results in increased exports that are more than what's observed under the PA modeling. When the model results are compared using a consistent hydrology (under the climate change and sea level rise), increase in total south of Delta exports under the Proposed Project compared to the Existing Conditions is higher than what is simulated under the PA, at the expense of reduction in upstream storage. This type of operation with lower upstream storage does not represent how Reclamation would operate the CVP in the near future.
- Following the release of the DEIR, DWR has submitted its application to CDFW for an ITP under CESA. The project described in the application appears to differ from the information presented in the DEIR, representing a combination of components from different alternatives. This combination of alternatives has not been analyzed.

Reclamation provides the following comments specifically on the DEIR alternatives:

Alternative 2A

- Coordinating and balancing project operations would be extremely difficult under Alternative 2A. As mentioned previously, the accounting has not yet been discussed and therefore these effects cannot be considered.
- DWR should provide more scientific basis for additional Delta outflow in April and May under Alternative 2A to benefit Longfin Smelt (Section 5.2 (page 5.6)).
- Alternative 2A is predicated on the SWP providing additional Delta outflow in April and May based on DWR's share of the I:E Ratio from the 2009 NMFS Biological Opinion, which is not in the 2019 BOs. If Reclamation is not operating to the same criteria, then the Delta outflow increase would not be the same as targeted by the SWP; therefore, the desired increase in outflow may not occur as intended by the action.
- The I:E ratio in the 2009 NMFS Biological Opinion was developed for steelhead, not Longfin Smelt. The DEIR should include discussion of why the specific ratios included in I:E for steelhead are appropriate for Longfin Smelt, especially if the goal is simply increased outflow. As described on page 5-38, the effect on CVP exports has not been quantified, nor have mitigation measures been identified, and the potential benefits to Longfin Smelt are uncertain. Given this uncertainty, the DEIR should include scientific justification for this action and propose mitigation measures to ensure no impacts to CVP operations and water supply.

Alternative 2B

- Similar to Alternative 2A, any impact to CVP operations from the added outflow in Alternative 2B depends on conditions in the Delta and the way releases are accounted for under COA. As mentioned previously, the accounting has not yet been discussed and therefore these effects cannot be considered.

Alternative 3

- The HORB may cause impacts to flows in Old and Middle River, CVP and SWP exports, and Delta salinity. If flows are reduced such that water users in the South Delta have difficulty diverting water, then exports may need to be reduced to support South Delta water levels during periods when water transfers are occurring subject to the Water Level Response Plan. DWR should provide additional analysis and propose mitigation measures to ensure no impacts to CVP operations and water supply.
- Components such as barriers may require additional ESA compliance because they were not included in the 2019 BOs for the ROC LTO of the CVP and SWP. The HORB was not included in the PA because of uncertainties surrounding its effectiveness. See the Final EIS for further information.
- As described in the DEIR in Section 5.4.7, Alternative 3 would potentially impact the ability of the CVP to divert water and these impacts are greater than described in the cumulative section of the DEIR. DWR should provide additional analysis and propose mitigation measures to ensure no impacts to CVP operations and water supply.

Alternative 4

- Alternative 4 has the potential to have significant impacts on CVP operations and water supply to meet the greatly expanded X2 criteria. Depending on the sharing under COA, additional reservoir releases may also be required from both projects to maintain the X2 position described in Alternative 4, as opposed to the position described in the PA. As mentioned previously, the accounting has not yet been discussed and therefore these effects cannot be considered.
- The DEIR identified potentially significant impacts to cold water pool and identifies Mitigation Measure Alt 4-1. However, the prescribed water quality criteria in Mitigation Measure Alt 4-1 lacks details and analysis to show how this measure would actually reduce cold water pool impacts to less than significant. DWR should provide additional analysis and details to ensure this mitigation measure ensures no impacts to CVP operations and water supply.

A large portion of our comments are related to how operations are coordinated between the CVP and SWP and the importance of such coordination. Operating to different criteria creates challenges for both real-time operations and seasonal and long-term planning. Under previous iterations of the LTO, DWR has sought a Consistency Determination (CD) under CESA that allows for the same operating criteria. We continue to encourage the state to consider a CD to ensure coordination of operations. We would also like to see more detail in the DEIR on the steps DWR and CDFW will take as part of this process and how the DEIR may be used in the CESA process.

In closing, Reclamation finds the Proposed Project in the DEIR to be similar to the PA with critical exceptions as described above. We see a lot more alignment than differences and welcome the opportunity to continue to work with the State of California on permitting for the coordinated long-term operation of the CVP and SWP. Also, we have attached a list of references used in the EIS, PA, and the 2019 BOs that represents additional research of the best available science that should be incorporated into the DEIR.

Please contact Mr. Ben Nelson, Bay-Delta Office, at 916-414-2424 or bcnelson@usbr.gov for further coordination.

Sincerely,

ACTING FOR

David M. Mooney
Bay-Delta Office Area Manager