XIII.A.

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY BOARD OF DIRECTORS REGULAR TELEPHONIC MEETING MINUTES FOR JUNE 9, 2022

The Board of Directors of the San Luis & Delta-Mendota Water Authority convened at approximately 9:30 a.m. at 842 6th Street in Los Banos, California, with Chair Cannon Michael presiding.

Directors and Alternate Directors in Attendance

Division 1

Anthea Hansen, Director
Lea Emmons, Alternate for Rick Gilmore

Division 2

William Bourdeau, Director
Beau Correia, Director - Ara Azhderian, Alternate
Bill Diedrich, Director

Division 3

Chris White, Director (arrived during item 7)
Cannon Michael, Director
Ric Ortega, Director

Division 4

Aaron Baker, Alternate for John Varela
Jeff Cattaneo, Director

Division 5

Bill Pucheu, Director
Jose Gutierrez, Alternate for Tom Birmingham
Manny Amorelli, Director

Authority Representatives Present

Federico Barajas, Executive Director
Pablo Arroyave, Chief Operating Officer
Rebecca Akroyd, General Counsel
Scott Petersen, Water Policy Director (via phone)
Ray Tarka, Director of Finance
Bob Martin, Facilities O&M Director
Jaime McNeil, Engineering Manager
Stewart Davis, IT Officer

Others in Attendance

Frances Mizuno, Mizuno Consulting (ZOOM)
Mike Wade, California Farm Water Coalition (ZOOM)
John Wiersma, Henry Miller Reclamation District
Tom Boardman, Westlands Water District
Vince Gin, Valley Water
John Varela, Valley Water (ZOOM)
Richard Santos, Valley Water (ZOOM)

130

Dan McCurdy, Firebaugh Canal Water District (ZOOM)
Don Wright, WaterWrights (ZOOM)
Lora Carpenter, Fieldman Rolapp & Associates (ZOOM)
Chuck Gardner, Hallmark Group
Jessica Alwan, Hallmark Group
Mitchell Partovi, The Water Agency

1. **Call to Order/Roll Call**

The meeting was called to order by Chair Cannon Michael and roll was called.

2. **Board to Consider Additions or Corrections to the Agenda of Items, as authorized by Government Code Section 54950 et seq.**

General Counsel Rebecca Akroyd reported that agenda item 11.a will moved to agenda item 8.

3. **Opportunity for Public Comment**

No public comment.

CONSENT ITEMS

4. **Agenda Items 4-6: Board to Consider: a) Draft May 12, 2022 Meeting Minutes b) Acceptance of the Financial & Expenditures Reports, c) Staff Reports.**

On a motion of Director William Bourdeau, seconded by Alternate Director Lea Emmons, the Board accepted the May 12, 2022 Meeting Minutes, Financial Expenditures Reports, and Staff Reports. The vote on the motion was as follows:

AYES:	Hansen, Emmons, Bourdeau, Correia, Diedrich, Michael, Ortega, Baker, Cattaneo, Pucheu, Gutierrez, Amorelli
NAYS:	None
ABSTENTIONS:	None

ACTION ITEMS

5. **Agenda Item 7: Board of Directors to Consider Appointment of Officer Position, Treasurer.**

Executive Director Federico Barajas reported that Joyce Machado, who served as the Director of Finance, resigned March 15, 2022, which resulted in the need for the Board to appoint a new Treasurer. Barajas reported that staff is recommending that Raymond Tarka, who joined the Water Authority as its new Director of Finance, be appointed Treasurer.

On a motion of Director William Bourdeau, seconded by Director Chris White, the Board appointed officer position, Treasurer. The vote on the motion was as follows:

AYES:	Hansen, Emmons, Bourdeau, Correia, Diedrich, White, Michael, Ortega,

	Baker, Cattaneo, Pucheu, Gutierrez, Amorelli
NAYS:	None
ABSTENTIONS:	None

REPORT ITEMS

6. **Agenda Item 8: Executive Director's Report.**

San Luis Transmission Report (SLTP) – Frances Mizuno provided an update on bond financing cost based on the market conditions as of May 17, 2022, and the new construction schedule from Western Area Power Administration. Mizuno introduced Lora Carpenter from Fieldman Rolapp & Associates. Lora Carpenter reviewed a PowerPoint presentation titled "San Luis Transmission Project (SLTP) Briefing, SLTP Financial Summary." The presentation focused on: 1) SLTP Costs, 2) SLTP Benefits, 3) US Treasury Market Movement, and 4) SLTP Cost Comparison. Carpenter reported that current assumptions reflect construction cost of $317 million and estimated energization date of December 2028.

Mizuno discussed projects and costs included in the California ISO 10-year plan (articles included in the packet). Mizuno reported that TAC forecast that is being used is very conservative and will likely go higher.

Executive Director Federico Barajas reported on concerns by CVP contractors relating to SLTP. Barajas reported that Reclamation recently stated that they are not in a position to sign the MOU for SLTP unless all of the CVP contractors come on board. Barajas stated that staff will continue to coordinate with Reclamation, and continue conversations with Golden State Energy.

Mizuno and Barajas answered questions and acknowledged concerns from Board members throughout presentation of this item.

7. **Agenda Item 9: Communication Plan Update**

Water Policy Director Scott Petersen reviewed the memo included in the packet. Petersen reported that the Communications Plan is a guide for effective, multi-directional communications channels to both seek and convey information to and from all parties engaged with the Authority. Petersen reported status of key components within the Communications Plan.

Petersen reported that the California Farm Water Coalition has been distributing informational content on behalf of the Authority in the form of two monthly newsletters, Authority Insider and Executive Director In-Brief, as well as the daily publication, Media Monitor. Petersen reported that earlier this year, individuals who had been receiving Media Monitor were surveyed to find out what their impression of the publication was, how they viewed the timing, the quality of the content, and how it compared to other, similar publications. Petersen provided a brief summary of the survey results.

8. **Agenda Item 10: Briefing on Delta –Mendota Canal Subsidence Correction Project**

Facilities O&M Director Bob Martin, Chief Operating Officer Pablo Arroyave and Chris Park from CDM Smith presented a PowerPoint presentation on the Delta-Mendota Canal (DMC) Subsidence Correction Project. Bob Martin, Executive Director Federico Barajas, Water Policy Director Scott Petersen, and Chris Park answered questions throughout the presentation.

9. **Agenda Item 11: Report on State and Federal Affairs.**

Water Policy Director Scott Petersen reported included in the packet is a memo with active federal and state legislation being monitored by Authority staff, with Board-adopted positions for those pieces of legislation on which the Board has acted. Petersen reported that staff will keep this updated and intends to include this in monthly Board packets moving forward.

Petersen reported that after 8 years with the National Water Resources Association (NWRA), Ian Lyle will be moving on from his role as Executive VP at the end of June and transitioning to the electric sector. Water Strategies, in consultation with the NWRA Executive Committee will continue managing NWRA and begin the search for a new Executive VP. ACWA is working to ensure a California representative will be on the search committee.

Petersen reported that on June 7, 2022, the U.S. Fish and Wildlife Service is proposing to revise section 10(j) regulations under the ESA to allow for the introduction of listed species to suitable habitats outside of their historical ranges. . Petersen reported that the revised regulation will not change the rulemaking process for designating a 10(j) experimental population or require reevaluation of existing experimental populations. Petersen reported that the Service is also proposing other minor changes to provide more clarity in the regulations, and comments are being accepted from all interested parties until August 8, 2022.

Petersen reported that in May, Reclamation released what they are defining as Knowledge Based Papers for review and comment and reported that the Authority will be submitting comments to Reclamation on Friday.

Petersen reported that last month, the Biden Administration released the Drought Resilience Interagency Working Group's (IWG) Summary Report outlining the actions taken to date to improve drought-stricken communities' longer-term resilience to drought through financial and technical assistance.

Petersen reported that yesterday, the House adopted its fiscal 2023 deeming resolution . Petersen reported that with a $1.6 trillion discretionary ceiling to match President Joe Biden's budget request, House appropriators will start to tick through markups next week on the 12 annual spending bills. Petersen reported that the House and Senate could pass a full fiscal 2023 budget resolution later, with

the ability to add language unlocking another round of reconciliation power to sidestep the Senate filibuster.

Petersen provided brief summaries on the Senate Committee on Agriculture Subcommittee Hearing, and the Senate Energy and Natural Resources Committee Hearing.

Petersen reported that Governor Newsom laid out his budget priorities in January and is expected to release his May revise this week. Petersen reported that a surplus recently projected to be $29 billion is now estimated to be as high as $97.5 billion.

Petersen reported that on Wednesday June 1, Senate and Assembly Budget Committee Chairs Senator Nancy Skinner and Assemblymember Phil Ting, along with Senate President pro Tempore Toni G. Atkins and Speaker Anthony Rendon, announced a 2022-23 Legislative budget agreement. Petersen reported that this joint legislative plan incorporates budget priorities laid out by each house of the Legislature and takes in elements of the Governor's proposed budget released in January and the May Revision. Petersen reported that this budget will invest $37.5 billion in reserves and includes $8 billion to assist Californians with rising costs. Petersen reported that the agreement includes a $21-billion-dollar climate and Energy Package, with details subject to ongoing negotiations. Petersen reported that the package is expected to include drought resilience, wildfire resilience, sea level rise, extreme heat, biodiversity and outdoor access, energy, zero-emission vehicles and other climate actions, as well as $100 million in dam safety funding. Petersen reported that legislators need to pass the budget by June 15, but expect trailer bills to follow with more spending details.

Petersen reported that AB 2639 failed to pass out of the Assembly on May 26, effectively stopping the bill.

10. **Agenda Item 12: Executive Director's Report.**

b. **B.F. Sisk Dam Raise and Reservoir Expansion Project** – Chief Operating Officer Pablo Arroyave reported that there are now ten participants in the Activity Agreement. Arroyave reported that the first invoices will likely be sent out in the end of June. Arroyave reported that the Authority has contracted with the Hallmark Group and introduced Chuck Gardner and Jessica Alwen. Gardner described roles of the various team members.

c. **New City of Los Banos Museum/Water Agency Office Complex Project** – Executive Director Federico Barajas reported that there is a Stakeholder meeting today at 5:00 p.m. Handout with more details included in the packet.

d. **Training Requirements** – Barajas requested Board Members and Alternates to submit confirmation of satisfaction of ethics training and sexual harassment prevention training requirements as soon as possible.

e. **Upcoming Event** – Barajas reported that all of the Board Members and Alternates should have received an invite from Reclamation to the 120-Year Anniversary & Groundbreaking for the safety of dams Project coming up on June 17, 2022.

f. **Yuba Site Tour** – Barajas reported that the Authority is working on scheduling a site tour of Yuba County in July or August, which may include an overnight stay.

11. **Agenda Item 13: Chief Operating Officer's Report**

Chief Operating Officer Pablo Arroyave reported Jones Pumping Plant rewind continues, and things are going well and as expected.

Arroyave reported the Central Valley Operations office indicated that on or around July 1, 2022 Jones Pumping Plant will likely be able to ramp up to 3 units.

Arroyave reported that Reclamation indicated that as a result of the FY21 PUE true-up, it was determined that the Authority overpaid due to the drought year and that therefore the Authority will not receive any more PUE bills for the duration of FY22, which should result in a saving of approximately $6 million.

Yuba Transfer Update – Arroyave reported there is still a possibility of an opportunity for up to 25,000 af of CIwater, and expects to hear something next week.

12. **Agenda Item 14: Update on Water Operations and Forecasts**

Westlands Water District's Tom Boardman reported Shasta storage conditions and compared the current storage to 2014, 2015, & 2021. The projected carry over storage and summer release rates were also included in the report. Boardman described the improved storage conditions in Folsom reservoir and how the additional storage would be used this summer to support higher exports.

The current export constraint in the Delta was explained which included a forecast of increased Jones pumping starting by early July as a result of the higher Folsom storage. Boardman explained the current accounting under the Coordinated Operations Agreement. This was followed by a report on CVP San Luis storage conditions and a brief explanation of the status of Friant Dam releases to the Mendota Pool to meet Exchange Contractor demands.

Responding to a questions, Boardman provided an estimate of the amount of non-project water currently stored in CVP San Luis and confirmed that low Trinity storage may hinder upper Sacramento River temperature management this year and increase operational difficulties next year absent near normal or wet hydrology.

13. **Agenda Item 15: Committee Reports.**

a. **Water Resources Committee** – The June meeting was cancelled.

135

b. **Finance & Administration Committee** – Chair Cannon Michael reported that the committee met, and addressed agenda items.

c. **O&M Committee** – Chair Chris White reported that the committee met, and addressed agenda items.

14. Agenda Item 16: Outside Agency/Organization Reports.

a. **State and Federal Contractors Water Agency (SFCWA)**
No report.

b. **Family Farm Alliance (FFA)**
Report included in the packet.

c. **Farm Water Coalition.**
Mike Wade reported on work with the Authority, which Scott Petersen covered in his communications report. Wade reported that Bill Diedrich has been appearing on several major network TV news programs. Wade reported that they have been running a social media campaign for the last 4 weeks. Wade reported that he appeared on Los Angeles public radio yesterday regarding the State of California Senate proposal for purchasing farmland and taking over senior water rights and returning that water to environmental purposes. Wade reported that the link to the proposal will be in the Authority Media Monitor.

d. **Association of California Water Agencies**
Director Bill Diedrich reported that he is no longer the ACWA Ag Committee Chair. Director John Varela reported that Scott Petersen circulated the ACWA virtual events programs, and you must register to participate in these events. Varela reported that ACWA DC conference is coming up.

e. **Water Blueprint for the San Joaquin Valley**
Water Policy Director Scott Petersen reported that the Water Blueprint for the San Joaquin Valley underwent strategic planning and has proposed a Mission Statement and Vision Statement. Petersen reported that the 2022-2025 strategic priorities focus on: 1) Advocacy, 2) Groundwater Quality and Disadvantage Communities, 3) Land Use Changes Environmental Plan, 4) Outreach Communications, 5) SGMA Implementation, 6) Water Supply Goal, 7) Governance, Operations, and Finance.

15. Agenda Item 17: Board Member Reports.
Director William Bourdeau reported that Don Devine passed away June 4, 2022.

16. Agenda Items 18-19: Closed Session Report.
Chair Cannon Michael adjourned the open session to address the items listed on the Closed Session Agenda at approximately 12:02 p.m. Upon return to open session at approximately 12:40 p.m., Chair Cannon Michael stated that no reportable actions were taken.

136

17. **Agenda Item 20: Reports Pursuant to Government Code Section 54954.2(a)(3)**

No reports.

18. **Agenda Item 21: Adjournment.**

The meeting was adjourned at approximately 12:42 p.m.

XIII. A.

July 14, 2022

To: Pablo Arroyave, Chief Operating Officer

From: Bob Martin, Facilities O&M Director

Subject: O&M Report for June 2022

Operations Department

The C.W. "Bill" Jones Pumping Plant (JPP) operated with 1 unit throughout June. The average rate of pumping for the JPP was 911 cfs through June.

Total pumping at the JPP for June was 54,198 acre-feet. The O'Neill Pump/Generating Plant (OPP) generated 16,527 acre-feet, and pumped 7,595 acre-feet in June. 0 acre-feet was pumped at the Delta-Mendota Canal/California Aqueduct Intertie Plant (DCI) and 0 acre-feet was reversed from the California Aqueduct to the DMC for June.

The Federal share in the San Luis Reservoir at the end of June was 255,671 acre-feet as compared to 132,481 acre-feet for June, 2021.

For the month of June, releases from Friant Dam ranged from 1,704 to 814 cfs with 64,433 AF entering the Mendota Pool. Flows past the Mendota Dam for the San Joaquin River Restoration Program (SJRRP) were 0 AF for June.

Canal Operations staff performed open channel and closed-pipe flow measurements, routine patrols, bi-weekly meter readings, water samples, well soundings, meter calibration, and meter maintenance during the month (including moss removal). Coordinated flow testing was also conducted with the USBR at the San Joaquin River Bifurcation Structure and with the City of Turlock at the North Valley Regional Recycled Water Project discharge facility on the DMC at Milepost 37.33.

Control Operations switching/clearance placements performed this month:

- C-22-JP-19 JPP Unit 4 Annual Maintenance / Rewind
- C-22-ON-26 OPP Unit 6 Annual Maintenance
- C-22-JP-28A JPP Unit 3 Annual Maintenance
- C-22-JP-18B JPP Unit 3 & 4 Discharge Tube
- C-22-JP-19D JPP Unit 4 Rewind
- C-22-JP-33 JPP Unit 2 Field Breaker troubleshoot
- C-22-ON-34 OPP Unit 4 control shaft repair
- C-22-ON-35 OPP Unit 4 distributor control shaft

Civil Maintenance Department

The Civil Maintenance crews worked on the following projects this month:

- Grading of DMC operating roads
- OPP Unit 6 support and rescue team standby
- DMC erosion repairs
- Garbage collection on DMC and Wasteways
- Chemical and mechanical weed control on DMC and SLD
- Maintenance and repairs to float lines, signs, fences, guard rails and gates
- Transportation of OPP Unit 4 actuator rod
- Pump Back Project equipment removal and pump and motor transportation
- Fabricate and install handrails along the DMC
- DMC minor line repair at MP 22.15-L
- Control Room remodel support
- Clean drain inlets along the DMC
- Installed new staff gauge measuring device at the 10 foot gate (GWD)
- Performed PM's on the 10 foot gate
- Boom truck annual PM's and inspections
- CPR training
- DMC flow meter and turnout moss cleaning
- LBAO minor building maintenance
- Landscaping performed at USBR Tracy office
- Contractor support for JPP center tube grout repair
- Control Building SCADA room office Improvements

Plant Maintenance Department

The Plant Maintenance crews worked on the following projects this month:

Electrical/C&I Staff:

- JPP Unit 4 rewind/relay testing
- JPP Unit 3 annual maintenance
- TFO lighting
- TFO arc flash breaker replacement
- DMC PM's performed on Checks 1-12
- OPP Unit 6 annual maintenance
- JPP HVAC repairs
- DMC flow meter recalibration
- OPP Unit 6 annual maintenance & speed head re-assembly
- Control Building SCADA room office Improvements
- Installed new enable relay at Check 19
- Re-established communication with electronic flow meter at MP 107.85
- New program installation on the Pigeon Roost alarm panel

Mechanical Staff:

- JPP Unit 4 rewind support
- JPP Unit 4 component painting
- JPP Unit 3 annual maintenance
- JPP PM's
- OPP Unit 4 actuator rod
- OPP Unit 4 repairs & re-assembly
- OPP Unit 6 annual maintenance

- OPP Unit 6 alignment meeting
- HazMat storage building inspections
- JPP crane inspections and PM's
- JPP Unit 5 wheel pit pump switch replacement
- JPP facility painting
- DMC Volta East Well mechanical seal investigation
- Sandblast building PM's and minor repairs

USBR Support Services

Water Authority crews performed the following work at USBR facilities this month:

- TFF deflector boom inspections and repair planning
- VC flapper valve inspection

Engineering Department

The Engineering staff worked on the following O&M projects this month:

- JPP Penstock 2 (Center) epoxy Injection/ crack repair in outlet box
- JU-2 start sequence troubleshooting
- TFO breaker modifications per JPP Arc Flash 2018
- OPP Unit 1 enclosure tube repair
- OPP Unit 3 breaker charging coil repair
- OPP Unit 4 distributor leak repair
- OPP Unit 6 electro-mechanical relay tests
- JPP purchase spare shaft sleeve (Special Project)
- TSY UZ11A switchgear building repairs
- TSY UZ11A Basler relay setting updates and tests
- DMC seepage monitoring @ MP 20.15-L
- Data management of well readings and creation of Warren Act hydrographs
- O&M PM setup and asset management in NetSuite
- DCI U3 & U4 SCADA development for pump additions
- DCI as-built drawing updates
- Distribution of updated system operation drawings

2022 DMC Pump Back Project

- Worked on compiling comprehensive set of plans for 2022 installation

Land Management Activity Summary

The Engineering staff issued two (2) access permits this month:

- Access permit P2302010 was issued to Del Puerto Water District to repair the existing pipeline located at Milepost 18.05-R.
- Access permit P2302011 was issued to Panoche Water District to repair the existing underground pipeline located at Milepost 92.73-R on the Delta-Mendota Canal.

The Engineering staff were involved with the following land management projects this month:

- Coordination meeting with the City of Tracy on development
- Development of Land Management requirements for adjacent developments
- Orestimba Creek Recharge Project
- Tracy HOM Project, Tracy CA
- Costco Annexation Project, Tracy, CA

- Tracy Hills Commerce Center, Tracy, CA
- Tracy Hills Phase 5 development review
- Schulte Warehouse Annexation, Tracy, CA
- City of Patterson – Roger Road developments & Baldwin Ranch comments
- International Parkway Bridge Replacement, PROLOGIS -Tracy, CA – Prepared 2nd plan review and provided comments. Came to an agreement on proposed access road alignments.
- Santa Nella County WD pipeline crossing review

Safety Department

The Safety Department worked on the following items this month:

- Provided Job Hazard Analysis support for the crews
- Conduct Weekly Safety Tailgate talks with Maintenance and Operations crews
- Sent out Weekly Safety Tailgate Topics to include 6-1 Lock Out/Tag Out, 6-2 When to Call 911, 6-3 First Aid for Chemical Burns, 6-4 Fire Extinguishers
- Provided Safety Message for June 2022 Monthly Newsletter – 6/2022 Ergonomics Overview
- Conduct CPR/AED/First Aid training for new hires
- Provided Confined Space Rescue Standby for entry into JPP Penstock
- Provide Safety Orientation for new hire: Rebecca Harms

Procurement and Work & Asset Management Department

The Work & Asset Management Department worked on the following items this month:

- Continued work on finalizing inventory reports for end of FY22. All inventory was corrected and final reports sent to appropriate departments
- Continued training new Warehouse Inventory Control Clerk and Buyer
- Finalized all outstanding FY22 items including invoices
- Contracts/PO Agreements/LOA's Status Update:
  - F22-OPP-059 - OPP Main Transformer Rehabilitation. Proposals received June 9 and now in evaluation stage
  - F22-JPP-007 – JPP Discharge Tube Repair. Contract executed 6/17, $54,461.28
  - F22-JPP-003 – JPP Geotech Sampling. Agreement for $22,000 received and signed by vendor and will be executed upon collection of final signatures
  - F22-JPP-071- DMC Flowmeter Replacement - Board approved single source on 2/10. Contract executed 4/14. Project is ongoing and waiting for material
  - F22-AB-070 - RFP prepared for Investment Advisory Services. Still pending. Executives/Procurement have been finalizing RFP. Anticipated release date TBD.
  - F23-TFO-006 Landscape Maintenance - Released RFQ to multiple vendors for 3 year (+ two 1-year options to renew) agreement. Received one quote/bid with extremely higher pricing and will be evaluating prevailing wage requirements with legal for possible re-solicit. Release of new RFQ is anticipated in July.
  - Issued PO for $6500 for Server Room AC replacement and work is complete

Ongoing:

- Purchasing in support of the O&M crews, and maintaining/replenishing warehouse stock. Purchasing to support DMC Pump Back Project currently underway
- Warehouse receiving, stocking, and distribution
- Invoicing/vendor bills/vendor credits processing
- Janitorial cleaning & disinfecting per COVID-19 guidelines
- Contract Management/Administration activities, including bi-weekly contract update meetings with engineering staff
- Developing/implementing purchasing/procurement and asset/inventory procedures/boilerplate templates
- Bi-weekly WAM staff meetings to discuss updates/issues
- Contract invoice payment reviews, invoice disputes as needed, invoice payments
- Continuous testing for improvements to procedures in NetSuite, as well as ongoing issues related to NetSuite constraints
- Development of Blanket Contracts and Blanket Purchase Orders/Agreements
- Reviewing/closing out old/open PO's in NetSuite

Information Technology Department

The Information Technology Department worked on the following items this month:

- NetSuite
    - User and administration
    - Bi-Weekly Implementation Team meetings
- Assisted with monthly FAC, WRC and BOD meetings with Zoom
- Desktop support calls.
- Planning server refresh
- Planning laptop refresh
- Planning upgrading/replacing copiers
- Monitor Symantec anti-virus management console
- Security updates on servers
- Monitor firewall
- Update additional AV security settings
- Multi Factor Authentication vendor SurePass
- Follow-up meeting with Active Directory threat defense vendor
- Initial meeting with Protective DNS vendor
- 2nd Draft of Cyber Security Incidence Response Plan
- First draft Disaster Recovery Plan
- First draft Business Continuity Plan
- Developed Cyber Security Purchase requirements list. IT and SCADA
- Avaya vendor upgrade of firmware on phone switches "completed"
- New phones for SAC office Avaya – to be installed
- First Net deploying iPhones and iPad SIMS
- Created profile for new Tracy Mechanic
- Continued mass hard drive data destruction to DOD standards for e-cycle process
- MDM IBM (MAAS360) training
- Became member of InfraGard – FBI Cyber Security group.
- Cyber Security training and webinars

- WAM servers, prepping for redeployment
- Met with Reclamation OT Cyber Security
- Ordered Surface, configured and deployed for new Deputy Council
- Prepared e-cycle for warehouse staff
- Restarted server room after AC failure caused overheating on 6-26-22
- Met with Dartrace, an active AI network Cyber Security monitor program

HR Department

The Human Resources Department worked on the following items this month:
General Administrative Activities:

- Recruitments:
    - Mechanical (Plant) Engineer, Tracy (continued recruitment)
    - Hydro Electric Electrician, Tracy (continued recruitment)
        - C&I Technician, O'Neill (candidate selected)
- Interviews:
    - Special Programs Manager, Sacramento (interviews conducted)
    - Hydro Tech II, Tracy (interviews scheduled)

- Background checks for PIV cards (continuing)
- New Hire Orientations

Trainings:

- Remain up to date with COVID-19 compliance
    - Corona Virus 101 Training (new hires)
- Cyber Security training (all staff)
- Sexual Harassment Prevention training (all staff)
- Defensive Driving training (all staff)

Government Reporting:

- Merced County Public Health COVID reporting (as needed)
- Alameda County Public Health COVID reporting (as needed)

Ongoing:

- COVID protocols
- FMLA notices/follow ups
- COBRA notices/follow ups
- Worker's Comp follow ups
- Monthly safety points distribution
- Health benefits eligibility/employee assistance
- Maintain OSHA logs for calendar year
- PIV cards (USBR)
- Wellness program

EXTRAORDINARY O&M & CAPITAL PROJECTS

DELTA-MENDOTA CANAL (DMC)

Bridge Abutment Repair at MP 92.73 (FY21)

Status: The abutment repair is on hold until PG&E relocates the pipeline. The 6-inch pipe owned by PG&E that crosses under the bridge, adjacent to the abutment, is the main transmission line for the City of Dos Palos. All parties have agreed that it would be a safety hazard to conduct work with the gas line in place, and PG&E is currently planning to remove the existing pipeline from the bridge and HDD install a new pipeline under the canal. PG&E has prepared 90% plans and issued for final review with final plans anticipated to be ready for construction in the late summer to fall timeframe. PG&E, SLDMWA, and Reclamation are meeting monthly to keep the project moving forward.

DMC Subsidence Correction Project

Status: SLDMWA is working closely with Reclamation to complete the tasks identified in the Financial Assistance Agreement that was executed on 9/24/2021 after acquiring Board approval. Phase 1 Geotechnical work was completed last year. CDM Smith was awarded the $2.4M contract to complete the Feasibility Study, with the Notice to Proceed issued on February 10, 2022. The Feasibility Report is expected to be completed in approximately one year, with certain environmental permitting extending longer if needed. The Final Draft Report is scheduled to be completed 3/6/2023. CDM's consultant has completed the draft CalSim modeling, and they are currently working on economic benefits. Cultural Resource surveys have been completed. The non-structural alternative has been drafted and is under review. Current activities consist of preparation of the Plan Formulation of Alternatives Technical Memorandum, which will identify which alternatives will be carried forward for further Study. The Reclamation led DEC Review is scheduled for the week of August 15th, with a site visit scheduled for August 10th. SLDMWA has coordinated with USBR on a cost estimate for non-contract costs that will inform the DEC Review team.

The DWR Funding agreement was executed in April for $3.3M to partially fund Final Design, which includes the future phases of the Geotechnical Investigation.

The SLDMWA continues to provide support to Reclamation as they manage the construction contract with Unico Services to install the two additional pumps at the DMC/CA Intertie Pumping Plant (DCI). The completion of the project has been delayed due to supply chain issues. Unico demobilized and is currently working to procure a capacitor and 2 combination air valves critical to completion. The project is now estimated to be completed by late Summer/ early Fall.

DMC Turnout Flowmeter Upgrade Program – Phase 2 (FY22)

Status: SLDMWA is in contract with McCrometer for the purchase of 62 Water Specialty flowmeters equipped with telemetry through the SLDMWA single-source procedure. The contract was executed after the January 2022 Board meeting. 29 flowmeters have been delivered and are currenty being installed. No

flowmeters delivered this month. Next expected delivery will be within first week of July 2022. Final delivery of meters is expected in Fall 2022.

DMC Turnout Flowmeter Upgrade Program – Phase 3

Status: No activity this month. Engineering staff is coordinating with Water Operations for the design data for the flowmeters required with this phase. These measurements will be supplied to McCrometer in order to obtain a final quote and a single-source contract will be pursued. Contract is expected to be executed in Fall 2022.

C.W. "BILL" JONES PUMPING PLANT (JPP)

JPP Excitation System & Control Modernization (FY18)

Status: SLDMWA is currently in contract with Reclamation through a Letter of Agreement. Reclamation will be providing the Technical Specifications, along with an Engineer's Estimate. The 60% design is currently being peer reviewed by USBR Denver Office (TSC). SLDMWA and USBR reviewed the following: general equipment layout for the excitation cabinets and transformers, CT and PT three-line diagrams to be referenced, and design status of the unit controls. The 90% plans and estimate is scheduled for completion in September.

JPP Wear Ring Purchase (FY22)

Status: No activity this month.

JPP Unit No. 4 Rewind

Status: The project is underway and on schedule. The surge rings and ring bus have been installed. Installation of the new stator coils has started. The rotor poles are currently in Texas at the NEC factory being overhauled, approximately half have been completed and the rest should be done on schedule. The second progress payment will be submitted to SLDMWA the first week of July.

JPP Unit No. 3 Rewind

Status: The initial 40% payment to NEC has been made, and SLDMWA has been reimbursed by USBR for the payment. This allows NEC to purchase the materials to manufacture the stator laminations.

TSY Switchgear Building UZ11A Repairs (Unplanned Project)

Status: A ground fault incident that damaged the main feeder switchgear and bushing box in switchgear building UZ11A occurred in October 2021. SLDMWA electricians have made partial repairs and investigations have been performed by Reclamation's TSC and Powell (Powell is the company that designed and built the switchgear building). Building UZ11A is currently energized via adjacent switchgear building UZ8A. The contract for Powell to provide the repairs and replacement has been executed. TSC reviewed and approved submittals for long lead items. All long lead items have been ordered by Powell. At the request of Powell, SLDMWA and Reclamation reviewed and approved an alternative for

surge arresters due to the long lead time on the original surge arrester. The outage request for September 7 to 28 has been sent to WAPA and CVO.

JPP Concrete Slab by Trashrake Dumpster (FY23)

Status: Project is currently in the planning and design phase. A geotechnical investigation is being pursued to characterize the subgrade to ensure an optimum design is implemented for the project. SLDMWA will be contracting with Terracon for the geotechnical investigation of the site to provide pavement and subgrade design. Construction is tentatively scheduled to occur in Spring 2023.

O'NEILL PUMPING/GENERATING PLANT (OPP)

Main Transformers Rehabilitation/Replacement

Status: A Transformer Condition Assessment was performed by TSC in 2019. The transformers were in such poor condition that it was recommended that the transformers were to be refurbished or replaced. A Value Planning Study was conducted in 2020 and concluded to refurbish/rehabilitate the transformers in short term and plan to replace the transformers in the future. Emergency measures were also performed which included replacing (3) obsolete HV bushings (2019) and hot oil reconditioning of the in-service transformers (2020) to ensure transformers remained eligible for rehabilitating. Quarterly oil monitoring was completed in April and the results were acceptable.

Work completed by TSC and SLDMWA includes: scope of work, specifications, contract documents, formal soliciation, site visit, and responses to questions. One proposal was received and is currently being reviewed. Contract award is anticipated after August board meeting.

Arc Flash Hazard Analysis, Facility Rating, & Protective Relays Reviews (Electrical Equipment Periodic Reviews) (FY22)

Status: No activity this month. The Facility Rating Review has been received. The personal protective grounds were upgraded per recommendations from the Facility Rating Review. Performed an inspection of the unit busses. A report of the findings will be provided to TSC per recommendation. The Arc Flash Hazard Analysis final report has been received. The Protective Relays Review is still pending a draft review. SLDMWA continues to provide engineering support to TSC.

OPP Pump Bowl Modification & Replacement (Design and USBR Approval)

Status: No activity this month. Project is on hold while scope is being re-evaluated to ensure the continued reliability of the OPP units. A value engineering study is tentatively scheduled early August, with SLDMWA an active participant.

Penstock Cathodic Protection System Replacement (FY22)

Status: Project is complete. Construction was completed May 2022, and follow-up survey and training was completed this month. Final documentation has been provided to Reclamation and accepted.

EXTRAORDINARY O&M & CAPITAL PROJECTS

UPS Battery Charging System Replacement (FY22)

Status: No activity this month. Installation will be timed concurrent with the outage for the transformer rehabilitation at OPP (April/May 2023). Equipment purchase for this job will occur 6 months prior to the Main Transformer Rehabilitation project starting.

OPP Station Service Backup Battery System Replacement (FY23)

Status: No activity this month. Equipment purchase for this job will occur 6 months prior to the Main Transformer Rehabilitation project starting.

TRACY FACILITIES (TFO)

TFO Domestic Water Treatment Plant Replacement (FY20)

Status: No activity this month. Raw water quality test results were provided to package plant vendors for quotes. Vendor quotes received will be evaluated for completeness for future selection. Treatment Plant Drainage: SLDMWA Engineers proposed modifications to the drainage design to prevent ponding in and around the WTP building. Final design and review has been completed and is awaiting construction by SLDMWA staff.

MULTIPLE FACILITIES

TFO/LBFO/DCI Arc Flash Hazard Analysis (FY22)

Status: Received the project management plan from TSC in August 2021. SLDMWA reviewed a draft Letter of Agreement (LOA) and feedback with comments was provided to Reclamation's Tracy Office. The final copy of the LOA has been signed and copies sent back to Reclamation. Site work is tentatively scheduled for July 2022.

SCADA System Evaluation (FY23)

Status: SCADA staff is currently undergoing site discovery and documentation of the existing SCADA System. Research is being conducted on how best to upgrade the system to current standards while keeping a manageable budget. Researching cyber security to ensure new Federal requirements and guidelines are met. Developing a manageable 10-year plan for SCADA.

XIII. A.

MEMORANDUM

TO: SLDMWA Water Resources Committee Members and Alternates

FROM: Scott Petersen, Water Policy Director

DATE: July 11, 2022

RE: Update on Water Policy/Resources Activities

BACKGROUND

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

POLICY ITEMS

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

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

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

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

Both FWS and NMFS concluded that Reclamation's proposed operations will not jeopardize threatened or endangered species or adversely modify their critical habitat. These conclusions were reached for several reasons – most notably because of significant investments by many partners in science, habitat restoration, conservation facilities including hatcheries, as well as protective measures built into Reclamation's and DWR's proposed operations.

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

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

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

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

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

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

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

1419

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

Last month, Reclamation issued draft copies of the Knowledge Base Papers for the following management topics:

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

The Authority provided supplementary material and scientific citations[3] for Reclamation's consideration during finalization of the Knowledge Base Papers.

Current Milestones

- Virtual Scoping and a Scoping Report (2022)
- Initial Alternatives and Knowledge Base Papers (2022)
- Final Alternatives and Proposed Action (2022)
- Biological Assessment and Public Draft EIS (2023)
- Final EIS (2024)
- Record of Decision (2024)

Exploratory Modeling

Concurrent with the development of the EIS and BA, Reclamation is conducting Exploratory Modeling to assist in the development of initial alternatives for the Biological Assessment. Recent

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

discussions have involved updates to the 2021 LTO Climate Change Methodology, the Delta Zone of Influence Analysis and the Shasta Operations Analysis.

Climate Change Analysis

The exploratory modeling efforts for the LTO Climate Change proposes future climate conditions centered on 2040, with analyses mainly based on the median climate change scenario, and sensitivity scenarios to review the range of modeling uncertainty, including:

- Hot and dry
- Warm and wet
- Extreme heat and dryness
- Warm and dry, and
- Hot and wet

Reclamation Manual

Documents out for Comment

Draft Policy

- SLE P08 Emergency Management (comments by 7/24/2022)

Draft Directives and Standards

- ADM 04-01 Planning, Approval, and Reporting Conference Related Activities for Spending (comments by 7/15/2022)

Draft Facilities Instructions, Standards, and Techniques (FIST)

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

Draft Reclamation Safety and Health Standards (RSHS)

- RSHS 20 Mobile and Stationary Mechanized Equipment (comments by 7/15/2022)

Draft Reclamation Design Standards

- There are currently no Design Standards out for review.

State Water Resources Control Board (State Water Board) Activity

Curtailment Update

On June 28, the State Water Board issued an update about the curtailment status of water rights and claims of right within the Sacramento-San Joaquin Delta (Delta) watershed pursuant to Initial Orders Imposing Water Right Curtailment and Reporting Requirements in the Delta Watershed (Order for water rights/claims under 5,000 acre-feet and Order for water rights/claims over 5,000 acre-feet).

The following water rights are curtailed, effective June 29, 2022, unless and until the State Water Board advises that this determination has been updated:

1. Water rights on the following Sacramento River tributaries:
    a. Post-1914 appropriative water rights in the Bear River subwatershed with a priority date of 1942 or later; and

151

b. Post-1914 appropriative water rights in the Putah Creek subwatershed outside of the Legal Delta with a priority date of 1945 or later.

2. Water rights and claims on the following San Joaquin River tributaries:
   a. All post-1914 appropriative water rights, pre-1914 appropriative water right claims, and riparian water right claims in the Calaveras River subwatershed outside of the Legal Delta;
   b. All post-1914 appropriative water rights, pre-1914 appropriative water right claims, and riparian water right claims in the Chowchilla River subwatershed; and
   c. Post-1914 appropriative water rights and pre-1914 appropriative water right claims in the Merced River subwatershed with a priority date of 1859 or later.

3. Post-1914 appropriative water rights and pre-1914 appropriative water right claims in the San Joaquin River watershed outside of the Legal Delta with a priority date of 1914 or later.

Curtailments are expected to continue through the summer and early fall until significant precipitation occurs. Water supply forecasts will continue to be evaluated regularly to determine if, when, and to what extent the further re-imposition or suspension of curtailments may be appropriate. The next curtailment status update will be provided by email and web posting no later than July 6, 2022. Please check the Delta Watershed Curtailment Status List for the current curtailment status of each water right and claim in the Delta watershed.

The above curtailments consider the following technical and policy inputs to the Water Unavailability Methodology for the Delta Watershed (methodology):

1. **Curtailments based on the subwatershed-scale analyses.** Curtailments account for both local water unavailability in headwater subwatersheds and watershed-wide conditions.
2. **Modification of demands for water rights and claims associated with contractual agreements with the U.S. Bureau of Reclamation (Reclamation) and the California Department of Water Resources.** Sacramento River Settlement Contractor and Feather River Contractor demands were reduced compared to 2018 data, consistent with contractual agreements applicable this year. San Joaquin River Exchange Contractor (SJREC) demands for June were adjusted to account for demands for San Joaquin River water due to reduced deliveries of water from the Delta provided by Reclamation.
3. **Legal Delta.** Current analyses do not support curtailments in the Legal Delta. Term 91 curtailments will continue to apply to rights within and outside the Legal Delta containing Term 91.

The above curtailments factor in estimated agricultural and municipal return flows based on CalSim 3 results for 1976 and reduced demands associated with Central Valley Project and State Water Project exports from the Delta under the State Water Board's April 4, 2022 Order

15D

Approving Temporary Urgency Changes to Water Right License and Permit Terms Relating to Delta Water Quality.

This curtailment status update is based on the output of the methodology for the calendar month of June. As such, today's update considers observed water supply data and forecasts from the California Nevada River Forecast Center (CNRFC) that were updated on June 28, 2022. The 50% exceedance water supply forecast was selected to determine curtailments at this time. Other than modifications identified above, demand data informing curtailments continue to be based on reported diversions from 2018.

The determination of water unavailability used to inform curtailments is based on the Water Unavailability Methodology for the Delta Watershed.

Water Unavailability Methodology and Revised Draft Emergency Curtailment Regulation

Background

On August 3, 2021, the State Water Board adopted an emergency regulation authorizing the curtailment of diversions when water is determined to be unavailable at a water right holder's or claimant's priority of right. (Cal. Code Regs., tit. 23, §§ 876– 879.2.) The regulation was approved by the Office of Administrative Law and went into effect upon filing with the Secretary of State on August 19, 2021. The emergency regulation remains in effect for up to one year. The State Water Board plans to consider revision and re-adoption of this emergency regulation on July 20, 2022, in advance of the expiration date of the current regulation.

On April 19, 2022, the State Water Board released draft proposed revisions to the emergency regulation and methodology revisions and solicited public input on both in writing by May 19, 2022, and orally at a public workshop on May 12, 2022. Based on those comments, updates to the methodology and draft emergency regulation were developed. The current version of the Draft Emergency Curtailment and Reporting Regulation has been released for further public review and comment in advance of the July 20, 2022 Board Meeting, at which the Board will consider re-adoption of the emergency regulation, as revised. The latest proposed emergency regulation includes sections applicable to multiple watersheds in the state, including the Delta, that were revised by the Board in May during the re-adoption of the emergency regulation for the Russian River watershed. The latest proposed regulation would continue to require water right holders in the Delta watershed to curtail their diversions when the State Water Board determines, based on the methodology and the best information available to the Board, that water is not available to serve their priority of right. The emergency regulation would also continue to allow limited exceptions to curtailment for specified uses such as meeting minimum human health and safety needs and to allow the Board to require that water right holders provide additional information related to their water diversion and use.

In addition to the emergency regulation noted above, a June 27, 2022 updated Water Unavailability Methodology has also been posted. The April 19, 2022 version of the methodology did not include updates to Technical Appendix D. The June 27, 2022 version of the methodology includes updates to Appendix D. The State Water Board is not soliciting comments on other

153

aspects of the methodology that have already been considered during the prior public comment process.

The deadline for written comments concerning this matter is 12:00 noon on Friday, July 8, 2022. Comments submitted are for the July 20, 2022, Board Meeting, during which the Board will consider revision and re-adoption of the emergency regulation.

If re-adopted by the State Water Board, the emergency regulation will be submitted to the Office of Administrative Law for a public comment period, review, and requested approval. If approved, the re-adopted emergency regulation would become effective upon filing with the Secretary of State, anticipated by mid-August of 2022 and in advance of expiration of the current emergency regulation. If re-adopted and approved, the emergency regulation would remain in effect for up to one year but could be repealed if hydrologic conditions improve, or re-adopted again if drought conditions persist.

Bay Delta Water Quality Control Plan Update

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

During the December 12, 2018 Water Board Meeting, the Department of Water Resources ("DWR") and Department of Fish and Wildlife presented proposed "Voluntary Settlement Agreements" ("VSAs") on behalf of Reclamation, DWR, and the public water agencies they serve to resolve conflicts over proposed amendments to the Bay-Delta Plan update.[4] The State Water Board did not adopt the proposed VSAs in lieu of the proposed Phase 1 amendments, but as explained below, directed staff to consider the proposals as part of a future Delta-wide proposal.

Phase 1 Status: The State Water Board adopted a resolution[5] to adopt amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and adopt the Final Substitute Environmental Document during its December 12, 2018 public meeting.

Phase 2 Status: In the State Water Board's resolution adopting the Phase 1 amendments, the Water Board directed staff to assist the Natural Resources Agency in completing a Delta watershed-wide agreement, including potential flow and non-flow measures for the Tuolumne River, and associated analyses no later than March 1, 2019. Staff were directed to incorporate

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

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

154

the Delta watershed-wide agreement as an alternative for a future, comprehensive Bay-Delta Plan update that addresses the reasonable protection of beneficial uses across the Delta watershed, with the goal that comprehensive amendments may be presented to the State Water Board for consideration as early as possible after December 1, 2019. As the State Water Board further refines this update, there will be opportunity for public comment.

The effort has made progress since an initial framework was presented to the State Water Board on December 12, 2018.

On March 1, 2019, the California Department of Water Resources and the Department of Fish and Wildlife submitted documents[6] to the State Water Board that reflect progress since December to flesh-out the previously submitted framework to improve conditions for fish through targeted river flows and a suite of habitat-enhancing projects including floodplain inundation and physical improvement of spawning and rearing areas.

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

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

On December 8, the State Water Resources Control Board heard an information item on upcoming actions to update and implement the Water Quality Control Plan for the San Francisco Bay Sacramento San Joaquin Delta.

Schedule

Biological Goals

Past Activities

- January 2019 – Independent Science Advisory Panel: Concepts and Ideas for Developing Biological Goals for the Bay-Delta Plan
- September 2019 – Draft Initial Biological Goals for the LSJR for public comment

Current Activities

- Completion of revisions based on public comment to produce a draft Final Biological Goals Report

Future Activities

- Winter/Spring 2022 – Release draft Final Biological Goals Report
- Winter/Spring 2022 – Public Workshop & comment

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

- Summer 2022 – Board consideration of adoption

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

Spring 2022 – Spring 2023

- Initiate CEQA process
- Draft environmental document and public comment
- Notice of draft regulation
- Final environmental document

Summer 2023

- State Water Board consideration of approval
- Notice of final regulation
- Submission to Office of Administrative Law

Sac/Delta Update: Key Milestones

- Early 2022: expected submittal of proposed voluntary agreement
- Winter – Summer 2022: development of Scientific Basis Report for any voluntary agreement, including public review and comment
- Fall 2022: Draft Staff Report public review and comment
- Winter 2023: Public workshop on Draft Staff Report
- Early Fall 2023: Response to comments and development of proposed final changes to the Bay-Delta Plan
- Late Fall 2023: Board consideration of adoption

Draft Biological Goals for Lower San Joaquin River Flow Objectives

On June 24, the State Water Resources Control Board (State Water Board), released a notice that it is seeking written public comments on revised draft initial biological goals[7] for fall-run Chinook salmon in the lower San Joaquin River and its three salmon-bearing tributaries, the Stanislaus, Tuolumne, and Merced Rivers (collectively "LSJR") developed pursuant to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan or Plan), as amended on December 12, 2018.

State Water Board staff also plan to hold a technical workshop to receive input and recommendations on possible revisions and improvements to the revised draft initial biological goals from members, or potential members, of the STM Working Group and the public. The remote workshop is scheduled to be held on July 18, from 1:00 to 5:00 pm.

Workshop Topics

The workshop is offered to seek recommendations and comments from members, or potential members, of the STM Working Group and public on revisions to the revised draft initial biological goals for the LSJR. Staff specifically request input on biological goals that will contribute to meeting the overall goals for salmon populations, including the salmon doubling objective, and

[7] https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/biological_goals/draft-biological-goals-06242022-hard-tracks.pdf

156

inform management of flow conditions to maintain viable native San Joaquin River fish populations migrating through the Delta for the following topics:

1. Definition – The Bay-Delta Plan requires biological goals to be specific, measurable, achievable, result-focused, and time-bound (SMART).
2. Achievability – Sources of additional evidence that inform whether the quantitative values, time-frame, and averaging periods of the revised draft initial biological goals are achievable.
3. Role – The Bay-Delta Plan states that the biological goals will be used to evaluate effectiveness of the program of implementation and inform adaptive methods, the San Joaquin Monitoring and Evaluation Program (not yet initiated), and future changes to the Bay-Delta Plan.
4. Abundance – The use of escapement as the metric for defining the abundance goal, identifying a specific numeric value for abundance and a time-frame for achieving the escapement value, and feasibility of the abundance goal.
5. Salmon Protection Objective – The role of biological goals with respect to the salmon protection objective and the relationship between the salmon protection objective1 and biological goals.
6. Hatchery Issues – The inclusion of adult hatchery fish as contributing to the abundance goal, feasibility of improving hatchery marking practices for fall-run Chinook salmon, and feasibility of and means for completing and implementing hatchery management plans for fall-run Chinook salmon in San Joaquin River tributary hatcheries.
7. Process – The process for adoption of revised draft initial biological goals and future review and updates to any adopted biological goals.

Written comments on the Revised Draft Initial Biological Goals report must be received by **noon on Monday, August 1, 2022.**

Voluntary Agreements

On March 29, 2022, members of the Newsom Administration joined federal and local water leaders in announcing the signing of a memorandum of understanding[8] that advances integrated efforts to improve ecosystem and fisheries health within the Sacramento-San Joaquin Bay-Delta. State and federal agencies also announced an agreement[9] specifically with the Sacramento River Settlement Contractors on an approach for 2022 water operations on the Sacramento River.

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

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

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

IS-7

The broader MOU outlines terms for an eight-year program that would provide substantial new flows for the environment to help recover salmon and other native fish. The terms also support the creation of new and restored habitat for fish and wildlife, and provide significant funding for environmental improvements and water purchases, according to a joint news release from the California Natural Resources Agency and the California Environmental Protection Agency (CalEPA). Local water agency managers signing the MOU have committed to bringing the terms of the MOU to their boards of directors for their endorsement and to work to settle litigation over engaged species protections in the Delta.

On June 16, the SLDMWA, Friant Water Authority and Tehama Colusa Canal Authority signed onto the VA MOU.

Racial Equity Plan

In May, community partners and State Water Board management and staff came together for Visioning and Strategy retreats, as well as a series of Action Planning workshops. The draft Racial Equity Action Plan will set goals for the State Water Board to address racial inequities and identify metrics to measure progress.

The Water Board is inviting you to provide input on the Racial Equity Action Plan through a series of public engagement workshops across the state. During each session, Board staff will inform communities about the Water Boards' progress since the Racial Equity Resolution was adopted.

Here are the ways that you and your community can provide feedback:

Statewide Virtual Workshop (Notice)

- July 20, 2022. 5:30-7:30 PM. Zoom.

Regional In Person and Virtual Workshops

- Northern California (Redding, CA): July 21, 2022. 4 – 6:30 PM.
- Southern California (Mecca, CA): July 25, 2022. 4 – 6:30 PM.
- Central California (Visalia, CA): July 27, 2022. 4 – 6:30 PM.

To Register, and for agendas and background materials, click here.

Water Blueprint for the San Joaquin Valley Activity

Background

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

Strategic Planning

The Blueprint's new board of 20 directors and other participants conducted extensive strategic planning, facilitated by Amy Wolfe. It produced a focused Mission and Vision statement as shown below, and crafted the Blueprint's strategic priorities for 2022-2025, deliverables, actions, and timelines. The priorities focus on the following: Advocacy, Groundwater Quality and Disadvantaged Communities, Land Use Changes & Environmental Planning, Outreach &

Communications, SGMA Implementation, Water Supply Goals, Governance, Operations & Finance.

The Blueprint Board has also identified quantifiable objectives, timelines for action and systems of accountability. The Large group met on June 22nd to review the 3-year plan and to collect input and support for the plan.

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

Vision Statement: *"The Water Blueprint serves as the united voice to champion water resource policies and projects to maximize accessible, affordable, and reliable supplies for sustainable and productive farms and ranches, healthy communities, and thriving ecosystems in the San Joaquin Valley."*

Committees

The Board established the following official standing committees:

- Technical
- Executive/Budget/Personnel
- Advocacy
- Community/Outreach

Chairs and committee members are being nominated and filled in the next two months.

Advocacy

The Blueprint prepared and is transmitting a letter with a SJV funding flyer to highlight and identify needs for state elected and policy makers. It consists of:

- Interregional Water Planning: $10 million (fish friendly diversions pilot)
- Conveyance: $835 million
- Regional Resilience and Sustainability: $1.5 billion
- Multi-Benefit Land Repurposing: $1 billion

Drinking Water Feasibility

A draft drinking water feasibility study proposal has been prepared by Fresno State/California Water Institute covers 5 counties within the San Joaquin Valley to identify 20 spots that are technically and financially feasible for groundwater recharge that have multiple benefits and specifically DACs with no other options but groundwater. Fresno State, FWA, Self Help, Sustainable Conservation and Leadership Council have been working on this over the past year and are discussing funding opportunities with Senator Feinstein's office and DWR. Friant Contractors/managers are sharing projects they are pursuing and exploring the ability to identify tangible and/or direct benefits to drinking water supplies.

Authority staff is working to expand the scope of this potential study to include communities and projects adjacent to the San Luis and Delta-Mendota Canals.

ISA

San Joaquin Valley Water Collaborative Action Program (SJVW CAP)

The CAP plenary group continues to meet, most recently it received a presentation from PPIC related to water supplies and the delta. CAP produced a Phase I Framework with solution set elements that all 5 caucuses have yet to endorse. A small work group of the caucuses are meeting to draft a term sheet for agreement, sticking points remain around evaluating Delta water supplies and land fallowing.

By September 2022, the CAP intends to complete the following:

- An initial list of projects that are consistent with the CAP criteria that can improve water supplies. These projects will be supported by the CAP participants.
- Review and analysis of updated Delta study by the PPIC.
- Workplan for activities necessary to finish the 2023 comprehensive plan to reach sustainability by 2040.

By September 2023:

- The in-Valley and Delta opportunities assessments.
- Regional action plan for strategic land repurposing
- List of actions and projects that will achieve a water balance by 2040.

160

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APPENDIX

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San Luis & Delta-Mendota Water Authority

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June 13, 2022

VIA EMAIL

Ms. Cynthia Meyer
Bureau of Reclamation
Bay-Delta Office
801 I Street, Suite 140
Sacramento, CA 95814-2536

Cynthia Meyer: cameyer@usbr.gov

Re: Knowledge Base Document Review: Long-Term Operation of the Central Valley Project and State Water Project

Dear Ms. Meyer:

The San Luis & Delta-Mendota Water Authority ("Water Authority") appreciates the opportunity to perform a supplementation review on the following Knowledge Base Documents associated with the 2021 Reinitiation of Consultation ("Consultation") on Long-Term Operation of the Central Valley Project ("CVP") and State Water Project ("SWP"):

1. Spring-run Juvenile Production Estimate- Spring-run Survival Knowledge Base Document, May 2022
2. Steelhead Juvenile Production Estimate-Steelhead Survival Knowledge Base Document, April 2022
3. Old and Middle River Reverse Flow Management – Smelt, Chinook Salmon, and Steelhead Migration and Survival Knowledge Base Document, May 2022
4. Central Valley Tributary Habitat Restoration Effects on Salmonid Growth and Survival Knowledge Based Paper, March 2022

The Water Authority is a public agency with its principal office located in Los Banos, California. It was formed in 1992 as a joint powers authority, and has twenty-seven member agencies. Twenty-five of the Water Authority's member agencies contract with the United States for the delivery of water from the federal CVP. Most of the Water Authority's member agencies depend upon the CVP as the principal source of water they provide to users within their service areas. That water supply serves approximately 1.2 million acres of agricultural lands within areas of San Joaquin, Stanislaus, Merced, Fresno, Kings, San Benito, and Santa Clara Counties, a portion of the water supply for nearly 2 million people, including in urban areas within Santa Clara County referred to as the "Silicon Valley," and millions of waterfowl that depend upon nearly 200,000 acres of

managed wetlands and other critical habitat within the largest contiguous wetland in the western United States. The operations of the CVP are therefore of vital interest and importance to the Water Authority, its member agencies, and the people, farms, businesses, communities, and wildlife refuges they serve.

During this review, the Water Authority looked for knowledge gaps and if found, literature and gray literature searches[1] were conducted. The papers and reports that add to the knowledge base are listed below, with the aim of ensuring that the best available science is incorporated into the 2021 Consultation.

1 Spring-run Juvenile Production Estimate – Spring-run Survival

1.1 Climate Change

Thompson, L. C., Escobar, M. I., Mosser, C. M., Purkey, D. R., Yates, D., & Moyle, P. B. (2012). Water management adaptations to prevent loss of spring-run Chinook salmon in California under climate change. Journal of Water Resources Planning and Management, 138(5), 465-478.

Yates D, Galbraith H, Purkey D, Huber-Lee A, Sieber J, West J, Herrod-Julius S, and B. Joyce. 2008. B. Climate warming, water storage, and Chinook salmon in California's Sacramento Valley. Climatic Change. 91(3):335-50.

1.2 Salvage and Loss

One salvage query platform is SacPAS: https://www.cbr.washington.edu/sacramento/workgroups/.

Kimmerer (2008) discussed the loss of Chinook salmon juveniles. Wim Kimmerer's evaluation looked at all runs including Spring-run Chinook salmon.

1.3 Juvenile Production Estimate

In the SRD, Reclamation makes the following statement: "In Spring 2022, DWR published the Incidental Take Permit Spring-Run Chinook Salmon Juvenile Production Estimate Science Plan (JPE Science Plan) which is a resource that outlines ongoing and future research and monitoring to support development of a SR JPE." However, Reclamation did not provide any citation for the JPE Science Plan call-out, here is the full citation:

DWR et al. 2020. INCIDENTAL TAKE PERMIT SPRING-RUN CHINOOK SALMON JUVENILE PRODUCTION ESTIMATE SCIENCE PLAN: 2020-2024. Department of Water Resources, Sacramento, CA. Accessed 5-26-2022 online at https://water.ca.gov/-

[1] Using AFS Gray Literature database located at https://graylitreports.fisheries.org/about

1605

/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Files/ITP/ITP-Spring-run-Chinook-Salmon-JPE-Science-plan-final-approved_Final_PDF_04-05-22.pdf.

1.4 Spring-run Chinook Salmon Survival and Routing

Singer, G. P., Chapman, E. D., Ammann, A. J., Klimley, A. P., Rypel, A. L., & Fangue, N. A. (2020). Historic drought influences outmigration dynamics of juvenile fall and spring-run Chinook Salmon. Environmental Biology of Fishes, 103(5), 543-559.

Notch, J. J., McHuron, A. S., Michel, C. J., Cordoleani, F., Johnson, M., Henderson, M. J., & Ammann, A. J. (2020). Outmigration survival of wild Chinook salmon smolts through the Sacramento River during historic drought and high water conditions. Environmental Biology of Fishes, 103(5), 561-576.

Cordoleani, F., Notch, J., McHuron, A. S., Michel, C. J., & Ammann, A. J. (2019). Movement and survival rates of Butte Creek spring-run Chinook salmon smolts from the Sutter Bypass to the Golden Gate Bridge in 2015, 2016, and 2017.

Notch, J. (2017). Out-migration survival of wild Chinook Salmon (Oncorhynchus tshawytscha) smolts from Mill Creek through the Sacramento River during drought conditions. University of California, Santa Cruz. M. S. Thesis.

1.5 Butte Creek Studies

Mosser, C. M., Thompson, L. C., & Strange, J. S. (2013). Survival of captured and relocated adult spring-run Chinook salmon Oncorhynchus tshawytscha in a Sacramento River tributary after cessation of migration. Environmental Biology of Fishes, 96(2), 405-417.

1.6 Improvements to "Literature" Section

A problem with the Spring-Run Document was the listing of citations in the Literature Section that could not be obtained. This was not because the source material does not exist but because the full citation was not sufficient to allow an interested reader to find the document. This is one of the citations that were insufficient and need to be improved in the scoping and BA documents but there were others:

- [DWR] California Department of Water Resources. Data Management Strategy for the Spring Run Chinook salmon Juvenile Production Estimate. Draft report, 2022

1.7 Literature Cited

Salmonid Scoping Team. 2017. EFFECTS OF WATER PROJECT OPERATIONS ON JUVENILE SALMONID MIGRATION AND SURVIVAL IN THE SOUTH DELTA. Prepared for the Collaborative Adaptive Management Team. Accessed 5-21-2022 online at: https://www.fisheries.noaa.gov/resource/document/effects-water-project-operations-juvenile-salmonid-migration-and-survival-south.

Kimmerer, W. J. (2008). Losses of Sacramento River Chinook salmon and delta smelt to entrainment in water diversions in the Sacramento–San Joaquin Delta. San Francisco Estuary and Watershed Science, 6(2). Accessed 5-26-2022 online at https://escholarship.org/content/qt7v92h6fs/qt7v92h6fs.pdf.

Cavallo, B. et al. 2015. Predicting juvenile Chinook routing in riverine and tidal channels of a freshwater estuary. Environmental Biology of Fishes 98(6):1571-1582.

Cavallo, B., J. Merz, J. Setka. 2012. Effects of predator and flow manipulation on Chinook Salmon (Oncorhynchus tshawytscha) survival in an imperiled estuary. Environmental Biology of Fish. Published online April 2012. DOI 10.1007/s10641-012-9993-5.

J. Merz, M. Workman, D. Threloff, and B. Cavallo. 2013. Salmon life cycle considerations to guide stream management: examples from California's Central Valley. San Francisco Estuary and Watershed Science 11(2). Available at: http://www.escholarship.org/uc/item/30d7b0g7.

Cavallo, B., P. Gaskill, J. Melgo. 2012. Investigating the influence of tides, inflows, and exports on sub-daily flow in the Sacramento-San Joaquin Delta. Available at: http://www.fishsciences.net/reports/2013/Cavallo_et_al_Delta_Flow_Report.pdf.

Cavallo B., et al. 2016. Coleman National Fish Hatchery Adaptive Management Plan. United States Bureau of Reclamation. December 2016. Available at: https://www.usbr.gov/mp/battlecreek/docs/pd-cnfhamp.pdf.

Cavallo B., et al. 2014. Hatchery and Genetics Management Plan for Feather River Hatchery Spring-run Chinook Program. California Department of Water Resources. June, 2014.

Seesholtz, A., B. Cavallo, and others. 2003. Lower Feather River juvenile fish communities: distribution, emigration patterns, and association with environmental variables. American Fisheries Society Symposium 39:141-166.

Zeug, S.C. & B.J. Cavallo. 2014. Controls on the entrainment of juvenile Chinook Salmon (Oncorhynchus tshawytscha) into large water diversions and estimates of population-level loss. PLoS One 9(7):e101479. Doi:10.1371/journal.pone.0101479.

Zeug, S.C. & B.J. Cavallo. 2013. Influence of estuary conditions on the recovery rate of coded wire tagged Chinook Salmon (Oncorhynchus tshawytscha) in an ocean fishery. Ecology of Freshwater Fish 22:157-168.

Zeug, S.C., P.S. Bergman, B.J. Cavallo and K.S. Jones. 2012. Application of a life cycle simulation model to evaluate impacts of water management and conservation actions on an endangered population of Chinook Salmon. Environmental Modeling and Assessment 17:455-467.

Anderson, J.J. 2018. Using river temperature to optimize fish incubation metabolism and survival: a case for mechanistic models. bioRχiv preprint.

Beacham, T.D., Murray, C.B. 1990. Temperature, egg size, and development of embryos and alevins of five species of Pacific salmon: a comparative analysis. Transactions of the American Fisheries Society 119:927-945.

California Department of Fish and Wildlife (CDFW). 2016. Chinook Salmon Populations of the Upper Sacramento River Basin In 2015. RBFO Technical Report No. 03-2016.

California Department of Fish and Wildlife, Fisheries Branch. 2019. California Central Valley Chinook Population Database Report. 2019. GrandTab 2019.05.07.

Del Rio, A.M., B.E. Davis, N.A. Fangue and A.E. Todgham. 2019. Combined effects of warming and hypoxia on early life stage Chinook salmon physiology and development. Conservation Physiology. 7. 10.1093/conphys/coy078.

Dumas, J., Marty, S. 2006. A new method to evaluate egg-to-fry survival in salmonids, trials with Atlantic salmon. Journal of Fish Biology 68:284-304. oxygen regimes. Transactions of the American Fisheries Society 135:1462-1477.

Martin, B.T., Pike, A., John, S.N., Hamda, N., Roberts, J., Lindley, S. & Danner, E.M. 2017. Phenomenological vs. biophysical models of thermal stress in aquatic eggs. Ecology Letters 20:50-59.

Munoz, N. J., A.P. Farrell, J.W. Heath, and B.D. Neff. 2014. Adaptive potential of a Pacific salmon challenged by climate change. Nature Climate Change 5: 163-166.

Poletto, J.B., Cocherell, D.E., Baird, S.E., Nguyen, T.X., Cabera-Stagno, V., Farrell, A.P., Fangue, N.A. 2017. Unusual aerobic performance at high temperatures in juvenile Chinook salmon, Oncorhynchus tshawytscha. Conservation Physiology. https://doi.org/10.1093/conphys/cow067.

Roni, P., Johnson C., De Boer, T., Pess, G., Dittman, A., Sear D. 2015. Interannual variability in the effects of physical habitat and parentage on Chinook salmon egg-to-fry survival. Canadian Journal of Fisheries and Aquatic Sciences 73:1-13.

Rubin, J.F. 1995. Estimating the success of natural spawning salmonids in streams. Journal of Fish Biology 46:603-622.

Vogel, D. A., and K. R. Marine. 1991. Guide to upper Sacramento River Chinook Salmon life history. Prepared by CH2M Hill for the U.S. Bureau of Reclamation, Central Valley Project, Redding, California.

2 STEELHEAD JUVENILE PRODUCTION ESTIMATE – STEELHEAD SURVIVAL

2.1 GENERAL

A Table of Acronyms should be included. Additionally, all acronyms should be defined with the initial use. For example: OMR, on page 1, is not defined anywhere in the document.

2.2 CONCEPTUAL MODELS

2.2.1 Adult Models

Steelhead Knowledge Base Document, Pg. 1, Paragraph 2: "Conceptual models link conditions to stressors that impact sheltering, migration, and foraging of juvenile steelhead."

Conceptual models should also include adult navigation upstream. A good conceptual model of salmonid adult navigation in the Central Valley can be found in Williams 2010: Life Stage Transition 3 (Pg. 26)). This model may be relied upon because it provides all the influences on adults transitioning from the bays upstream to spawning areas and it considers these influences on each spawning run.

2.2.2 Habitat Models

The relationship between spawning habitat and flow was evaluated using two models (PHABSIM and River2D) by Gard (2009). Gard's work was useful because it provided a flow/spawning habitat curve for steelhead in the Sacramento River (see Gard's (2009) Figure 10).

2.3 SALVAGE

The SHD provides one salvage query platform, SacPAS. However, there are also useful tools for exploring salvage and exports at the CDFW site: https://apps.wildlife.ca.gov/Salvage/Project?type=Export. Furthermore, the CDFW site provides useful information through its salvage density site: https://apps.wildlife.ca.gov/Salvage/Project?type=Density.

2.4 ANADROMY AND RESIDENCY

Operations of the CVP and SWP (subsequently the projects) have changed the lotic environments used by *Oncorhynchus mykiss* (*O. mykiss*) to execute its life history, which has modified the relative risk to species with anadromous life history. Papers and reports that could be incorporated in this effort are:

- Kendall et al. 2015
- Courter, I. et al. 2009
- Abadia-Cardoso et al. 2019
- Brodsky et al. 2020

2.5 Steelhead Survival and Routing

Buchanan, R. 2010-2016. Six-Year Acoustic Telemetry Study annual reports. All available here: https://www.usbr.gov/mp/bdo/six-year-acoustic-telemetry-steelhead-study.html

For example, the last survival results report in this series was:

- Buchanan. 2018. 2016 Six-year acoustic telemetry steelhead study: statistical methods and results. Prepared for US Bureau of Reclamation, Sacramento, CA.

See also:

- Brodsky et al. 2020
- Delaney et al. 2014

2.6 Feather River Studies

Two studies have been conducted in the lower Feather River with steelhead. These reports focus on growth and on the fish community with features steelhead:

- SP-F10 Task 3A Final Report: Distribution and Habitat use of Juvenile Steelhead and Other Fishes of the Lower Feather River. April 2004. http://orovillerelicensing.water.ca.gov/wg-reports_envir.html .
- SP-F10 Task 3B: Growth Investigations of Wild and Hatchery Steelhead in the Lower Feather River. April 2004. http://orovillerelicensing.water.ca.gov/wgreports_envir.html .

A presentation that focused on steelhead in the Feather River was:

Seesholtz, A., B. Cavallo, and others. 2003. Lower Feather River juvenile fish communities: distribution, emigration patterns, and association with environmental variables. American Fisheries Society Symposium 39:141-166.

2.7 Improvements to "Literature" Section

A problem with the SHD was the listing of citations in the Literature Section that could not be obtained. This was not because the source material does not exist but because the full citation was not sufficient to allow an interested reader to find the document. These are two of the citations that were insufficient and need to be improved in the scoping and BA documents but there were many others:

Killam, D. 2019a. Clear Creek video weir data for steelhead passage timing. Pages 1 in S. L. Gallagher, editor.

Lee, D. P., and J. Chilton. 2007. Hatchery and Genetic Management Plan for Nimbus Fish Hatchery Winter-Run Steelhead Program. Pages 134 in U.S. Department of Fish and Game, editor.

This citation may be removed:

California Department of Water Resources. 2008. Quantification of Pre-Screen Loss of Juvenile Steelhead within Clifton Court Forebay. Pages 136 in Fishery Improvements Section, editor.

Because it is cited properly in another location as:

Clark, K.W., M.D. Bowen, R.B. Mayfield, K.P. Zehfuss, J.D. Taplin, and C.H. Hanson (2009). Quantification of pre-screen loss of juvenile steelhead in Clifton Court Forebay. California Department of Water Resources, Bay-Delta Office, Fishery Improvements Section, Sacramento, CA. March 2009.

2.8 Literature Cited

Abadia-Cardoso, A. Brodsky, B. Cavallo and others. 2019. Anadromy redux? Genetic analysis to inform development of an indigenous American River steelhead broodstock. Journal of Fish and Wildlife Management 10(1):137–147; e1944-687X. https://doi.org/10.3996/072018-JFWM-063.

Brodsky, A., S.C. Zeug, J.Nelson, J. Hannon, P.J. Anders, B. Cavallo. 2020. Does broodstock source affect post-release survival of steelhead? Implications for replacing a non-native hatcherystock for recovery. Environmental Biology of Fishes 103: 437-453.

Buchanan, R. 2018. 2016 Six-year acoustic telemetry steelhead study: statistical methods and results. Prepared for US Bureau of Reclamation, Sacramento, CA. Accessed 5-25-2022 online at: http://www.cbr.washington.edu/sites/default/files/papers/UW%206yr%20steelhead%20report%202016%20FINAL.pdf.

Courter, I. and others. 2009. Flow and temperature effects on life history diversity of *Oncorhynchus mykiss* in the Yakima River basin. Cramer Fish Sciences, Gresham, OR. Accessed 5-21-22 online at https://www.researchgate.net/profile/Casey-Justice-2/publication/265148435_Flow_and_temperature_effects_on_life_history_diversity_of_Oncorhynchus_mykiss_in_the_Yakima_River_basin/links/586d463808aebf17d3a7231a/Flow-and-temperature-effects-on-life-history-diversity-of-Oncorhynchus-mykiss-in-the-Yakima-River-basin.pdf.

Delaney, D., P. Bergman, B. Cavallo and J. Melgo. 2014. Stipulation study: steelhead movement and survival in the South Delta with adaptive management of Old and Middle River flows. California Department of Water Resources Technical Report. Sacramento, CA.

Gard, M. 2009. Comparison of spawning habitat predictions of PHABSIM and River2D models. International Journal of River Basin Management, March, 2009. Accessed 5-21-2022 online at https://www.researchgate.net/publication/232897717. DOI: 10.1080/15715124.2009.9635370.

Kendall, Neala W., John R. McMillan, Matthew R. Sloat, Thomas W. Buehrens, Thomas P. Quinn, George R. Pess, Kirill V. Kuzishchin, Michelle M. McClure, and Richard W. Zabel. 2015. Anadromy and residency in steelhead and rainbow trout (Oncorhynchus mykiss): a review of the processes and patterns. Canadian Journal of Fisheries and Aquatic Sciences, Volume 72, Number 3. https://doi.org/10.1139/cjfas-2014-0192.

Salmonid Scoping Team. 2017. EFFECTS OF WATER PROJECT OPERATIONS ON JUVENILE SALMONID MIGRATION AND SURVIVAL IN THE SOUTH DELTA. Prepared for the Collaborative Adaptive Management Team. Accessed 5-21-2022 online at: https://www.fisheries.noaa.gov/resource/document/effects-water-project-operations-juvenile-salmonid-migration-and-survival-south.

Williams, J.G. 2010. Life History Conceptual Model for Chinook salmon and Steelhead. DRERIP Delta Conceptual Model. Sacramento (CA): Delta Regional Ecosystem Restoration Implementation Plan. Accessed 5-21-2022 online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=28422.

3 Old and Middle River Reverse Flow Management – Smelt, Chinook Salmon, and Steelhead Migration and Survival

3.1 Predation Reduction at Salvage Facilities

At least two reports have shown that predation on target species (Chinook salmon and Delta Smelt to name two) is a substantial problem in the primary channel at the Tracy Fish Collection Facility (TFCF). Two reports show substantial improvements in salvage when predators are removed from the primary channel.

Bark et al. (2013) showed a statistically significant improvement in Whole Facility Efficiency for Chinook salmon and Delta Smelt after TFCF predator removals were completed. For example, Bark et al.'s (2013) Table 3 showed this clearly:

Table 3.—Pre- versus post-predator removal WFE for delta smelt and juvenile Chinook salmon

Test Fish	Whole Facility Efficiency				t-Test P-value
	Pre	SE	Post	SE	
Delta smelt	9.33	2.63	26.5	5.86	0.0159
Chinook salmon	7.83	0.05	32.67	0.03	0.0009

Bridges et al. (2019) found similar results to those reported in Bark et al. (2013).

172

3.2 SALVAGE FACILITIES FISH DATA

Reclamation (Date Not Provided) provided a summary of three years of salvage data. It provides the relative proportion of all species obtained in the salvage from 2000 through 2003.

Some information on larval fish was summarized in Hiebert et al. 1995. For example, the size of fish and the timing of Delta Smelt larval entrainment to the TFCF is itemized. Also, Hiebert et al. (1995) provides a look at the proportional composition of fish eggs and larvae at the TFCF in the early 1990s.

3.3 TEMPORARY BARRIER EFFECTS ON SURVIVAL OF SALMONIDS IN THE SOUTH DELTA

In CDWR (2018), routing in the south Delta is shown through acoustic telemetry data.

3.4 LOSS AT THE SALVAGE FACILITIES

Calculations of loss by Tillotson and Gueta are described in the Knowledge Paper. However, other methods have been worked out that are not "in development" as these methods seem to be. These are described in these two papers:

Zeug SC, Cavallo BJ. 2014. Controls on the entrainment of juvenile Chinook Salmon (*Oncorhynchus tshawytscha*) into large water diversions and estimates of population-level loss. PLoS ONE [accessed 2020 Sep 09];9(7):e101479. https://doi.org/10.1371/journal.pone.0101479

Willis, J., M.D. Bowen, S. Zeug, B. Cavallo, and T. Keegan. 2014. Second opinion report on independent review panel recommendations regarding incidental take quantification at Delta water export facilities. Report 663R0101 to California Department of Water Resources (CDWR) by Turnpenny Horsfield Associates, Ashurst, UK.

3.5 BEHAVIORAL GUIDANCE STRUCTURES IN THE DELTA

Currently, NMFS has required the placement of a Bio-Acoustic Fish Fence (BAFF) in the Sacramento River at its divergence with Georgiana Slough. The BAFF is a non-physical barrier that must be installed and maintained each year by the DWR. The BAFF is intended to keep anadromous salmonid juveniles in the Sacramento River and not enter Georgiana Slough increasing survival by avoiding central Delta routes (Perry et al. 2010, Perry and Skalski 2009). There are two published reports evaluating the BAFF in the Sacramento River:

- California Department of Water Resources (CDWR). 2015a. 2012 Georgiana Slough non-physical barrier performance project report. Department of Water Resources Technical Report. Sacramento, CA. [See Literature Cited for online access information.].
- California Department of Water Resources (CDWR). 2012. 2011 Georgiana Slough non-physical barrier performance project report. Department of Water Resources Technical Report. Sacramento, CA. [See Literature Cited for online access information.].

CDWR (2015b) described the routing of steelhead and Fall Run Chinook Salmon (FRCS) into the Old River and the San Joaquin mainstem in a Wet year with no barrier (2011) and in other years

with rock barrier (2012) or non-physical fish barrier (BAFF) treatments (2009, 2010). CDWR (2015b) also estimated the proportion of salmonids lost due to predation. The authors also found there was significantly greater probability of predation with BAFF on or rock barrier than with BAFF off. Probability of predation was also positively related to small-fish density.

3.6 DATASETS

The Pacific States Marine Fisheries Commission maintains a database of all coded wire tagged releases. It can be found here: https://www.rmpc.org/.

3.7 CLIMATE CHANGE

Brown et al. (2016) showed how climate change models could be downscaled to evaluate effects on the ecosystem and in turn how that would affect an endangered fish: Delta Smelt.

3.8 MODELING DELTA SMELT MOVEMENT AND ENTRAINMENT

Gross et al. (2017) examined different Delta Smelt movement strategies. Gross et al. (2017) used a particle tracking model (PTM) and their results "suggest that somewhat realistic outcomes can be achieved by some form of selective tidal migration. It particularly shows support for tidal migration triggered by high salinity or perceived increases in salinity."

These manuscripts and reports also examined Delta Smelt. Together, they can be used to predict Delta Smelt movement and entrainment to the projects' facilities:

Korman, J, Gross, E, Smith, PE, Saenz, B, Grimaldo, LF (2018). Statistical evaluation of particle-tracking models predicting proportional entrainment loss for adult Delta smelt in the Sacramento-San Joaquin Delta. CSAMP/CAMT report.

Korman et al. 2021. Statistical Evaluation of Behavior and Population Dynamics Models Predicting Movement and Proportional Entrainment Loss of Adult Delta Smelt in the Sacramento–San Joaquin River Delta. San Francisco Estuary and Watershed Science, 19(1). https://doi.org/10.15447/sfews.2021v19iss1art1.

Gross, E.S. et al. 2021. Modeling Delta Smelt Distribution for Hypothesized Swimming Behaviors. San Francisco Estuary and Watershed Science, 19(1). https://doi.org/10.15447/sfews.2021v19iss1art3.

3.9 BIOLOGY OF INLAND FISHES OF CALIFORNIA

Moyle (2002) provides the most comprehensive coverage of biology of inland fishes. It is essential to understand the basics of distribution, life history, and many other attributes of fishes such as Chinook salmon, steelhead, Green Sturgeon, and Delta Smelt.

3.10 Improvements to "Literature" Section

A problem with the Old and Middle River Document was the listing of citations in the Literature Section that could not be obtained. This was not because the source material does not exist but because the full citation was not sufficient to allow an interested reader to find the document. These are two of the citations that were insufficient and need to be improved in the scoping and BA documents but there were many others:

Boles, G.L. 1988. Water Temperature Effects on Chinook Salmon with Emphasis on the Sacramento River: A Literature Review. Page 48 in California Department of Water Resources, editor.

Hughes, R.M., G.E. Davis, and C.E. Warren. 1978. Temperature requirements of salmonids in relation to their feeding, bioenergetics, growth, and behavior.

These citations were improved to include sufficient information for being able to obtain them:

Bowen, M.D., S. Hiebert, C. Hueth, and V. Maisonneuve. 2009. 2009 Effectiveness of a Non-Physical Fish Barrier at the Divergence of the Old and San Joaquin Rivers (CA). US Bureau of Reclamation, Technical Services Center, Lakewood, CO. Accessed 5-24-22 online at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/docs/sjrf_spprtinfo/bowen_etal_2009.pdf.

Bowen, M.D. and R. Bark. 2012. 2010 Effectiveness of a Non-Physical Fish Barrier at the Divergence of the Old and San Joaquin Rivers (CA). Technical Memorandum 86-68290-10-07. US Bureau of Reclamation, Technical Services Center, Lakewood, CO.

3.11 Literature Cited

Bark, R.C., B. Bridges, and M.D. Bowen. 2013. Predator impacts on salvage rates of juvenile Chinook Salmon and Delta Smelt. Tracy Technical Bulletin 2013-1. Prepared for the US Bureau of Reclamation, Tracy Fish Collection Facility by the Fisheries and Wildlife Resources Group, Denver, CO. Accessed 5-25-2022 online at https://usbr.contentdm.oclc.org/digital/collection/p15911coll3/id/2669.

Bowen, M.D., S. Hiebert, C. Hueth, and V. Maisonneuve. 2009. 2009 Effectiveness of a Non-Physical Fish Barrier at the Divergence of the Old and San Joaquin Rivers (CA). US Bureau of Reclamation, Technical Services Center, Lakewood, CO. Accessed 5-24-22 online at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/docs/sjrf_spprtinfo/bowen_etal_2009.pdf.

Bowen, M.D. and R. Bark. 2012. 2010 Effectiveness of a Non-Physical Fish Barrier at the Divergence of the Old and San Joaquin Rivers (CA). Technical Memorandum 86-68290-10-07. US Bureau of Reclamation, Technical Services Center, Lakewood, CO.

Bridges, Brent B., Brandon J. Wu, Rene C. Reyes, Mark D. Bowen, and Raymond C. Bark. 2019. Effects of Striped Bass Predation on Salvage of Adult Delta Smelt and Juvenile Chinook Salmon at the Tracy Fish Collection Facility. Tracy Fish Collection Facility Studies, Tracy

175

Series Volume 45. Bureau of Reclamation, Mid-Pacific Region, 77 pp. Accessed 5-25-2022 online at https://www.usbr.gov/mp/TFFIP/docs/tracy-reports/tracyseriesvol45-bridgesetal-aug2019.pdf.

Brown, L. R., Komoroske, L. M., Wagner, R. W., Morgan-King, T., May, J. T., Connon, R. E., & Fangue, N. A. (2016). Coupled downscaled climate models and ecophysiological metrics forecast habitat compression for an endangered estuarine fish. PloS one, 11(1). Accessed 5-25-2022 online at https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0146724.

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California Department of Water Resources (CDWR). 2015a. 2012 Georgiana Slough non-physical barrier performance project report. Department of Water Resources Technical Report. Sacramento, CA. Accessed 5-24-2022 online at https://www.noaa.gov/sites/default/files/legacy/document/2020/Oct/07354626712.pdf.

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Gross, E, Saenz, B, Rachiele, R, Grinbergs, S, Grimaldo, L, Korman, J, Smith, P, MacWilliams, M, Bever, A. (2017). Estimation of Adult Delta Smelt Distribution for Hypothesized Swimming Behaviors Using Hydrodynamic, Suspended Sediment and Particle- Tracking Models. Collaborative Adaptive Management Team Report. Accessed 5-25-2022 online at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/petitioners_exhibit/dwr/part2_rebuttal/dwr_1249.pdfhttps://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/petitioners_exhibit/dwr/part2_rebuttal/dwr_1249.pdf.

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174

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Reclamation. U.S. Department of the Interior/Bureau of Reclamation. DNP (Date Not Provided). Three-Year Summary of Fish Salvaged at the TFCF. Tracy Field Office, Tracy, CA. Accessed 5-22-2022 online at https://www.usbr.gov/mp/TFFIP/docs/fish-salvaged-3-year-summary.pdf.

Puckett, K., C. Liston, C. Karp, and L. Hess. 1996. Preliminary Examination of Factors that Influence Fish Salvage Estimates at the Tracy Fish Collection Facility, California, 1993 and 1994. August 1996. Tracy Fish Collection Facility Studies, Volume 4, U. S. Bureau of Reclamation, Mid-Pacific Region and Denver Technical Services Center. 28 pp. Accessed 5-23-2022 online at https://www.usbr.gov/mp/TFFIP/docs/tracy-reports/tracy-rpt-vol-4-preliminary-exam-factors.pdf.

Willis, J., M.D. Bowen, S. Zeug, B. Cavallo, and T. Keegan. 2014. Second opinion report on independent review panel recommendations regarding incidental take quantification at Delta water export facilities. Report 663R0101 to California Department of Water Resources (CDWR) by Turnpenny Horsfield Associates, Ashurst, UK.

Zeug SC, Cavallo BJ. 2014. Controls on the entrainment of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) into large water diversions and estimates of population-level loss. PLoS ONE [accessed 2020 Sep 09];9(7):e101479. https://doi.org/10.1371/journal.pone.0101479.

4 CENTRAL VALLEY TRIBUTARY HABITAT RESTORATION EFFECTS ON SALMONID GROWTH AND SURVIVAL

The Habitat Restoration Document provides this dataset but this link does not work:

Final reports of information derived from Tributaries Monitoring Program on Battle Creek: Red Bluff FWO, Fish and Wildlife Service (doi.net)

4.1 CVPIA NEAR-TERM RESTORATION STRATEGY

The CVPIA Near-term Restoration Strategy (Reclamation and USFWS 2020) provided decision support modeling to prioritize restoration actions. The prioritization allowed optimization strategies and locations to be identified that were most likely, from among the options studied, to provide greater increases in listed fish species in the Central Valley.

4.2 RESTORATION EVALUATIONS

Chase et al. (2010) compared performance of two restoration sites to two mainstem Trinity River reference sites.

4.3 SALMONID POPULATION MONITORING

https://www.calfish.org/ProgramsData/ConservationandManagement/CentralValleyMonitoring/CDFWUpperSacRiverBasinSalmonidMonitoring.aspx

NOAA (2021) provided the juvenile production estimate for Winter-run Chinook Salmon for brood year 2020. This letter provided the estimated number of juvenile WRCS that would enter the Delta in Water Year (WY) 2021.

California Department of Fish and Wildlife (CDFW). 2021a. Final winter-run juvenile production estimate (JPE) for brood year 2020. January 15, 2021 letter from CDFW to NMFS.

California Department of Fish and Wildlife (CDFW). 2021b. Draft winter-run juvenile production estimate (JPE) for brood year 2021. December 31, 2021 letter from CDFW to NMFS.

Killam, D. S. (2006) Sacramento River winter-run Chinook salmon carcass survey summary report for years 1996-2006. SRSSAP Tech. Report No. 06-4, 2006.

O'Farrell, M, Hendrix, N., Mohr, M. 2016. An evaluation of preseason abundance forecasts for Sacramento River winter Chinook salmon. National Marine Fisheries Service, Santa Cruz, CA, October 3, 2016.

Poytress, W.R., Gruber, J.J., Carrillo, F.D., Voss, S.D. 2014. Compendium report of Red Bluff Diversion Dam rotary trap juvenile anadromous fish production indices for years 2000-2012. Report of U.S. Fish and Wildlife Service to California Department of Fish and Wildlife and U.S. Bureau of Reclamation.

178

4.4 Spring-run Chinook Salmon

Cordoleani, Flora, Jeremy Notch, Alex S. McHuron, Cyril J. Michel, and Arnold J. Ammann. 2019. Movement and survival rates of Butte Creek spring-run Chinook salmon smolts from the Sutter Bypass to the Golden Gate Bridge in 2015, 2016, and 2017. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-618. 47 p. https://doi.org/10.25923/cwry-bx03.

Cordoleani, F, Phillis, C.C., Sturrock, A.M., FitzGerald, A.M., Malkassian, A., Whitman, G.E., Weber, P.K., Johnson, R.C. 2021. Threatened salmon rely on a rare life history strategy in a warming landscape. Nature Climate Change https://doi.org/10.1038/s41558-021-01186-4.

4.5 Fall-run Chinook Salmon

Lindley, S.T., Grimes, C.B., Mohr, M.S., Peterson, W., Stein, J., Anderson, J.T., Botsford, L.W., Bottom, D.L., Busack, C.A., Collier, T.K., Ferguson, J., Garza, J.C., Grover, A.M., Hankin, D.G., Kope, R.G., Lawson, P.W., Low, A., MacFarlane, R.B., Moore, K., Palmer-Zwahlen, M., Schwing, F.B. , Smith, J., Tracy, C., Webb, R., Wells, B.K., Williams, T.H. 2009. What caused the Sacramento River fall Chinook stock collapse? Report to the Pacific Fishery Management Council.

4.6 Hyporheic Influences on Spawning Success

Geist, D.R. 2000. Hyporheic discharge of river water into fall Chinook salmon (Oncorhynchus tshawytscha) spawning areas in the Hanford Reach, Columbia River. Canadian Journal of Fisheries and Aquatic Sciences 57:1647-1656.

Barnard, K and S McBain. 1994. Standpipe to determine permeability, dissolved oxygen, and vertical particle size distribution in salmonid spawning gravels. Fish Habitat Relationships Technical Bulletin 15.

4.7 Independent Review Panel (IRP) Report

Gore, J., Kennedy, B., et al. (2018) Independent Review Panel (IRP) Report for the 2017 Long-term Operations Biological Opinions (LOBO) Biennial Science Review: Report to the Delta Science Program. Delta Stewardship Council and Delta Independent Science Program.

4.8 Spawning Gravel

Kondolf, G.M., M.J. Sale, and M.G. Wolman. 1993. Modification of fluvial gravel size by spawning salmonids. Water Resources Research. 29(7): 2265-2274.

Stillwater Sciences. 2007. Sacramento River Ecological Flows Study: Gravel study final report. December 21 2007.

179

Terhune, LDB. 1958. The Mark IV groundwater standpipe for measuring seepage through salmon spawning gravel. J Fish. Res. Bd. Canada, 15(5): 1027-1063.

Tonina, D and JM Buffington. 2009. A three-dimensional model for analyzing the effects of salmon redds on hyporheic exchange and egg pocket habitat. Canadian Journal of Fisheries and Aquatic Sciences 66:2157-2173.

Zimmermann AE, Lapointe M. 2005 Intergranular low velocity through salmonid redds: sensitivity to fines infiltration from low intensity sediment transport events. River Res. appl. 21, 865–881.

4.9 Recovery Plans

National Marine Fisheries Service. 2014. Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead. California Central Valley Area Office. July 2014.

4.10 Fecundity and Spawning Success Research

Quinn, T.P., Bloomberg, S. 1992. Fecundity of Chinook salmon (Oncorhynchus tshawytscha) from the Waitaki and Rakaia rivers, New Zealand. New Zealand Journal of Marine and Freshwater Research 1992:429-434.

Rubin, J.F. 1995. Estimating the success of natural spawning salmonids in streams. Journal of Fish Biology 46:603-622.

4.11 Off-channel Chinook Salmon Habitat

Bellido-Leiva, F.J.; Lusardi, R.A.; Lund, J.R. Quantification of Off-Channel Inundated Habitat for Pacific Chinook Salmon (Oncorhynchus tshawytscha) along the Sacramento River, California, Using Remote Sensing Imagery. Remote Sens. 2022, 14, 1443. https://doi.org/10.3390/rs14061443.

4.12 Restoration Potential

Phillis, C. C., Sturrock, A. M., Johnson, R. C., & Weber, P. K. (2018). Endangered winter-run Chinook salmon rely on diverse rearing habitats in a highly altered landscape. Biological Conservation, 217, 358-362.

4.13 Thiamine Monitoring

Monitoring Thiamine Deficiency in California Salmon – NOAA Program for determining the cause of thiamine deficiency in Chinook Salmon: https://www.fisheries.noaa.gov/west-coast/science-data/monitoring-thiamine-deficiency-california-salmon.

180

4.14 Biology of Inland Fishes of California

Moyle (2002) provides the most comprehensive coverage of biology of inland fishes. It is essential to understand the basics of distribution, life history, and many other attributes of fishes such as Chinook Salmon, steelhead, Green Sturgeon, and Delta Smelt.

4.15 Improvements to "Literature" Section

A problem with the Habitat Restoration was the listing of citations in the Literature Section that could not be obtained. This was not because the source material does not exist but because the full citation was not sufficient to allow an interested reader to find the document. This is a citation that was insufficient and should be improved in the scoping and BA documents but there were others:

Duffy, W.G. 2005. Protocols for monitoring the response of anadromous salmon and steelhead to watershed restoration in California. Report to CDFW. 84 p

4.16 Literature Cited: Full Citations for Call-Outs

Bellido-Leiva, F.J.; Lusardi, R.A.; Lund, J.R. Quantification of Off-Channel Inundated Habitat for Pacific Chinook Salmon (*Oncorhynchus tshawytscha*) along the Sacramento River, California, Using Remote Sensing Imagery. Remote Sens. 2022, 14, 1443. https://doi.org/10.3390/rs14061443.

Chase, R. et al. 2013. Assessment of juvenile coho salmon movement and behavior in relation to rehabilitation efforts in the Trinity River, California, using PIT tags and radiotelemetry. Environmental Biology of Fishes 96: 303-314.

National Oceanic and Atmospheric Administration. 2021. Juvenile Production Estimate (JPE) for Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*) from brood year (BY) 2020 expected to enter the Sacramento-San Joaquin Delta (Delta) during water year (WY) 2021. Central California Valley Office, Sacramento, CA. Accessed 5-25-2022 online at https://media.fisheries.noaa.gov/2021-02/nmfs-by-2020-jpe-letter.pdf.

Reclamation and USFWS. U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service. 2020. Near-term Restoration Strategy for the Central Valley Project Improvement Act Fish Resource Area FY2021–FY2025. Prepared for the Bureau of Reclamation and U.S. Fish and Wildlife Service. Sacramento, California. 100 pages. Accessed 5-26-2022 online at https://www.usbr.gov/mp/cvpia/3406b1/docs/cvpia-near-term-restoration-strategy-fy21-fy25.pdf.

5 CONCLUSION

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

Sincerely,

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

187

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183

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June 20, 2022

VIA EMAIL

Ms. Cynthia Meyer
Bureau of Reclamation
Bay-Delta Office
801 I Street, Suite 140
Sacramento, CA 95814-2536

Cynthia Meyer: cameyer@usbr.gov

Re: Knowledge Base Document Review: Long-Term Operation of the Central Valley Project and State Water Project

Dear Ms. Meyer:

The San Luis & Delta-Mendota Water Authority ("Water Authority") appreciates the opportunity to perform a supplementation review on the following Knowledge Base Documents associated with the 2021 Reinitiation of Consultation ("Consultation") on Long-Term Operation of the Central Valley Project ("CVP") and State Water Project ("SWP"):

1. Delta Spring Outflow Management Smelt Growth and Survival Knowledge Base Document, May 2022
2. Pulse Flow Effects on Salmonid Survival Knowledge Base Document, May 2022
3. Summer and Fall Habitat Management Actions – Smelt Growth and Survival Knowledge Base Document, May 2022
4. Shasta Cold Water Pool Management – End of September Storage Knowledge Base Document, May 2022

The Water Authority is a public agency with its principal office located in Los Banos, California. It was formed in 1992 as a joint powers authority, and has twenty-seven member agencies. Twenty-five of the Water Authority's member agencies contract with the United States for the delivery of water from the federal CVP. Most of the Water Authority's member agencies depend upon the CVP as the principal source of water they provide to users within their service areas. That water supply serves approximately 1.2 million acres of agricultural lands within areas of San Joaquin, Stanislaus, Merced, Fresno, Kings, San Benito, and Santa Clara Counties, a portion of the water supply for nearly 2 million people, including in urban areas within Santa Clara County referred to as the "Silicon Valley," and millions of waterfowl that depend upon nearly 200,000 acres of managed wetlands and other critical habitat within the largest contiguous wetland in the western

United States. The operations of the CVP are therefore of vital interest and importance to the Water Authority, its member agencies, and the people, farms, businesses, communities, and wildlife refuges they serve.

During this review, the Water Authority looked for knowledge gaps and if found, literature and gray literature searches[1] were conducted. The papers and reports that add to the knowledge base are listed below, with the aim of ensuring that the best available science is incorporated into the 2021 Consultation.

1 DELTA SPRING OUTFLOW MANAGEMENT: SMELT GROWTH AND SURVIVAL

1.1 RESULTS

1.1.1 References for Outflows and Smelt Movement and Entrainment

Anchor QEA, 2017. Collaborative Adaptive Management Team Investigations on Understanding Factors that Affect Entrainment of Delta Smelt, Hydrodynamic and Sediment Transport Modeling Study, December 2017.

A review of the effects of Delta outflow and inflow on multiple species including Delta Smelt and Longfin Smelt is:

CDFG. 2010. Effects of Delta Inflow and Outflow on Several Native, Recreational, and Commercial Species. Bay-Delta Region, Stockton, CA. Accessed 5-27-2022 online at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/PCFFA&IGFR/part2/pcffa_146.pdf.

1.2 MODELS

1.2.1 FISH-PTM

FISH-PTM allows for the prediction of Delta Smelt distribution. References:

Gross et al. (2018) used multiple approaches to modeling Delta Smelt swimming behavior and conducted the first application of FISH-PTM for Delta Smelt. Gross et al. (2021) refined the model of Delta Smelt swimming behavior.

Specification of FISH-PTM was first done by Ketefian et al. (2016).

Resource Management Associates. 2017. Calibration of the Hydrodynamic, Salinity and Turbidity Models for the Adult Delta Smelt Behavior Study. Report for the Collaborative Adaptive Management Team.

[1] Using AFS Gray Literature database located at https://graylitreports.fisheries.org/about

125

1.2.2 IBM of Delta Smelt Population Dynamics

Rose KA, Kimmerer WJ, Edwards KP, Bennett WA. 2013. Individual-based modeling of delta smelt population dynamics in the upper San Francisco Estuary: I. Model description and baseline results. Transactions of the American Fisheries Society 142: 1238–1259.

1.3 Longfin Smelt References

Lewis, L. S., M. Willmes, A. Barros, P. K. Crain, and J. A. Hobbs. 2020. Newly discovered spawning and recruitment of threatened Longfin Smelt in restored and underexplored tidal wetlands. Ecology 101(1):e02868. 10.1002/ecy.2868.

Tobias, V., & Baxter, R. (2021). Fewer and farther between: changes in the timing of Longfin Smelt (Spirinchus thaleichthys) movements in the San Francisco Estuary. Accessed 5-27-2022 online at: https://www.preprints.org/manuscript/202101.0512/download/final_file.

1.4 Literature Cited: Full Citations for Call-Outs

Gross, ES, Saenz, B, Rachiele, R, Grinbergs, S, Grimaldo, LF, Korman, J, Smith, PE, MacWilliams M, Bever A. 2018. Estimation of adult Delta Smelt distribution for hypothesized swimming behaviors using hydrodynamic, suspended sediment and particle-tracking models. Walnut Creek (CA): Resource Management Associates. Technical Report DWR-1249. 58 p. Accessed 5-27-22 online at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/petitioners_exhibit/dwr/part2_rebuttal/dwr_1249.pdf.

Gross, E., et al. 2021. Modeling Delta Smelt Distribution for Hypothesized Swimming Behaviors. San Francisco Estuary and Watershed Science, 19(1). https://doi.org/10.15447/sfews.2021v19iss1art3.

Hamilton Scott A, Murphy Dennis D. 2022. Identifying Environmental Factors Limiting Recovery of an Imperiled Estuarine Fish. Frontiers in Ecology and Evolution, 10(22). https://www.frontiersin.org/articles/10.3389/fevo.2022.826025/full

Ketefian GS, Gross ES, Stelling GS. 2016. Accurate and consistent particle tracking on unstructured grids, International Journal for Numerical Methods in Fluids, 80(11): 648–665, doi:10.1002/fld.4168.

2 Pulse Flow Effects on Salmonid Survival

2.1 Results

2.1.1 Datasets

The Pulse Flow Effects on Salmonid Survival Knowledge Base Document ("PFD") provides many useful datasets.

There are some datasets not listed in the PFD that could improve the understanding of pulse flows and their effects. Here is an example from the Stanislaus:

In the spring, juvenile salmonids in the San Joaquin River tributaries tend to emigrate from their natal streams when the hydrograph shows a steep ascending or descending limb. The existence of this relationship was supported by Chinook salmon fry releases in the Stanislaus River in 2003, experimental pulse flows, rotary screw trap (RST) Chinook salmon fry-catch rates, and subsequent observations of Chinook salmon fry at the salvage facilities (SJRGA 2004).

There are substantial datasets available for the Tuolumne River where a reader may compare RST catch rate to flow (cfs). Full citations for all 14 of these reports may be found in the Literature Cited section of this review: Turlock and Modesto Irrigation Districts. 2006 - 2019.

Here is an example of the pulse flow and RST data available for the Tuolumne River:

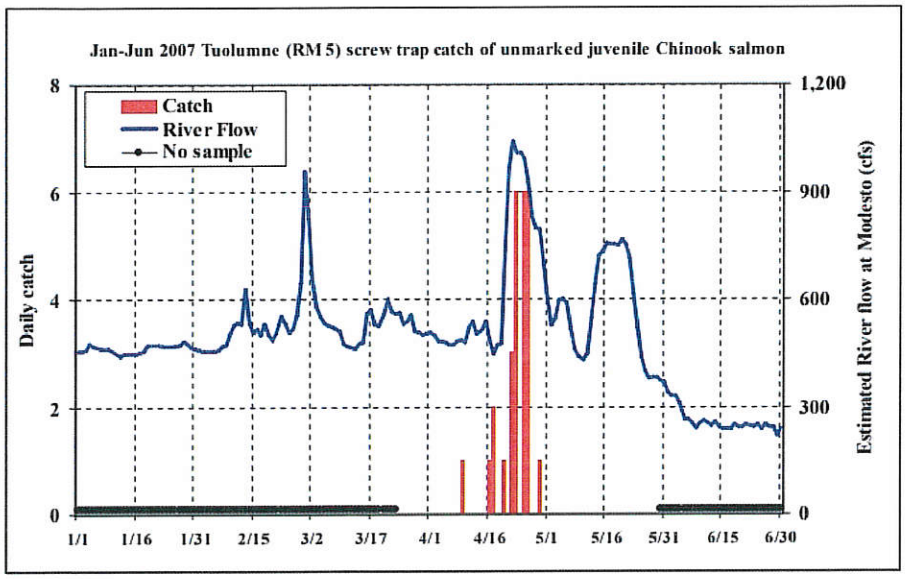

Figure 1. Source: Turlock and Modesto Irrigation Districts (2008)

L-21

There are a few datasets available for the Merced River where a reader may compare flow (cfs) at Cressey to the RST catch at River Mile 2 of the Merced River. See this figure:

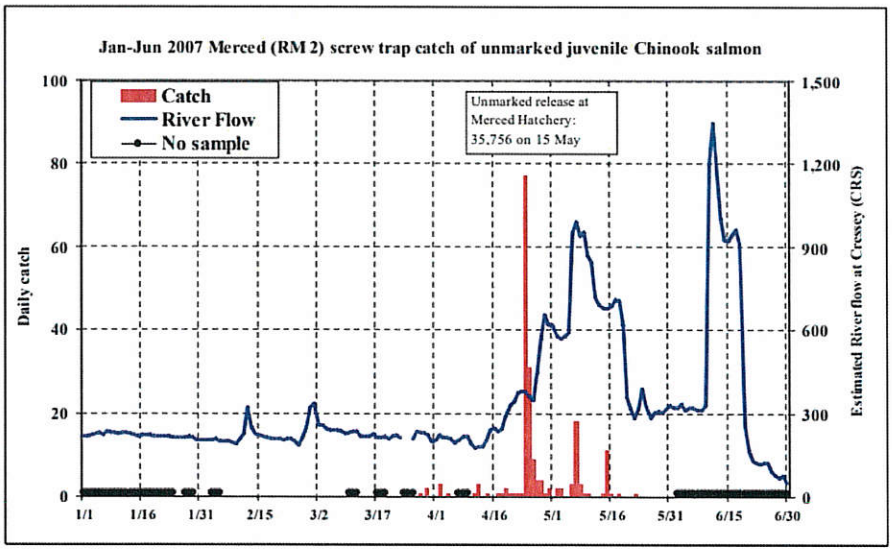

Figure 2. Source: Turlock and Modesto Irrigation Districts (2008)

These data sets show there is regularly a pulse in outmigration with a pulse flow. However, this is not always the case and so these datasets should be viewed in their entirety. The Merced River datasets are in this same dataset that was provided above: Turlock and Modesto Irrigation Districts. 2006 - 2019.

2.2 Literature Cited: Full Citations for Call-Outs

SJRGA (San Joaquin River Group Authority). 2004. Complimentary Studies Related to the VAMP. Chapter 6 in 2003 Annual Technical Report on Implementation and Monitoring of the San Joaquin River Agreement and the Vernalis Adaptive Management Plan. Prepared for the California Water Resources Control Board in compliance with D-1641. Accessed 5-27-2002 at https://calisphere.org/item/ark:/86086/n2sx6c5g/.

Turlock and Modesto Irrigation Districts. 2006. FERC Project No. 2299: 2005 Lower Tuolumne River Annual Report. Accessed 5-27-2002 online at: http://tuolumnerivertac.com/Documents/20060330-5125(14999182).pdf.

Turlock and Modesto Irrigation Districts. 2007. FERC Project No. 2299: 2006 Lower Tuolumne River Annual Report. Accessed 5-27-2002 online at: http://tuolumnerivertac.com/Documents/P-2299_Report_1-of-7.pdf and http://tuolumnerivertac.com/Documents/Tuolumne%20River%20Data%20Report%20-%202006.pdf.

Turlock and Modesto Irrigation Districts. 2008. FERC Project No. 2299: 2007 Lower Tuolumne River Annual Report. Accessed 5-27-2002 online at:

188

http://tuolumnerivertac.com/Documents/P-2299_2007_Summary_Rpt_Part.pdf and http://tuolumnerivertac.com/Documents/2007-4%20RST.pdf.

Turlock and Modesto Irrigation Districts. 2009. FERC Project No. 2299: 2008 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/2008_Annual_Report_Part_1.pdf and http://tuolumnerivertac.com/Documents/2008%20Tuolumne%20Annual%20RST%20Report_FINAL.pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2010. FERC Project No. 2299: 2009 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/2009_FERC_Report_wo_technical_reports.pdf and http://tuolumnerivertac.com/Documents/Tuolumne%20RST%20Annual%20Report%202009_final.pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2011. FERC Project No. 2299: 2010 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/P-2299_2010_Summary_Report.pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2012. FERC Project No. 2299: 2011 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/2012_FERC_Report.pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2013. FERC Project No. 2299: 2012 Lower Tuolumne River Annual Report. Available: http://elibrary.ferc.gov/IDMWS/common/OpenNat.asp?fileID=13216498. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2014. FERC Project No. 2299: 2013 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/20140331-5180(29239341)(1).pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2015. FERC Project No. 2299: 2014 Lower Tuolumne River Annual Report. Available: http://tuolumnerivertac.com/Documents/2014%20Annual%20Report%20to%20FERC.pdf. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2016. FERC Project No. 2299: 2015 Lower Tuolumne River Annual Report. Available: http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14444089. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2017. FERC Project No. 2299: 2016 Lower Tuolumne River Annual Report. Available:

6-28

https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=14543006. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2018. FERC Project No. 2299: 2017 Lower Tuolumne River Annual Report. Available: https://elibrary.ferc.gov/IDMWS/common/OpenNat.asp?fileID=14857850. Accessed May 14, 2020.

Turlock and Modesto Irrigation Districts. 2019. FERC Project No. 2299: 2018 Lower Tuolumne River Annual Report. Available: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14756651. Accessed May 14, 2020.

3 SUMMER AND FALL HABITAT MANAGEMENT ACTIONS – SMELT GROWTH AND SURVIVAL

3.1 STOCK-RECRUITMENT AND SMALL SPAWNING STOCK

Beverton, R. J., and S. J. Holt. 1957. "On the Dynamics of Exploited Fish Populations." United Kingdom Ministry of Agriculture and Fisheries, Fishery Investigations, Series II, 19.

Hutchings Jeffrey A. 2015. Thresholds for impaired species recovery. Proc. R. Soc. B. 2822015065420150654. http://doi.org/10.1098/rspb.2015.0654. Accessed 5-28-2022 online at: https://royalsocietypublishing.org/doi/10.1098/rspb.2015.0654.

3.2 EXTINCTION RISK ANALYSIS AND POPULATION VIABILITY ANALYSIS EXAMPLES

NOAA. 2021. Guidance on Responding to Petitions and Conducting Status Reviews under the Endangered Species Act. Accessed 5-28-2022 online at: https://media.fisheries.noaa.gov/2021-02/Final%20Listing%20Guidance_%202017%20ver_revisions_02012021_external.pdf?null.

Pine, W. et al. 2013. An individual-based model for population viability analysis of humpback chub in Grand Canyon. North American Journal of Fisheries Management. https://doi.org/10.1080/02755947.2013.788587.

3.3 IMPROVEMENTS TO "LITERATURE" SECTION

A minor problem with the Habitat Management Document was the listing of citations in the Literature Section that could not be obtained. This was not because the source material does not exist but because the full citation was not sufficient to allow an interested reader to find the document. This is one of the citations that were insufficient and need to be improved in the scoping and BA documents but there were others:

CDWR 2022. Delta Smelt Summer-Fall Habitat Action 2022 Action Plan. Division of Integrated Science and Engineering, Sacramento CA. 32 pp + appendices.

4 SHASTA COLD WATER POOL AND STORAGE MANAGEMENT – CHINOOK SALMON AND STEELHEAD GROWTH AND SURVIVAL

4.1 RESULTS

4.1.1 Datasets

The Coldwater Pool Document (CDP) provides many useful datasets. The Trinity River Division is not discussed in the CPD. However, temperature concerns on the Trinity River and the Sacramento River are related. One excellent source for information on the Trinity River basin temperature issues is the Trinity River Restoration Program document storage site: https://www.trrp.net/library/. References from that library could inform the ESA Consultation regarding water temperatures in Lewiston Reservoir for water that would enter the Clear Creek Tunnel and arrive in Whiskeytown Reservoir:

Magneson, M. 2013. The Influence of Lewiston Dam Releases on Water Temperatures of the Trinity River and Lower Klamath River, CA. April to October, 2012. Report to the Trinity River Restoration Program, Arcata Fisheries Data Series Report Number DS 2013-30. U. S. Fish and Wildlife Service, Arcata, California. Available: https://www.trrp.net/library/document?id=2244.

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113

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195

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5 CONCLUSION

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

Sincerely,

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

XIII. A.

MEMORANDUM

TO: Water Resources Committee and Alternates, Board of Directors and Alternates

FROM: Scott Petersen, Water Policy Director

DATE: July 11, 2022

RE: Water Resources Committee to Consider Recommendations on Legislation / Board of Directors to Consider Same

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Recommendation

Recommend to the Board of Directors to adopt the following positions on federal legislation:

- Adopt a position of "Support and Amend" on H.R. 8127 (Schrier): Water Infrastructure Finance and Innovation Act Amendments of 2022

Summary

Federal Legislation

H.R. 8127 (Schrier): Water Infrastructure Finance and Innovation Act Amendments of 2022

RECOMMENDATION: SUPPORT AND AMEND

OBJECTIVE: Improve Water Infrastructure Affecting Authority Member Agencies

Summary

This bill would:

- Broaden WIFIA funding and financing eligibility to state and federal projects and entities. This includes state-led water storage projects, transferred works of the Bureau of Reclamation, and congressionally authorized Army Corps of Engineers (USACE) projects.
- Authorizes the use of collaborative project delivery methods for WIFIA projects, allowing more flexibility and reducing time and cost of the project.
- Allows certain federal water infrastructure loans to have maturity dates of up to 55 years.
- Reauthorizes USACE WIFIA program through FY2026.
- Directs the USACE to implement its WIFIA program, which it has not done despite its authorization in 2014.

Status

This legislation was introduced in the House of Representatives on June 16, 2022.

Importance to the Authority

HR 8127 would make WIFIA funding and financing eligibility to transferred works, and state-led water storage projects, making the program available for financing of the Delta-Mendota Canal, provided that the loan is repaid using non-federal dollars. Additionally, the legislation extends the loan repayment term for projects with a useful life beyond 30 years to up to 55 years or equal the project's useful life.

Pros:

- The legislation would enable the Authority to access WIFIA funding and financing eligibility for transferred works projects, like the Delta-Mendota Canal Subsidence Correction Project.

Cons:

- Surface and groundwater storage funding is limited to nonreimbursable public benefits

Committee Options

Option 1

Recommend that the Board authorize the Executive Director and delegated staff to express support to this legislation and pursue the following amendments:

1. Seek clarifying language that would enable project proponents to voluntarily accept a loan repayment period of less than 55 years on a project with a useful life greater than 30 years. The current statutory language is limited to loan repayment periods of either (1) 55 years, or (2) the project's useful life.

Fiscal Impact: Unknown. Reduced costs associated with Authority and member agency water project development.

Business Analysis: Increase financing flexibility for Authority and member agency projects.

Option 2

Take no action.

Fiscal Impact: Unknown.

Business Analysis: Status quo.

Guidelines for Taking Positions on Legislation

A number of controversial bills are introduced each year in the Congress and in the California Legislature. It is important to understand how the Authority takes positions on legislation.

Policy

By Agenda Item 8, dated December 9, 2021, the Board adopted the Fiscal Year 2023 Objectives.

Water Authority's Positions on Legislation

The Water Authority takes positions on legislation that, if enacted, would impact Water Authority members, consistent with Water Authority Board adopted Goals and Objectives. The Water Authority may take the following positions on legislation: Oppose, Support, Oppose Unless Amended, Support if Amended, Not Favor, Favor, Not Favor Unless Amended, Favor if Amended, and Watch (neutral). The

199

Water Authority's staff testifies and advocates with legislators and staff through meetings and member agency contacts on all positions except Watch, Favor and Not Favor. For Favor and Not Favor positions, written communication of the Water Authority's position is provided to the legislator. Nothing in this section should be read to preclude the Executive Director or his or her delegee from taking an informal support or informal oppose position on behalf of the Water Authority that is consistent with adopted legislative or policy objectives, or to preclude the Executive Director from communicating a position on emergency legislation after obtaining the concurrence of the Chair, or the Chair's designee, provided that the Executive Director informs the Board regarding such positions on emergency legislation no later than the next regularly scheduled Board meeting.

Amendment Development Process

If the Water Authority takes an Oppose Unless Amended or Support if Amended position, the Water Authority will typically discuss the concepts for the amendments at the meeting. Then Water Authority staff, in consultation with Committee and/or Board Members as needed, will develop the amendments after the meeting.

Information Sharing

To provide adequate information to the entire Water Authority membership, the Water Authority provides legislative updates, posts positions and other information on our website, and sends out advisories and alerts on key legislation.

The Water Authority's legislative department is available to provide specific information on bills on request and Board Members are encouraged to communicate Water Authority positions on priority legislation in meetings with legislative staff, consistent with Water Authority policy. The Water Authority's Water Policy Director appreciates being informed by Water Authority members of positions taken by Water Authority members on legislation.

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X III A.

STAFF MEMORANDUM

TO: Board Members and Alternates

FROM: Scott Petersen, Water Policy Director

DATE: July 14, 2022

RE: Update on Science Program

SUMMARY

The San Luis & Delta-Mendota Water Authority's ("Water Authority") current science commitments for Fiscal Year 23 (March 1, 2022 – February 28, 2023) may be considered in three categories. First, the Water Authority re-budgeted $282,652 in the current budget to fund five activities and/or studies previously authorized to be funded. Second, the Water Authority began the year with approximately $2,000 in funds remaining from the State and Federal Contractors Water Agency ("SFCWA") to fund one study initially authorized by SFCWA and transferred to the Water Authority for funding and management, and which has now been completed. Third, the Water Authority has budgeted $392,500 in the current budget for science studies. More detail regarding the various science commitments is provided below. In total, the Water Authority started the current fiscal year with approximately $677,152 available to fund science, of which $284,652 has been obligated.

1. Previous Commitments - $282,652 in FY 23 Budget

Subject	Description of Work / Objective(s)	FY 23 Budget
Joint Funding of Delta Smelt Structured Decision Making Phase 3	This funding would support management and technical analyses required to conduct Phase 3 for the CSAMP Delta Smelt Structure Decision Making (SDM) project. Technical analyses would include modeling and the application of other analytical tools to evaluate the consequences of proposed management actions for Delta Smelt as well as the evaluation of potential consequences to other resource values including water supply and agriculture. Phase 3 was scheduled to occur from September 2020 to September 2021, but has been delayed.	$45,400
Joint Funding for CAMT Technical Support	This funding would match State Water Contractor funding obligated for CAMT studies. The Water Authority is currently researching two potential uses	$105,000

	for this funding – 1. Continuation of Delta Smelt SDM funding for Phase 3, or 2. Execution of a contract for Salmon Structured Decision Making.	
Development of eDNA monitoring tool for detection of Delta Smelt	Goal to develop an accepted eDNA monitoring tool for species detection in tidally mixed aquatic ecosystems in the Delta, and to advance eDNA aquatic monitoring towards a state-of-science that can be applied in the context of scientific, policy, and regulatory decision-making	$63,000
Delta Smelt Incidental Take Limit Research	Funds support the evaluation of differences in salvage between pre- and post-BiOp conditions and the determination of how much variance in salvage can be explained by each of the predictor variables. Support provided to ICF Jones & Stokes, Inc., through a cost share with SWC.	$14,252
CAMT Facilitation and Technical Support	Funds support facilitation and assistance with CAMT and CSAMP meetings. Main contracts with Essex Partnership (Bruce DiGennaro) and Hansen Environmental (Chuck Hansen) held by SWC.	$55,000

2. SFCWA-Funded Studies Being Managed by the Water Authority - $0 Remaining

Subject	Description of Work / Objective(s)	SFCWA Funds Remaining
Measuring Impact of Control of yellow Starthistle in the Northern Sac. Valley and Superior California on Watershed Runoff and Groundwater Levels	Study of the water benefits of yellow Starthistle (YST) control. If there appears to be replicable water supply benefit from YST removal, will prepare plan of recommended YST removal in California that results in increased runoff and/or improved groundwater levels. Study completed in May, 2022.	$0

3. New Science - $392,500 in FY 23 Budget

Subject	Description of Work / Objective(s)	FY 23 Budget
Science Studies/Efforts		$392,500
Joint Funding for CAMT Technical Support	This funding would match State Water Contractor funding obligated for CAMT studies. The Water Authority and State Water Contractors are currently jointly researching two potential uses for this funding – 1. Continuation of Delta Smelt SDM funding for Phase 3b, or 2. Execution of a contract for Salmon Structured Decision Making.	$150,000

	After deliberation within CAMT/CSAMP, the group has chosen to pursue continued development of the Delta Smelt Structured Decision Making Phase 3b, with the salmon recovery strategy being advanced through in-kind contributions this year.	
CAMT Technical Support	Funds support technical engagement by Hansen Environmental (Chuck Hansen) in CAMT and CSAMP meetings. Contract held by SWC.	$30,000
Delta Coordination Group Summer Fall Habitat Action Structured Decision Making Facilitation Support	Funds support facilitation and assistance with Delta Coordination Group Structured Decision Making for Delta Coordination Group recommendations to Reclamation and DWR related to Summer Fall Habitat Actions in the Biological Opinions and State Incidental Take Permit. Project jointly funded with State Water Contractors.	$12,500
SLDMWA Technical, Science and Regulatory Support	Funds will be used for engagement in Science Program, technical or regulatory efforts that arise in FY 2023. Anticipated use includes technical support for the reconsultation on long-term operations of the CVP and SWP, anticipated ESA listing decisions for longfin smelt, yellow-legged frog (and others), and engagement in efforts associated with the Bay-Delta Plan Update. To date, efforts using this funding pool include: 1. Technical Review of Knowledge Base Documents for the Reinitatiation of Consultation for the Long-Term Operations of the Central Valley Project and State Water Project	$200,000

SCIENCE PROGRAM DIRECTION

Authority staff is planning to focus on key areas for the 2023 and future budgets, in order to assist in the development of a more coordinated science strategy between public water agencies and state and federal agencies who fund the scientific enterprise. Specifically, these recommended areas are:

- Technical Support for Authority Engagement in Regulatory Processes
- Delta Smelt Structured Decision Making
- Salmon Structured Decision Making
- CSAMP/CAMT Support
- Delta Coordination Group Support

Technical Support for Authority Engagement in Regulatory Processes
The Authority has need of additional biological expertise to provide comments and a higher level of engagement with regulatory entities, including the State Water Resources Control Board, NOAA Fisheries, the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife and others. Authority staff has executed master service agreements with 9 consultants for scientific and biological support services for on-demand services centered on the areas of expertise of the respective consultant and staffing availability. Specifically, staff anticipates need for additional technical and science expertise related to engagement in the reconsultation of the long-term biological opinions for the operations of the Central Valley Project and State Water Project, the anticipated listing determination for longfin smelt by the US FWS, the anticipated listing determination and rulemaking process for the foothill yellow legged frog, and others.

Delta Smelt Structured Decision Making
Compass Resources, working in conjunction with CAMT's Smelt working group, are advancing Phase 3b of the Delta Smelt Structured Decision Making development project. This aims to increase the transparency of tradeoffs and associated analyses and to inform when agencies are determining actions to protect and restore delta smelt.

CSAMP/CAMT Support
The Authority has remained engaged in CSAMP/CAMT and has jointly funded facilitation support, technical support and scientific studies related to management actions associated with project operations.

Delta Coordination Group Support
Authority staff is a member of the Delta Coordination Group (DCG), a group formed pursuant to Reclamation's Proposed Action and the Incidental Take Permit for the Coordinated Operations of the Central Valley Project and State Water Project. The DCG is charged with providing recommendations to Reclamation/DWR pertaining to Summer-Fall Habitat Actions for delta smelt. Facilitation support for Structured Decision Making related to summer fall habitat actions is currently being provided jointly by the Water Authority and the State Water Contractors.

XIII.A.

STAFF MEMORANDUM

TO: Board Members and Alternates

FROM: Scott Petersen, Water Policy Director

DATE: July 14, 2022

RE: State and Federal Affairs Update

SUMMARY

The San Luis & Delta-Mendota Water Authority engages in federal and state administrative and legislative forums to educate policymakers about the impacts of proposed federal and state actions on the Authority and its member agencies, specifically related to adopted annual Authority objectives and objectives contained within the Authority Strategic Plan.

Attached to this memo, please find the current status of legislation being monitored by Authority staff.

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1. Tracked Legislation

a. Federal Legislation – Support Position

Bill Number(s)	Sponsor(s)	Bill Title	Summary	Position	Status
S. 1179/H.R. 2552	Feinstein (D-CA) Costa (D CA-16)	Canal Conveyance Capacity Restoration Act	This bill would authorize the Secretary of the Interior to provide financial assistance up to a one-third non-reimbursable federal cost share for the design, planning, and construction of the Delta-Mendota Canal, San Luis Canal, Friant-Kern Canal, and the non-federal pools of the California Aqueduct. Additionally, the legislation would increase the authorization amount for the San Joaquin River Restoration Settlement Act Restoration Goal by $180 million.	Support	Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022) Introduced and referred to the Senate Committee on Energy and Natural Resources. (4/15/2021) Introduced and referred to the House Committee on Natural Resources. (4/15/2021)
S. 4231	Feinstein (D-CA)	STREAM Act	This bill authorizes $1.65 billion in federal funds for a number of projects, programs and activities, including groundwater and surface storage projects and conveyance, water recycling, environmental funding, desalination, drinking water assistance to disadvantaged communities, and loans for water supply projects at discounted rates. Additionally, the legislation establishes a two-tiered project authorization process by allowing Interior to approve water recycling, desalination and non-federal storage projects less with less than $250 million in federal funding. For federal projects or projects with greater than $250 million in federal funding, the legislation establishes a "Reclamation WRDA" process	Support	Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022) Introduced and referred to Senate Committee on Energy & Natural Resources. (5/17/2022)

2-22

			to expedite Congressional review and approval of projects. Finally, the legislation would modify the cost allocation structure and approval structure for storage projects in a way that would incentivize multi-benefit projects.		
S. 914	Duckworth (D-IL)	Drinking Water And Wastewater Infrastructure Act of 2021	This bill reauthorizes through FY2026 or establishes a variety of programs for water infrastructure. Specifically, it supports programs to provide safe drinking water or treat wastewater, such as sewer overflows or stormwater. For example, the bill reauthorizes and revises the clean water state revolving fund (SRF) and the drinking water SRF.	Support	The Senate-passed version of the bill was included in H.R. 3684, the Infrastructure Investment and Jobs Act. Following the vote, the House received the bill on April 30th. Senator Tom Carper of the Senate Environment and Public Works Committee filed a written report on the bill on May 5th, 2021. S.914 passed the Senate on a vote of 89-2 on April 29th, 2021. Senators Ted Cruz (R-TX) and Mike Lee (R-UT) voted No on the measure. S. 914 would authorize more than $35 billion in funding to improve water infrastructure and drinking water safety.

H.R. 1563	Garcia (R-CA-25)	To extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 providing operational flexibility, drought relief, and other benefits to the State of California.	The bill would extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 for 7 years, providing operational flexibility, drought relief, and other benefits to the State of California.	Support	Referred to the Subcommittee on Water, Oceans, and Wildlife (4/21/2021). Introduced and referred to the House Committee on Natural Resources and the Committee on Science, Space, and Technology (3/3/2021)
H.R. 644	Calvert (R-CA-42)	REBUILD Act	This bill authorizes (1) the assignment to states of federal environmental review responsibilities under relevant federal environmental laws for projects funded by, carried out by, or subject to approval by federal agencies; and (2) states to assume all or part of those responsibilities. Each responsible federal official who is authorized to assign such responsibility must promulgate regulations that establish requirements relating to information required to be contained in state applications to assume those responsibilities. An official may approve an application only if (1) public notice requirements have been met, (2) the	Support	Introduced and referred to the House Committee on Natural Resources (2/1/2021)

			state has the capability to assume the responsibilities, and (3) the head of the state agency having primary jurisdiction over the projects enters into a written agreement with an official to assume the responsibilities and to maintain the financial resources necessary to carry them out. The officials must audit state compliance with federal laws for which responsibilities are assumed. The officials may terminate the responsibilities assigned to states after providing notice to states of any noncompliance and an opportunity to take corrective action.		
H.R. 737	Valadao (R-CA-21)	RENEW WIIN ACT	The bill would extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 for 10 years, providing operational flexibility, drought relief, and other benefits to the State of California.	Support	Referred to the Subcommittee on Water, Oceans, and Wildlife (2/23/2021) Introduced and referred to the House Committee on Natural Resources (2/2/2021)
H.R. 866	Calvert (R-CA-42)	FISH Act	This bill gives the Fish and Wildlife Service (FWS) the sole authority to protect endangered or threatened species that are anadromous species (species of fish that spawn in fresh or estuarine waters and that migrate to ocean waters) or catadromous species (species of fish that spawn in ocean waters and migrate to fresh waters). Currently, the FWS shares this authority with the National Marine Fisheries Service.	Support	Referred to the Subcommittee on Water, Oceans, and Wildlife (3/3/2021) Introduced and referred to the House Committee on Natural Resources (2/5/2021)

S. 29	Klobuchar (D-MN)	Local Water Protection Act	This bill reauthorizes through FY2025 programs within the Environmental Protection Agency that award grants to states for managing nonpoint source water pollution or protecting groundwater quality. Water pollution from nonpoint sources is caused by precipitation picking up pollution as it moves over or through the ground.	Recommendation: Support	Introduced and Referred to the Senate Committee on Environment and Public Works (1/22/2021)

b. Federal Legislation – Oppose Position

Not tracking any bills SLDMWA is opposed to.

c. Federal Legislation – No Position/Differing Position

Bill Number(s)	Sponsor(s)	Bill Title	Summary	Position	Status
H.R. 4915	McClintock (R-CA-04)	Water Supply Permitting Coordination Act	This bill would reauthorize the WIIN Act funding accounts; authorize funding to eliminate BOR's maintenance backlog; restore storage capacity at BOR and U.S. Army Corp of Engineers facilities through a sediment management program.		Introduced and Referred to the House Committee On Natural Resources (8/03/2021)
S. 2185	Barrasso (R-WY)	The Western Water Infrastructure Act of 2021	This bill makes the Bureau of Reclamation the lead agency for the purpose of coordinating all permitting and related activities required to construct certain new surface-water storage projects. Additionally, Reclamation is authorized to accept and expend funds contributed by a nonfederal public entity to expedite the evaluation of a permit for such a project.		Introduced and Referred to the Senate Committee on Energy and Natural Resources (6/23/2021)
S. 3886	Warren (D-MA)	Future of Water Act of 2022	This bill would Prohibit the trading of water and water rights from commodity futures contracts. The proposed bill would add "water and water rights" to		(3/21/2022) – Read twice and referred to the Committee on Agriculture, Nutrition, and Forestry.

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			the current list of prohibitions in the Commodity Exchange Act.		
H.R. 6491	Huffman (D-CA-02)	Salmon FISH Act	This bill would identify the core centers of salmon abundance, productivity, and diversity as Salmon Conservation Areas and identify areas of particularly pristine quality as Salmon Strongholds. Build upon existing analysis such as that used in Essential Fish Habitat. Ensure actions of the federal government do not undermine the abundance of these areas. Authorize funding for a grant program focused on restoration and conservation of Salmon Conservation Areas and Salmon Strongholds. Support current federal programs focused on the restoration and maintenance of healthy watersheds.		WOW Subcommittee hearing held (3/17/2022). No movement since. Referred to the Subcommittee on Europe, Energy, the Environment and Cyber. (2/22/2022) Referred to the Subcommittee on Conservation and Forestry. (2/8/2022) Introduced in House. Referred to the Committee on Natural Resources. (1/25/2022)
H.R. 8127	Schrier (WA-08-D) Garamendi (CA-03-D)	To reauthorize the Water Infrastructure Finance and Innovation Act of 2014	This bill would clarify that state-led water projects, Bureau of Reclamation transferred works, and Congressionally authorized Army Corps projects are eligible to receive WIFIA loans. Additional provisions include: extending the maturity date of certain loans to 55 years. The bill would also direct the White House Office of Management and Budget (OMB) and the Congressional Budget Office to deem certain projects as "non-federal" under the Federal Credit Reform Act.	Track language developments	Referred to Subcommittee on Water Resources and Environment (6/17/2022) Introduced in the House and referred to the Committee on Transportation and Infrastructure (6/16/2022) Bill text here.
H.R. 8265	Kaptur (OH-09-D)	Making Appropriations	The Committee Report recommended $1.89 billion for the Bureau of Reclamation, $477 million above		Marked up by the Committee on Appropriations (6/28/2022)

	for the energy and water development and related agencies for fiscal year ending September 30, 2023	the FY'23 budget request. This includes funding for the following line items: • $134 million for water storage projects authorized under section 4007 of the WIIN Act; • $33 million for CALFED; • $20 million in Title XVI program funding for projects authorized under section 4009 of the WIIN Act; • $10 million for planning and pre-construction activities related to canal conveyance capacity restoration; • $6 million for the Anadromous Fish Screen Program; • $500,000 for the Aging Infrastructure Account

a. Federal Legislation – Bills from Water & Power Subcommittee Legislative Hearing (5/25/2022)

Bill Number(s)	Sponsor(s)	Bill Title	Summary	Position	Status
S. 953	Wyden (D-OR)	Water for Conservation and Farming Act	To provide for drought preparedness and improved water supply reliability		Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)
S. 2334	Cortez Masto (D-NV)	Large Scale Water Recycling Project and Drought Resiliency Investment Act	Directs the Secretary of the Interior to establish a grant program to provide grants on a competitive basis to eligible entities for large-scale water recycling and reuse projects, to amend the Omnibus Public Land Management		Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)

2/4

			Act of 2009 to make certain modifications to the Cooperative Watershed Management Program, and to provide emergency drought funding, and for other purposes.	
S. 2693	Padilla (D-CA)	**Salton Sea Projects Improvement Act**	Amends the Reclamation Projects Authorization and Adjustment Act of 1992 to authorize additional projects related to the Salton Sea.	**Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)**
S.3539	Wyden (D-OR)	Watershed Results Act	Authorize the Secretary of the Interior to carry out watershed pilots.	Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)
S.3971	Inhofe (R-OK)	To amend the America's Water Infrastructure Act of 2018 to modify a provision relating to cost-sharing requirements applicable to certain Bureau of Reclamation dams and dikes	Amends Sec. 4309 of the America's Water Infrastructure Act of 2018 by modifying a provision related to cost-sharing requirements applicable to certain Bureau of Reclamation dams and dikes.	**Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)**
S.4176	Risch (R-ID)	To amend the Infrastructure Investment and Jobs Act to modify the eligibility requirements for	Amends the Infrastructure Investment and Jobs Act to modify the eligibility requirements for certain small water storage and groundwater storage projects and to authorize the use of funds for certain additional Carey Act projects.	Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)

215

		certain small water storage and groundwater storage projects and to authorize the use of funds for certain additional Carey Act projects		
S.4233	Barrasso (R-WY)	**Platte River Basin Critical Maintenance and Repair Act**	Amends the Infrastructure Investment and Jobs Act to provide for critical maintenance and repair of certain Bureau of Reclamation reserved or transferred works, and for other purposes.	**Hearing held by Senate Committee on Energy & Natural Resources Subcommittee on Water & Power. (5/25/2022)**

1. Tracked State Legislation

Bill Number(s)	Author	Bill Title	Summary	Position	Status
SB 559	Hurtado	Department of Water Resources: water conveyance systems: Canal Conveyance Capacity Restoration Fund.	This bill would establish the Canal Conveyance Capacity Restoration Fund in the State Treasury to be administered by the department. The bill would require all moneys deposited in the fund to be expended, upon appropriation by the Legislature, in support of subsidence repair costs, including environmental planning, permitting, design, and construction and necessary road and bridge upgrades required to accommodate capacity improvements. The bill would require the department to expend from the fund, upon appropriation by the Legislature, specified monetary amounts to restore the capacity of 4 specified water conveyance systems, as prescribed, with 2 of those 4 expenditures being in the form of a grant to the Friant Water Authority and to the San Luis and Delta-Mendota Water Authority. The bill would make these provisions inoperative on July 1, 2030, and would repeal the provisions as of January 1, 2031.	Support	Ordered to inactive file on request of Assembly Member Gray. (9/8/2021) Passed Senate Natural Resources and Water Committee on a 6-0 vote. Re-referred to the Committee on Appropriations. (4/27/2021)
AB 252	Rivas	Multibenefit Land Repurposing Incentive Program: Administration	This bill would find and declare that coordinated management of landscapes affected by SGMA can minimize economic and social dislocation in rural economies, reducing or avoiding environmental health impacts, facilitating a transition to less water-intensive but still productive and economic uses of land to achieve sustainable groundwater management. This bill would define "land	Support	Referred to the inactive file at the request of Senator Skinner. (09/07/2021) From committee: Amend, and do pass as amended – voted 7-0 (8/26/2021).

			repurposing" as converting previously irrigated agricultural land to new uses through any of the following methods: Restoring upland habitat. Creating pollinator habitat. Restoring floodplains. Creating dedicated wildlife-friendly recharge areas. Dryland farming or planting cover crops. Switching from irrigated agriculture to rangeland. Creating parks or community recreation areas.		
AB 350	Villapudua	Agriculture: Cannella Environmental Farming Act of 1995: technical assistance grant program: groundwater conservation planning.	AB 350 would create a three-year program within CDFA (if funds are appropriated by the Legislature) that would fund technical assistance to support landowners located in critically over-drafted basins in the San Joaquin Valley in reaching water use reduction goals established under SGMA. The purpose of this program would be to avoid unnecessarily fallowing of agricultural land. The grant program would fund one technical assistance provider in each of the eight counties that make up the San Joaquin Valley.	Oppose	Referred to the inactive file at the request of Senator Hurtado. (09/02/2021)
AB 979	Frazier	Sacramento-San Joaquin Delta: projects: sea level rise analysis report.	As amended on April 13, 2021, AB 979 would require any individual or entity, including a state or local agency, that undertakes a "project" within the Delta to complete a report that analyzes the impact of sea level rise on the project. The report would be required to include an analysis based on the sea level	Oppose	(2/1/2022) - From committee: Filed with the Chief Clerk pursuant to Joint Rule 56.

			rise scenarios described in the Ocean Protection Council's (OPC) *Sea-Level Rise Guidance 2018 Update Document*. More probable or severe sea level rise scenarios could also be included but would not be required. The bill would require the individual or entity to submit the report to the DSC, the Delta Protection Commission (DPC), and the Legislature, and the report would be required to be posted on the DSC and DPC websites.		Ordered to inactive file at the request of Senator Hurtado. (9/2/2021)Passed Committee on Water, Parks, and Wildlife on a vote of 9 to 5. Referred to the Committee on Appropriations. (04/27/2021) In committee. Held under submission. (05/20/2021)
AB 2639	Quirk	San Francisco Bay/Sacramento-San Joaquin Delta Estuary: water quality control plan: water right permits	Requires the State Water Resources Control Board (State Water Board) to complete an update and implementation, as specified, of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta Plan) by December 31, 2023, and places a moratorium on new water rights permits resulting in increased diversions in the Sacramento River/San Joaquin River watershed after January 1, 2024, unless and until the update and implementation are completed.	Oppose unless amended.	Passed WP&W 9-4 and ESTM 5-3, to Appropriations. Failed to pass Assembly Floor.
AB 2895	Arambula	Water: permits and licenses: temporary changes: water or water rights transfers	Revises the State Water Resources Control Board's (State Water Board) process for consideration and approval of a petition to temporarily change a water right to effectuate a short-term water transfer (i.e., for a period of one year or less).	Monitor, working with Author on Amendments.	Passed WP&W 11-0 and Appropriations. Passed Assembly Floor 50-19.

					Passed Natural Resources & Water 7-0, to Appropriations.
AB 1001	Garcia	Environment: mitigation measures for air and water quality impacts: environmental justice	Amends the California Environmental Quality Act (CEQA) to 1) require mitigation to compensate for adverse air or water quality impacts in a disadvantaged community (DAC) to mitigate those impacts directly in the affected community and 2) require all public agencies implementing CEQA to give consideration to the principles of environmental justice by ensuring the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins.	Monitor	2-year bill, passed Assembly 43-23, to Senate EQ. Failed to pass Senate EQ.
AB 1640	Ward	Office of Planning and Research: regional climate networks: regional climate adaptation and resilience action plans	Requires the Office of Planning and Research (OPR) to facilitate the creation of regional climate networks and create standards for the development of a regional climate adaptation action plan to support the implementation of regional climate adaptation efforts	Monitor	Passed Natural Resources 8-1 and Appropriations. Passed Floor 71-0. Passed Natural Resources and Water 8-0.
AB 1642	Salas	California Environmental Quality Act: water system well and domestic well projects: exemption	Establishes an exemption from the California Environmental Quality Act (CEQA) for projects designed to mitigate or prevent the failure of a drinking water well designated as high risk or medium risk in the State Water Resources Control Board (SWRCB) drinking water need assessment.	Monitor	Passed Assembly 55-2, to Senate. Passed Senate EQ 7-0.
AB 1717	Aguiar-Curry	Public works: definition	Expands the definition of "public works," for the purpose of the payment of prevailing wages, to also include fuel reduction work paid for in whole or in part by public funds performed as part of a fire	Monitor	Passed Labor and Employment 6-0 and Appropriations.

			mitigation project, including, but not limited to, residential chipping, rural road fuel breaks, fire breaks, and vegetation management.		Passed Assembly 58-11. Passed Senate Labor 4-1, to Appropriations.
AB 1811	Fong	Delta Plan: multispecies conservation plan	Deletes references to "Bay-Delta Conservation Plan" (BDCP) and "BDCP" in existing law and replaces them with "multispecies conservation plan;" likewise, deletes obsolete references to "Department of Fish and Game" in existing law and replaces them with "Department of Fish and Wildlife."	Monitor	Passed WP&W 8-4 and Appropriations. Passed Assembly 69-1. Passed Natural Resources and Water 9-0, to Appropriations.
AB 1865	Bennett	Court fee waiver: water rights cases	Permits a person to proceed without paying court fees and costs when that person is joined or countersued in a case involving a water right held by the person, including, but not limited to, an appropriative, groundwater, or riparian water right.	Monitor	Passed WP&W 15-0 and Appropriations. Passed Floor 76-0. Passed Judiciary 11-0, to Appropriations.
AB 1906	Stone	Voluntary stream restoration: property owner liability: indemnification: claims	Makes technical changes to provisions relating to indemnity and limited liability protections for real property owners who voluntarily permit a state-funded project to restore fish and wildlife habitat on their real property	Monitor	Passed Assembly Floor 61-0, to Senate.
AB 2016	Bauer-Kahan	State Water Resources Control Board: desalination plant: feasibility study	Requests the California Council on Science and Technology (CCST) to undertake a comprehensive feasibility study of brackish and ocean water desalination along the San Francisco Bay in coordination with the Department of Water Resources (DWR) and submit the study to the Legislature no later than January 1, 2025.	Monitor	Passed WP&W 13-0 and Appropriations. Passed Floor 74-0. Passed Judiciary 9-0, to Appropriations.

AB 2041	Garcia	California Safe Drinking Water Act: primary drinking water standards: compliance	Requires the State Water Resources Control Board (State Water Board) to work with public water systems it has determined may not be able to comply with a future primary drinking water standard without receiving financial assistance to develop a compliance plan for those water systems	Monitor	Passed ESTM 9-0, failed to pass Appropriations.
AB 2054	Quirk-Silva	Corporation taxes: exempt organizations: mutual ditch or irrigation companies: public water system: mutual water companies	Exempts, for 2023 through 2027 taxable years, from the taxes imposed by the Corporation Tax (CT) Law, a mutual ditch or irrigation company that operates a public water system if the company complies with specified requirements, including those open meeting and record accessibility requirements for eligible persons.	Monitor	Passed Rev & Tax 11-0, failed to pass Appropriations.
AB 2078	Flora	Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program	This bill reconfigures the existing Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program (Atmospheric Rivers Program) within the Department of Water Resources (DWR).	Monitor	Passed WP&W 13-0, failed to pass Appropriations.
AB 2081	Garcia	Municipal water districts: water service: Indian lands	Extends the sunset date, until January 1, 2025, on the authorization for a municipal water district (MWD) to apply to a local agency formation commission (LAFCO) to extend water service to Indian lands, as specified. Defines "Indian lands" to mean Indian lands that were part of a reservation or held in trust as of January 1, 2022.	Monitor	Passed Assembly 70-0, to Senate. Passed Gov and Finance 5-0, to Appropriations.
AB 2106	Rivas	Water quality: permits	Requires, on or before December 2024, the California State Water Resources Control Board (State Water Board) to, modernize its Stormwater Multiple Application and Report Tracking System (SMARTS) database. Additionally, Requires the State Water	Monitor	Passed ESTM 6-2 and Appropriations. Passed Floor 50-21.

223

			Board to establish a statewide commercial, industrial, and institutional national pollutant discharge elimination system (NPDES) order		Passed EQ 5-2, to Appropriations.
AB 2108	Rivas	Water policy: environmental justice: disadvantaged and tribal community representation	Requires one member of the State Water Resources Control Board (State Water Board) and one member of each Regional Water Quality Control Board (Regional Water Board) to have experience related to disadvantaged or tribal communities and requires the State Water Board and Regional Water Boards to take various actions to address environmental justice and racial equity in their planning and permitting processes.	Monitor	Passed ESTM 6-1 and WP&W 11-3 and Appropriations. Passed Assembly 52-19.
AB 2113	Rivas	State Water Pollution Cleanup and Abatement Account: annual proceed transfers	Creates four new accounts in the Waste Discharge Permit Fund and, subject to a future legislative act, transfers up to a total of 50 percent of the annual proceeds from the State Water Pollution Cleanup and Abatement Account (Account) to these four new accounts for specified purposes.	Monitor	Passed ESTM 9-0, failed to pass Appropriations.
AB 2173	Petrie-Norris	Public contracts: payment	This bill would remove the sunset clause on the 5% retention cap policy related to public works projects, thereby permanently establishing it	Monitor	Passed Assembly 69-0, to Senate. Passed Senate, to Governor.
AB 2201	Bennet	Groundwater sustainability agency: groundwater extraction permit	Requires a groundwater sustainability agency (GSA) in a critically overdrafted basin to establish and implement a process to issue permits for groundwater extraction facilities within the GSA's jurisdiction by July 1, 2023, unless the facility is exempted due to groundwater being used for	Monitor	Passed WP&W 8-5 and Appropriations. Passed Floor 44-24. Passed Gov & Finance 3-1, to Appropriations.

			domestic, environmental, existing, or renewable energy purposes.		
AB 2313	Bloom	Water: judges and adjudications	Establishes a judicial training program on water and expands use of experts to assist in complex cases involving water law.	Monitor	Passed Judiciary 10-0 and WP&W 15-0 and Appropriations. Passed Floor 74-0. Passed Judiciary 10-0, to Appropriations.
AB 2387	Garcia	Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022	Authorizes the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Act of 2022 (Climate Bond), a $7.4 billion general obligation bond to address the impacts of climate change, to be placed before voters on the November 8, 2022, general election ballot.	Monitor	Passed WP&W 11-2 and Natural Resources 7-2, failed to pass Appropriations.
AB 2412	Villapudua	Agriculture: State Water Efficiency and Enhancement Program	Codifies the State Water Efficiency and Enhancement Program (SWEEP) administered by the California Department of Food and Agriculture (CDFA) which provides grants to agricultural operations for projects that reduce greenhouse gases (GHG) and water use.	Monitor	Passed Ag 9-0 and WP&W 15-0, failed to pass Appropriations.
AB 2419	Bryan	Environmental justice: federal Infrastructure Investment and Jobs Act: Justice40 Oversight Committee	Requires a state agency administering federal funds under the federal Infrastructure Investment and Jobs Act to allocate a minimum of 40 percent of those funds to projects that provide a direct benefit to disadvantaged communities and an additional 10	Monitor	Passed ESTM 6-2 and Natural Resources 6-2 and Appropriations. Passed Floor 55-17

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			percent of those funds to projects that provide direct benefits to low-income households		Passed GO 9-3, to Appropriations
AB 2421	Rubio	Water: unlicensed cannabis cultivation	This bill enhances the ability for local prosecutors to civilly enforce restrictions against unlawful diversions of water and water pollution stemming from unlicensed cannabis growing operations.	Monitor	Passed Judiciary 9-0 and WP&W 13-0 and Appropriations. Passed Floor 76-0. Passed WPW 15-0, to Appropriations.
AB 2447	Quirk	Oil and gas wastewater: unlined ponds: prohibition	Prohibits the disposal of produced wastewater into unlined ponds and the construction of new unlined ponds.	Monitor	Passed Natural Resources 8-3, to Appropriations. Moved to inactive file.
AB 2451	Wood	State Water Resources Control Board: drought planning	Establishes a permanent Drought Section at the State Water Resources Control Board (State Water Board) and requires it to adopt principles and guidelines that apply to specified coastal watersheds during times of drought. Requires the State Water Board to establish a permanent Drought Section within the Division of Water Rights (Division) to improve drought planning, drought response, and climate resiliency, including adopting principles, guidelines, and plans as directed by this bill. Requires that the State Water Board consider the recommendations of the Water Rights Drought Effort Review report.	Monitor	Passed WP&W 11-1, failed to pass Appropriations.
AB 2805	Bauer-Kahan	Department of Fish and Wildlife: advance mitigation and	Revises provisions relating to the Regional Conservation Investment Strategies (RCIS) Program at the Department of Fish and Wildlife (DFW).	Monitor	Passed WP&W 15-0 and Appropriations. Passed Floor 71-0.

		regional conservation investment strategies			Passed Natural Resources and Water 9-0, to Appropriations.
AB 2819	Cooley	The Rural California Infrastructure Act	AB 2819 establishes the Rural California Infrastructure Act for the purpose of awarding $1 billion in grants to local agencies for rural infrastructure projects, including fairground maintenance, disaster preparedness, highway or street maintenance or repair, and historic or cultural preservation or repair	Monitor	Passed Emergency Management 7-0 and Jobs, Economic Development and the Economy 6-0, failed to pass Appropriations.
AB 2877	Garcia	Safe and Affordable Drinking Water Fund: tribes	Requires the State Water Resources Control Board (State Water Board) when administering funds under the Safe and Affordable Drinking Water Fund (Fund) to work with tribes to remove barriers for those tribes to accessing funding under the Fund. Additionally, provides that a limited waiver of tribal sovereignty is not required for a tribe that is an eligible recipient to access funding under the Fund.	Monitor	Passed ESTM 9-0 and Appropriations. Passed Floor 72-0. Passed Senate EQ 7-0, to Appropriations.
SB 463	Dahle	Water: landowner right to modify, repair, or replace jointly used conduits	This bill authorizes a landowner, where a conduit is constructed across or buried beneath the lands of 2 or more landowners, to modify, repair, or replace the conduit on or beneath their land if the modification, repair, or replacement is made in a manner that does not impede the flow of the water to any other property receiving a benefit of the conduit or, otherwise injure any person using or interested in the conduit.	Monitor	2-year bill, passed Senate Floor 38-0, to WP&W. Failed passage.

SB 991	Newman	Public contracts: progressive design-build: local agencies	This bill allows local agencies that provide water service to use progressive design-build for projects over $5 million.	Monitor	Passed Gov & Finance 5-0 and Appropriations. Passed Floor 33-0. Passed Local Gov 8-0, to Appropriations.
SB 1100	Cortese	Open meetings: orderly conduct	This bill authorizes the presiding member of a legislative body conducting a meeting to remove an individual for disrupting the meeting, and defines "disrupting" for these purposes.	Monitor	Passed Senate Floor 29-7, to Assembly. Passed Judiciary, to Appropriations.
SB 1123	Caballero	Resilience Navigators Program: climate-related disaster resilience grant and loan programs	Requires the Office of Planning and Research to develop the Resilience Navigators Program to provide support and guidance to potential applicants for state programs that offer financial assistance related to enhancing resilience to climate change, including disasters associated with or amplified by climate change.	Monitor	Passed Senate EQ 7-0 and Natural Resources 9-0 and Appropriations. Passed Floor 39-0. Passed Natural Resources 10-0, to Appropriations.
SB 1124	Archuleta	Public health goal: primary drinking water standard: manganese	This bill would require the Office of Environmental Health Hazard Assessment (OEHHA) to prepare a public health goal for manganese as well as require the State Water Resources Control Board (SWRCB) to adopt a primary drinking water standard for manganese and to establish monitoring requirements for manganese.	Monitor	Passed Senate EQ 5-0 and Appropriations. Passed Floor 31-5. Passed ESTM 6-2, to Appropriations.
SB 1144	Wiener	Water efficiency and quality assessment reports: state	This bill requires state agencies and public schools to complete a water efficiency and quality assessment report on their facilities, including testing for lead, radon, Legionella, and other contaminants. If the report identifies noncompliant plumbing fixtures and	Monitor	Passed GO 10-1 and Education 6-0 and Appropriations. Passed Floor 36-1.

		buildings and public school buildings	appliances or contaminants, the bill would require the operating agency to remedy the problem at the earliest practical time, subject to available funding.		Passed ESTM and Education, to Appropriations.
SB 1157	Hertzberg	Urban water use objectives: indoor residential water use	This bill changes th the standards for indoor residential water use beginning 2025 to 47 gallons per capita daily (gpcd) and beginning 2030 to 42 gpcd.	Monitor	Passed Senate Floor 28-9, to Assembly WP&W. Passed WPW 8-4, to Appropriations.
SB 1188	Laird	Safe Drinking Water State Revolving Fund: financial assistance	This bill would authorize the State Water Resources Control Board (State Water Board) to provide grants, principal forgiveness funding, and zero percent financing from the state's Drinking Water State Revolving Fund to the extent authorized by federal law by deleting certain existing requirements, including making such funding limited to water systems serving severely disadvantaged communities.	Monitor	Passed EQ 7-0 and Appropriations. Passed Floor 39-0. Passed ESTM 8-0, to Appropriations.
SB 1197	Caballero	Water Innovation and Drought Resiliency Act of 2022	Create in the Office of Planning and Research, the Initiative to Advance Water Innovation and Drought Resiliency. The purpose of the Initiative is the furtherance of new technologies and other innovative approaches in the water sector, including how these approaches can lead to a drought-resilient economy. Requires the initiative to: a) Establish an interagency team to increase collaboration among state agencies on innovative approaches and drought resiliency. b) Engage affected stakeholders, including water agencies, academia, vendors, commercial and	Monitor	Passed Natural Resources and Water 8-0, failed to pass Appropriations.

2 of 2

			agriculture users, and environmental and environmental justice organizations. c) Review regulations that may limit or inhibit innovation, the adoption of new technologies and other water innovations, or planning for a drought-resilient future, including, but not limited to, in disadvantaged communities, and make recommendations for streamlining or revising those regulations. d) Develop recommendations for innovative approaches and technologies that will protect the state's economy from fluctuations brought on by drought conditions, including regional and local water supply options, incorporating any relevant elements of state plans and efforts that address impacts of drought on the state's economy, and the role of innovation in securing a sustainable water future.		
SB 1205	Allen	Water rights: appropriation	Require the State Board to develop and adopt regulations to provide greater specificity as to the methods and practices for determining water availability in the issuance and administration of water right permits and licenses. Would require the regulations to include, but not be limited to, consideration of the effects of climate change, including drought extremes, climate variability, wildfires, long term watershed land use changes, and ground-water-surface-water interactions, upon	Monitor	Passed Natural Resources and Water 8-0 and Appropriations. Passed Floor 34-0. Passed WPW 10-5, to Appropriations.

			watershed hydrology as part of the preparation of water availability analyses.		
SB 1219	Hurtado	21st century water laws and agencies: committee	Requires the Secretary of the Natural Resources Agency and the Secretary for Environmental Protection to convene a committee to develop and submit to the Governor and to the Legislature a strategic vision, proposed statutes, and recommendations for a modern 21st century set of water laws and regulations and state and local water agencies for the state, as provided, on or before December 31, 2024.	Monitor	Passed EQ 5-0 and Natural Resources and Water 6-0 and Appropriations. Passed Floor 21-6. Failed to pass WPW.
SB 1253	Melendez	Infrastructure plan: flood control: delta levees	This bill would add the following to the list of types of infrastructure to be included in the five-year infrastructure plan: 1) Construction, operation, and maintenance for facilities of the State Plan of Flood Control. 2) Support for infrastructure needs pursuant to the Delta Levee Subvention Program. 3) Support for infrastructure needs pursuant to the Delta Special Flood Control Projects Program. 3) Aggregate funding for the state share of nonfederal capital costs for flood control projects located outside of the Central Valley.	Monitor	Passed Natural Resources and Water 8-0 and Appropriations. Passed Floor 39-0. Passed WPW 14-0, to Appropriations.
SB 1254	Hertzberg	Drinking water: administrator: managerial and other services	This bill provides a level of immunity to administrators of water systems appointed or selected by the State Water Resources Control Board. The bill also expands the water systems for which administrators can be appointed.	Monitor	Passed Senate EQ 7-0 and Judiciary 11-0, failed to pass Appropriations.

SB 1392	McGuire	Fish and wildlife: steelhead trout: fishing report-restoration card	This bill would extend the sunset for the steelhead report card program until January 1, 2028, and again require a legislative report on the program prior to the sunset, as provided.	Monitor	Passed Natural Resources and Water 8-0 and Appropriations 7-0. Passed Floor 38-0. Passed WPW 12-0, to Appropriations.
SB 1469	Bradford	Water corporations: demand elasticity	This bill requires the California Public Utilities Commission (CPUC) to authorize the use of full decoupling of water sales and revenues by water utilities	Monitor	Passed EUC 11-0 and Appropriations. Passed Floor 36-0. Passed U&E 13-0, to Appropriations.

XIII A.

Friant
WATER AUTHORITY

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Sacramento, CA 95814

(559) 562-6305

June 21, 2022

San Luis & Delta-Mendota Water Authority
Attn: Federico Barajas, Executive Director
842 6th Street
Los Banos, CA 93635

Transmitted via email

RE: BILLING OF SAN JOAQUIN RIVER RELEASES TO MENDOTA POOL DUE TO A TEMPORARY INTERRUPTION OF SETTLEMENT WATER DELIVERIES THROUGH THE DELTA-MENDOTA CANAL

Dear Mr. Barajas:

We are in receipt of San Luis & Delta-Mendota Water Authority's (SLDMWA) June 2022 invoice for projected deliveries in July 2022, which includes charges for 25,200 acre-feet of deliveries from San Joaquin River releases to Mendota Pool.

At your request and in the interest of continuing the dialogue we have had to date regarding treatment of these releases in regards to cost recovery under the First Amended and Restated Memorandum of Understanding (MOU) between the Friant Water Authority (FWA) and SLDMWA, FWA is paying the May billing under protest pending resolution of the questions raised in our April 20, 2022 letter with the understanding that this payment is not precedential and with the expectation that concerns that FWA has raised will be fully addressed. It is FWA's view that the MOU did not anticipate and therefore does not address San Joaquin River releases to the Settlement Contractors where there is a temporary interruption of settlement water deliveries through the Delta-Mendota Canal (DMC). Further, it is FWA's view that water released from the Friant Division facilities and delivered directly to the Exchange Contractors at the privately owned and maintained Mendota Pool should not be factored into the costs Friant Contractors pay for the operation and maintenance of the San Luis Unit facilities owned by the United States and actually maintained by the SLDMWA.

At our last meeting, we proposed a compromise path forward for resolving this issue. To reiterate our proposal:

1. Any agreement regarding treatment of these San Joaquin River deliveries for the purposes of cost allocation need to be documented, in writing, and approved by SLDMWA and FWA's respective Board of Directors.

2. In the interest of ensuring all beneficiaries of Delta-Mendota Canal facilities are allocated a minimum level of costs each year, we are willing to agree to SLDMWA's proposal for the San Joaquin River flows into the Mendota Pool to be allocated costs associated with the Lower DMC cost pool for these deliveries, subject to the following conditions:

A. During the year, the monthly charges for these releases will comprise only the adjusted lower DMC rate proposed by SLDMWA;

B. All San Joaquin River flows, including flood flows, will not be included in the ten-year historical delivery computation used to develop the allocation of reserve costs for SLDMWA maintained facilities (Exhibit B, Section VI]. The rationale for the exclusion of these flows is three-fold:

   i. The Mendota Pool is not a Federal facility that SLDMWA maintains. As such, these flows do not use and therefore do not impact any of the facilities that SLDMWA incurs costs for maintenance;
   ii. Inclusion of these releases into the reserve calculation does not reflect an allocation of costs that is proportional to the benefits received and inequitably increases the costs to Friant Contractors or long-term investments in the DMC facilities that SLDMWA actually incurs costs to operate and maintain; and
   iii. The MOU already identifies minimum participation which is factored into the 10-year historic delivery computation to reflect the long-term value of SLDMWA's facilities [Exhibit B, Section V].

C. The minimum participation requirements of Exhibit B, Section V. will be included in SLDMWA's annual process for establishing the per acre-foot rates, beginning with a rate adjustment in water year 2022. This would implement a pre-existing requirement in the MOU, specifically Section V.A. which states, in part, "In recognition of the value of providing OM&R even in Years when an individual SLDM Contractor's pro rata share of costs based upon that Year's water deliveries is very low or non-existent, there will be created Minimum Participation amounts of assumed minimum water deliveries, for the purposes of cost allocation only."

FWA believes that the above proposal is an equitable and fair resolution to how the San Joaquin River releases can be treated for purposes of cost allocation under the MOU for this year and years hereafter. We look forward to continuing working with you and your team to have this matter resolved expeditiously.

Regards,

Jason Phillips
Chief Executive Officer
Friant Water Authority

cc:

Pablo R. Arroyave, SLDMWA Chief Operating Officer
Rebecca R. Akroyd, SLDMWA General Counsel

233