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7 Principal, California Water Research

8
9 **BEFORE THE**
10 **CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**
11

12 HEARING REGARDING PETITION
13 FILED BY THE DEPARTMENT OF
14 WATER RESOURCES AND U.S. BUREAU
15 OF RECLAMATION REQUESTING
16 CHANGES IN WATER RIGHTS FOR THE
17 CALIFORNIA WATERFIX PROJECT

18 JOINDER IN THE JULY 12, 2018
19 REQUEST BY THE SACRAMENTO
20 VALLEY WATER USERS

21 Deirdre Des Jardins, principal at California Water Research (“California Water
22 Research”) joins in the July 12, 2018 request by the Sacramento Valley Water Users that “DWR
23 further specify a witness or witnesses who will be available to answer questions associated with
24 the operating conditions for WaterFix as directed by the Hearing Officers.” (p. 1.)

25 Exhibit DWR-1143 rev2, submitted on July 19, 2018, does not include many operating
26 criteria which are assumed in the modeling and which have previously been represented as
27 proposed operational criteria for the project. The omitted criteria include flows at Vernalis
28 required under Decision 1641, and preferential exports from the South Delta in the summer.
California Water Research presumes that the omission of these operating criteria is at the
direction of the Hearing Officers, who requested that the Department of Water Resources “not

1 include operating criteria that are no longer proposed to be included as part of the project.” (July
2 16, 2018 Hearing Ruling, p. 2.)

3 While the Department of Water Resources’ July 20, 2018 objection to the Sacramento
4 Valley Water Users’ request states that protestants could ask questions of the Operators during
5 Part 1 and Part 2 Case in Chief, there has been conflicting testimony in the hearing. The
6 Department of Water Resources’ witnesses asserted in Part 2 that modeling assumptions were
7 part of the proposed operating criteria for the project. Erik Reyes testified in Part 2 of the
8 hearing that, “CWF H3+ scenario meets the Water Rights Decision 1641 (D-1641) fish and
9 wildlife requirements,” and also testified that CWF H3+ is the adopted project. Gwen Buchholz
10 also testified that CWF H3+ is the adopted project. It was exactly this kind of confusion
11 between modeling assumptions and operational criteria that Exhibit 1143 was required to
12 address.

13 The omission of Decision 1641 operating criteria from Exhibit DWR 1143 rev2 is
14 significant, given Richard Woodley’s February 15, 2017 letter to the Executive Director of the
15 State Water Resources Control Board stating that Reclamation would not comply with Decision
16 1641 standards at Vernalis. (California Water Research only became aware of this letter in the
17 past week.)

18 California Water Research checked transcripts from Part 1 of the hearing, and noted that
19 the San Joaquin Tributaries Authority attempted to cross-examine Ron Milligan on
20 Reclamation’s plans for compliance with D-1641 flows at Vernalis on April 27, 2017. Milligan
21 stated in part:

22 I’m hoping that we come to a new Basin Plan amendment with some flows that we feel
23 are more achievable. (R.T. 93:12-14.)

24 Further questions were ruled as beyond the scope of Ron Milligan’s Part 1 rebuttal testimony.
25 (R.T. April 27, 2018, 93:15-94:7.)

1 Reclamation sent a letter on July 27, 2018 to the State Water Resources Control Board,
2 stating that the Secretary of Interior would be reviewing the Phase 1 Bay-Delta Water Quality
3 Control Plan Update and deciding whether it conflicts with Congressional direction regarding the
4 Central Valley Project (p. 1-2.) Given this letter, and omission of D-1641 criteria from Exhibit
5 DWR-1143, there are very real questions about Reclamation's future plans for joint operations of
6 the Central Valley Project and State Water Project, including the new North Delta diversions.
7 These questions need to be answered for the Board and the parties to have adequate information
8 about the actual project operations proposed by Reclamation.

9 Thank you for your consideration of these issues.

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11 Dated July 30, 2018

Sincerely,

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15 Deirdre Des Jardins
16 Principal, California Water Research

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18 Attachment: July 27, 2018 letter from Reclamation to State Water Resources Control Board
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United States Department of the Interior

BUREAU OF RECLAMATION
Washington, DC 20240

IN REPLY REFER TO:

July 27, 2018

Ms. Felicia Marcus, Chair
State Water Resources Control Board
P.O. Box 100
1001 I Street
Sacramento, California 95814

Subject: Final Draft Bay-Delta Plan Update for the Lower San Joaquin River and Southern Delta

Dear Chair Marcus:

The Bureau of Reclamation provides this comment to the State Water Resources Control Board (“Board” or “SWRCB”) in response to the Board’s proposed final San Joaquin River flows and Southern Delta water quality amendments (collectively, “Board Amendments”) to the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*. The Board has requested comments by July 27, 2018.¹ Attached are Reclamation’s more technical comments on the Board Amendments.

As set forth in greater detail below, the Board Amendments contemplate management by others of a Reclamation project and appear to directly interfere with the New Melones Project’s ability to store water. The Board amendments essentially elevate the Project’s fish and wildlife purposes over the Project’s irrigation and domestic purposes contrary to the prioritization scheme carefully established by Congress. Notably, implementation of the 40% unimpaired flow standard will reduce storage of water at New Melones by 315,000 acre-feet per year, on average—even after taking into account likely reductions to Central Valley Project contract deliveries. The 40% unimpaired flow standard will likely result in diminished power generation and recreational opportunities at New Melones, as well.

Reclamation, therefore, recommends the Board reconsider the Board Amendments and postpone the public meeting currently scheduled for August 21-22, 2018, for additional due diligence and dialogue.

Consistent with his statutory responsibilities set forth in Pub. L. 99-546, Title 1, section 101 and elsewhere, the Secretary of the Interior will more fully review the Board Amendments. Following appropriate due diligence, if the Secretary of the Interior determines that the Board

¹ The Board has also released its Framework for the Sacramento/Delta Update to the Bay-Delta Plan. Reclamation intends to comment on that document, as well. As confirmed to Reclamation by Board staff, there is no current deadline for comments to the Framework document.

Amendments are inconsistent with these responsibilities, the Secretary will request the Attorney General of the United States bring an action against the Board.

I. The Central Valley Project and New Melones Project: Congressional Directives

Reclamation operates the Central Valley Project (“CVP”) in accordance with federal Reclamation law, including the Rivers and Harbors Act (“RHA”) of August 26, 1937, Public Law 75-392, 50 Stat. 844, 850, as amended by Section 3406 of the Central Valley Project Improvement Act (“CVPIA”), Public Law 102-575, 106 Stat. 4706 (1992). Under the RHA, as amended by Section 3406(a)(2) of the CVPIA, the CVP “shall be used first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and fish and wildlife mitigation, protection, and restoration purposes; and third, for power and fish and wildlife enhancement.”

As the statute makes clear, only the specific fish and wildlife mitigation, protection, and restoration purposes may be considered on par with the CVP’s irrigation and domestic use purposes. The CVP may be operated for the enhancement of fish and wildlife, but Congress placed enhancement purposes below the CVP’s irrigation and domestic use purposes.

The CVP includes the New Melones Project, a dam and reservoir and related facilities originally constructed by the Army Corps of Engineers for flood control purposes. In accordance with Section 203 of the Flood Control Act of 1962, Pub. L. 87-874, 76 Stat. 1173, upon completion of construction by the Army Corps, the New Melones Project became an integral part of the CVP to be operated and maintained by the Secretary of the Interior pursuant to Federal reclamation laws.

As an integral part of the CVP, the New Melones Project is authorized for irrigation, municipal & industrial, power, recreation, and water quality purposes, as well as preservation and propagation of fish. Today, the New Melones Project plays a critical role in providing Californians reliable water supply, flood control, fish and wildlife, and other benefits.

The legislative history of the New Melones Project details the deliberations made by Congress when it determined the economically justifiable capacity, federal funding levels, and benefits from the New Melones Project. The 2.4 million acre-feet New Melones Project was recommended to Congress by the Chief of Engineers for the Army Corps because it would provide for full development and maximum use of Stanislaus River supplies. H.R. Rep. No. 13273, 2d Sess., p. 349 (1962).

These authorities demonstrate Congress intended the New Melones Project to support reliable irrigation, flood control, power and recreation. The authorities also include fish and wildlife and other important environmental purposes that have been incorporated into Reclamation’s mission. Indeed, Reclamation operates the CVP and New Melones Project in an environmentally sensible manner, consistent with the project specific congressional directives discussed above, as well as the Endangered Species Act, the National Environmental Policy Act, the San Joaquin River Restoration Settlement Act (Pub. L. 111-11, Title X), and other laws. Environmental activities include restoring and replenishing spawning gravel in Central Valley streams, screening

diversions, modifying operations where necessary, advancing science, and updating monitoring to assist in the survival and recovery of fish species.

Reclamation also provides restoration flows for salmon and other species in the San Joaquin River and engages with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the California Department of Fish and Wildlife in implementing the various biological measures identified in the current biological opinions related to the operations of the CVP and State Water Project.

II. The Secretary of the Interior May Determine That SWRCB Water Quality Standards Are Not Consistent with the Congressional Directives for the CVP and New Melones Project

Section 8 of the Reclamation Act of 1902 requires Reclamation to “proceed in conformity” with state laws “relating to the control, appropriation, [and] distribution of water used in irrigation.” 43 U.S.C § 383. State law plays an important role in project operations. Reclamation values and appreciates its collaborative relationships with SWRCB and other state water resource agencies.

At the same time, SWRCB does not have unfettered discretion to impose regulatory constraints that interfere with the congressionally authorized purposes of a Reclamation project. Otherwise, there would be no limit to the ability of a state agency to co-opt control of Reclamation project water and usurp the purposes for which Congress made the federal investment. Reclamation is charged with implementing congressional directives, and Reclamation has an obligation to ensure that federal project objectives are respected and adhered to but not impinged upon.

Congress confirmed the preeminence of federal objectives vis-à-vis SWRCB in 1986, following years of litigation between the United States and California over the validity of state water quality regulations. In Public Law 99-546, Congress authorized the Secretary to operate the CVP in compliance with SWRCB water quality standards, but left the Secretary with discretion to evaluate and determine whether the standards are consistent with congressional directives. Upon determination of inconsistency, Congress mandated the Secretary to request the Attorney General to take appropriate action:

Unless the Secretary of the Interior determines that operation of the Central Valley project in conformity with State water quality standards for the San Francisco Bay/Sacramento–San Joaquin Delta and Estuary is not consistent with the congressional directives applicable to the project, the Secretary is authorized and directed to operate the Project, in conjunction with the State of California water project, in conformity with such standards. Should the Secretary of the Interior so determine, then the Secretary shall promptly request the Attorney General to bring an action in the court of proper jurisdiction for the purposes of determining the applicability of such standards to the project.²

² P.L. 99-546. 100 Stat. 3050. 27 Oct. 1986. Congress established this review process to “provide[] a mechanism by which the Secretary will evaluate future water quality standards and determine whether operating in compliance with those standards is consistent with Congressional directives applicable to the project,” recognizing further that “the Secretary’s authority to make such an evaluation is discretionary.”

Thus, although SWRCB may promulgate water quality standards which purport to apply to the CVP, the Secretary has authority to review the standards for consistency with congressional directives.³

III. The Board Amendments Are Likely Not Consistent with the CVP's and New Melones Project's Congressional Directives

The New Melones Project includes a large reservoir, but is dependent on the extremely variable hydrology of the Stanislaus River. The annual inflows are further subject to use by State-granted senior (pre-Project) water right holders (a maximum entitlement of 600,000 acre-feet per year). Over the life of New Melones, inflow to the reservoir has varied between 200,000 acre-feet per year to over 3 million acre-feet per year, with an average annual inflow of approximately 1.1 million acre-feet per year. Initial investigations into the viability of the 2.4 million acre foot New Melones reservoir estimated the reliable project yield for CVP contract supplies to be less than 200,000 acre-feet, leading to CVP water service contracts for irrigation and municipal uses that total up to 155,000 acre-feet. The current average annual demand for all uses and regulations (SWRCB D-1641 and Biological Opinions) at New Melones is approximately 1.2 million acre-feet per year.

Past Reclamation studies have shown that even under the current conditions, actual gains in carryover storage at New Melones occur only 39% of the time. With current demands of the senior water right holders, current state and federal environmental requirements, and Central Valley Project contracts, New Melones loses storage from one water year to another 61% of the time.

H. Rep. 99-257, *Providing for the Coordinated Operation of the Central Valley Project and the State Water Project in California* (Comm. on Interior and Insular Affairs) (Sept. 9 1985). *See also*, 132 Cong. Rec. 31304 (1986) (Statement of Sen. McClure) (“This language provides protection for the investment of the taxpayer and the Nation in the facilities of the Central Valley Project. Foremost under the Reclamation law is the obligation of the Secretary of the Interior to secure repayment of the reimbursable costs of reclamation projects. In operating the Central Valley Project to meet appropriate state water quality standards, the Secretary must be consistent with the congressional directives applicable to the project. In response to those directives, the Secretary must not place in jeopardy the repayment capability of the project.”).

³ The CVPIA provides the Secretary of the Interior “shall operate the Central Valley Project to meet all obligations under state and federal law . . . and all decisions of the [SWRCB] establishing conditions on applicable licenses and permits for the project,” but also makes clear that the Secretary retains discretion to review SWRCB standards for consistency with congressional directives. *See* CVPIA 3406(b), 3411(b) (requiring the Secretary in implementing the CVPIA to “fully comply with the United States’ obligations as set forth in the ‘Agreement Between the United States of America and the Department of Water Resources of the State of California for Coordinated Operation of the Central Valley Project and the State Water Project’ dated May 20, 1985 [(1985 COA)], and the provisions of Pub. L. 99-546.” *See also* 1985 COA, Article 11(a) (“Should the [SWRCB] establish new Delta standards, and the United States determines that operation of the [CVP] in conformity with the new Delta standards is not inconsistent with congressional directives the parties shall amend Exhibit A to conform with the new Delta standards.”).

The Board's initial analysis suggests there are minimal impacts to CVP storage, yet the Board's modeling to support this conclusion is based on a minimum carryover storage target and other reservoir controls at New Melones. Reclamation's own preliminary analysis, on the other hand, has modeled the implementation of the 40% unimpaired flow standard and has concluded that even with reductions to Central Valley Project contract deliveries, New Melones reservoir will, on average, store 315,000 fewer acre feet of water, per year.

The Board's analysis failed to show this impact due to an erroneous assumption that Reclamation would be able to prioritize Board modeled carryover storage targets over meeting senior water right demands. The preliminary average annual storage shortfall of 315,000 acre-feet of water could make it likely that New Melones would only rarely, if ever, see gains in storage year over year. This is not a sustainable operation for New Melones Reservoir and does not provide a reliable water supply for Reclamation's CVP water service contractors. As a result, full use of the dam as Congress contemplated would be prevented, significantly undermining Congress's design for the long-term operation of the project to satisfy multiple policy objectives.

The Board's plan appears to not only directly interfere with the New Melones Project's ability to store water, but the Board also contemplates management of the federal Reclamation project by others. The Board has provided that the Board's Executive Director may allow variances to the 40% unimpaired flow standard, including allowing for the standard to be managed as a volume throughout the year, if any the member of the Stanislaus Tuolumne Merced Workgroup, set up by the State, requests.

The Board has not provided sufficient detail for Reclamation to understand fully how managing the 40% unimpaired flow standard as a projected total annual volume of water would work, or its potential implementation on the Stanislaus River. Further information is needed regarding how the Board contemplates management of this volume of water throughout the year and what happens to, or who the Board believes would manage, any carryover supplies from this volume, if any.

The loss of flow and hydraulic head caused by additional outflow requirements in the spring will negatively impact power generation during the peak summer and early fall months, cutting energy production in half and doubling fixed operating costs per MWh. In Fiscal Year (FY) 17, gross power generation at New Melones was 646,522 MWh, whereas in FY14 and FY15, the gross power generation at New Melones was 286,563 MWh, and 141,706 MWh, respectively. The FY14 and FY15 power generation numbers resulted from severe consecutive years of drought. If the Board Amendments are implemented, Reclamation anticipates power generation similar to the levels generated in FY14 and FY15.

Similarly, potential impacts to recreation in the local area could be devastating. In FY17 New Melones visitation reported approximately 450,000 visitors with revenue of approximately \$500,000.00. In FY15 in the fourth year of the drought, New Melones reported approximately 286,842 visitors with revenue of approximately \$213,575.00. If the Board Amendments are implemented, consistently lower lake levels are anticipated. The potential impacts to the local

economy could be significant, and this could be exacerbated by reduced visitation caused by consistently lower lake levels. When Congress authorized New Melones for recreation, it did not expect future State action to undercut the recreation benefits it anticipated by requiring the reservoir to operate at less than full capacity.

In light of these severe consequences to Reclamation's ability to effectively manage the Central Valley Project and New Melones Project, the Secretary of the Interior intends to review the final draft of the Board amendments to determine their consistency with congressional directives.⁴ If they are inconsistent with applicable congressional directives, the Secretary will be required to request the Attorney General to take appropriate action.

IV. The Board Amendments Fail to Sufficiently Consider Other Factors Affecting Fish Species and Alternative Approaches to Species Recovery

The Board Amendments focus primarily on requiring increased flows for fish on the Stanislaus River. This approach does not fully capture the impacts of other stressors limiting fish populations on the Stanislaus River. Scientific evidence indicates that other stressors are impacting the populations, including: predation (Buchanan et al. 2018, Zeug et al. 2014, SST 2017, Zeug et al. 2016); temperature (Fish Bio 2015); interactions with hatchery fish (SEP 2016); and lack of spawning and rearing habitat (SEP 2016, Sturrock et al. 2015). Research has also demonstrated that flow timing and flow quantity are equally important. (SEP 2016, Zeug et al. 2014). Furthermore, the water quantity used in existing flow pulses is greater than necessary to elicit adult fish response (Peterson et al. 2016).⁵

The Anadromous Fish Restoration Program, authorized by the CVPIA, represents an alternative approach—with proven benefits for fish species and the environment in the Stanislaus River system—that the Board did not consider. Implementation of habitat restoration projects supported by significant investment of federal funding, in collaboration with local partners, include side channel/floodplain projects at Honolulu Bar, annual spawning gravel placements in Goodwin Canyon, side channel and gravel projects at Lover's Leap, Buttonbush Side Channel, and gravel and boulder placements at Knights Ferry. The current combination of flows from New Melones and the habitat restoration activities provides a significant contribution to meeting beneficial uses of water in the Stanislaus River.

Reclamation encourages the Board to participate in collaborative processes using peer reviewed conceptual models that include the full range of factors that influence fish. Reclamation is currently engaged in a Reinitiation of Consultation on Long-term Operations and anticipates updates to how the Sacramento and San Joaquin systems, including New Melones, meet the requirements of listed species as well as other project purposes. This process could help to inform the Board on a Stanislaus River operations plan that could support water supply as well as

⁴ The Secretary's review will include appropriate input from the U.S. Fish and Wildlife Service.

⁵ As the Board is aware, the relationship between temperature and flow within the Stanislaus system, including the two major reservoirs below New Melones, is complex. I would like to offer my staff to sit down and discuss this issue with the Board and its staff.

meet the needs for fish and wildlife species.

The above mentioned processes will also consider the interaction between flow and temperature in developing an operations plan that meets multiple objectives. The relationship between temperature and flow within the Stanislaus system, including operation of the two major reservoirs below New Melones, is complex due to the bathymetry of the system, physical limitations of the outlet structures, and the varying residence times.

V. South Delta Salinity Issues

The Board has engaged in a welcome effort to understand the difficulties with the Southern Delta Salinity standards. The Board Amendments appear to set the Vernalis and interior South Delta salinity standards at 1.0 dS/m EC year round. This is consistent with the Board's findings on reasonable protection levels for agricultural uses in the South Delta.

The Board's implementation plan with respect to stored water at New Melones remains, however, unclear. The Board appears to suggest that despite setting the objective at Vernalis as 1.0 dS/m EC, year round, only Reclamation would be regulated to an outdated objective of 0.7 dS/m EC at Vernalis in order to implement the interior South Delta standards. The technical and legal bases for such a determination are not apparent and conflict with the analysis Reclamation submitted in 2011, which determined that a much lower assimilative capacity is adequate at times when San Joaquin River salinity is controlling.

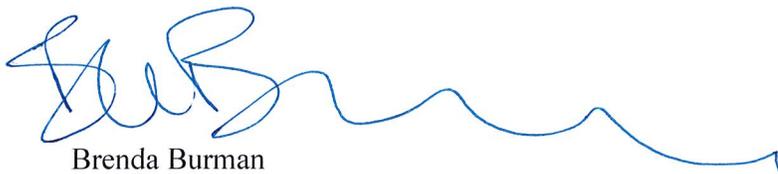
It is also unclear whether the Board's program of implementation for the interior South Delta could include additional dilution flows from New Melones, especially after June. Currently, the Board does not implement the interior South Delta standards through dilution flows from New Melones. A clear statement from the Board is needed as to whether the implementation of the interior South Delta salinity objectives could include dilution flows from New Melones and whether the Board's modeling fully captures the impact of that potential additional draw on New Melones storage, in addition to implementation of the 40% unimpaired flow standard.

The Board continues to claim, mistakenly, that Reclamation and the California Department of Water Resources ("DWR") are responsible for degraded salinity levels in the South Delta, despite some of those causes being beyond the control of either Reclamation or DWR. Additional information regarding the basis of the Board's position is necessary to enable Reclamation to make a fully informed response.

Conclusion

Reclamation appreciates the opportunity to comment and looks forward to continued dialogue with the Board. However, in light of the concerns discussed above, Reclamation respectfully requests the Board to reconsider the Board Amendments and postpone the meeting currently scheduled for August 21-22, 2018.

Sincerely,

A handwritten signature in blue ink, appearing to read 'B. Burman', with a long, wavy horizontal line extending to the right.

Brenda Burman
Commissioner

Attachment