

## Santa Clara Valley Water District

The Board directed staff to send letters to Ms. Felicia Marcus, State Water Resources Control Board, and Ms. Karla Nemeth, California Department of Water Resources, inviting them to speak to the Board and members of the Santa Clara Valley Water Commission at an upcoming meeting.

**File No.:** 18-0651

**Agenda Date:** 8/28/2018

**Item No.:** 2.7.

### BOARD AGENDA MEMORANDUM

**SUBJECT:**

Update on the State Water Resources Control Board's Amendments to the Bay-Delta Water Quality Control Plan.

**RECOMMENDATION:**

- A. Receive an update on the State Water Resources Control Board's Amendments to the Bay-Delta Water Quality Control Plan; and
- B. Direct staff to participate in voluntary settlement agreement discussions.

**SUMMARY:**

On July 6, 2018, the State Water Resources Control Board (State Water Board) released its third and final draft proposed amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) relating to water quality and flow objectives for the Lower San Joaquin River and its tributaries. This agenda item provides an overview of the Bay-Delta Plan; its purpose, history, and periodic review process. It also describes the currently proposed updates, including State Water Board and District staff assessments of the water supply and biological effects, public comments submitted by various entities, and future steps to implementation. The Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation) are responsible for meeting most of the water quality and flow objectives in the current Bay-Delta Plan as terms and conditions in their water rights permits for the State Water Project (SWP) and the Central Valley Project (CVP). The currently proposed updates could have significant impacts on the District's and Santa Clara County's imported water supplies.

#### **1. Overview of Bay-Delta Water Quality Control Plan**

##### **1.1. Authority and Purpose**

The State and Regional Water Boards develop water quality control plans to meet their obligations under the Porter-Cologne Water Quality Control Act and federal Clean Water Act. A water quality control plan establishes the beneficial uses of water within a region, the water quality objectives to ensure the reasonable protection of those beneficial uses, and a program of implementation for achieving the water quality objectives. In determining what is the reasonable protection of a particular beneficial use, the State Water Board must consider and balance all

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competing uses of water in its decision-making. The Bay-Delta Plan identifies 17 beneficial uses in the Bay-Delta watershed including municipal and domestic supply, agricultural supply, groundwater recharge, recreation, and several fish and wildlife uses including habitat, spawning, early development, and migration. The water quality objectives in the Bay-Delta Plan include objectives for salinity, dissolved oxygen, various measures of flow, and gate operations.

The program of implementation describes the general nature of actions that are needed to achieve the objectives along with a schedule and measures of compliance. The actual assignment of responsibility for compliance with the objectives occurs in separate proceedings. For example, responsibilities can be assigned through amendments to water right holders' permits following lengthy quasi-judicial water rights proceedings. The State Water Board can also use its authority under the Clean Water Act section 401 water quality certification and other water quality authorities to implement the objectives through water quality proceedings.

Alternatively, the State Water Board has accepted, and often encourages water right and license holders to develop voluntary agreements to implement a combination of flow and non-flow actions that achieve the objectives in place of imposing the responsibility through a lengthy water right proceeding. The State Water Board acknowledges that habitat restoration and other non-flow measures can reduce the needs for flow; however, because the State Water Board only has authority over water quality and quantity, they cannot impose non-flow measures even when they might better achieve their objectives with less cost to water supplies. Voluntary agreements provide a mechanism by which the State Water Board has some authority to enforce implementation of non-flow measures in exchange for some relaxation of flow or water quality obligations.

The Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation) are responsible for meeting most of the water quality and flow objectives in the current Bay-Delta Plan as terms and conditions in their water rights permits for the State Water Project (SWP) and the Central Valley Project (CVP).

## **1.2. History and Periodic Review**

The Porter-Cologne Act specifies that water quality control plans shall be periodically reviewed and may be revised. The Bay-Delta Plan was first adopted in 1978 and implemented through Decision 1485 (D-1485) which modified the terms and conditions of DWR's and Reclamation's water right permits. The Bay-Delta Plan was amended in 1991 and again in 1995. Decision 1641 (D-1641), adopted in 1999 and which incorporated several voluntary agreements, further modified the terms and conditions of DWR's and Reclamation's water right permits to implement the 1995 Bay-Delta Plan. In 2006 the State Water Board completed another review which resulted in relatively minor changes that did not require any changes to water right permits. Those changes were incorporated into an update of the Bay-Delta Plan, thereafter referred to as the 2006 Bay Delta Plan.

## **1.3. Current Status**

The condition of key fish species protected under the federal and State endangered species acts

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continue to decline and most agree the status quo is not sustainable. The Delta was once a vast marsh and floodplain dissected by meandering, branching channels and sloughs that provided a dynamic habitat for a rich diversity of fish, wildlife, and plants. Since the early 1900s, historic conditions in the Delta and its watershed have been modified by the dredging and reclamation of land for farming, by encroachment of urban development, and by changing flow patterns due to increased diversions upstream, within the Delta, and operation of the State and federal water projects. Today, less than 5 percent of the original wetlands remain and the rivers that once meandered through tree lined banks have been straightened, stripped of vegetation, and lined with large rocks. Changes to the landscape have resulted in losses of fish spawning and rearing habitat, fish migration corridors, and food web production.

Unscreened diversions, polluted runoff, urban wastewater discharges, changing flows and sediment loads, and other factors have also contributed to the degradation of the natural environment. The profound physical changes have also made it more hospitable to numerous invasive species such that a majority of the aquatic biomass in the Delta is non-native.

In response to the continuing decline of several native fish species, the State Water Board began another review and update of the Bay-Delta Plan in August 2008.

## **2. Current Phased Review and Update**

The State Water Board is currently engaged in a phased review and update of the 2006 Bay-Delta Plan. To inform the update, and pursuant to the 2009 Delta Reform Act, in August 2010 the State Water Board approved a staff technical report titled *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem* (2010 Delta Flow Report). That report describes the flows the State Water Board believes are needed to protect aquatic resources in the Delta. One of the more controversial conclusions in the report is that “in order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Water Board are crafted as percentages of natural or unimpaired flows.” The controversy is described below in section 3.2.

Importantly, the report does not consider any other beneficial uses of water including human uses or aquatic resource needs outside of the Delta, such as upstream temperature control for endangered winter-run Chinook salmon. The purpose of the report was to inform planning decisions including the State Water Board’s phased update to the 2006 Bay-Delta Plan.

### **2.1. Phase 1**

Phase 1 began in August 2008 and is now nearly complete. It is focused on water quality objectives for the protection of southern Delta agriculture, San Joaquin River flow objectives for the protection of fish and wildlife, and the program of implementation for achieving those objectives. The State Water Board released a third and final Substitute Environmental Document and proposed amendments on July 6, 2018.

The proposed amendments would require 40 percent of unimpaired flows to remain in the three salmon bearing tributaries -- the Merced, Stanislaus and Tuolumne Rivers -- from February

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through June, within an adaptive range of 30-50 percent. They also require a base flow of 1,000 cubic feet per second (cfs) in the San Joaquin River that may be adjusted within an adaptive range of 800-1,200 cfs. The amendments describe the steps that would be required to move within the adaptive ranges. The amendments also allow for the required percent of unimpaired flow to be managed as a total volume of water and released on a pattern that differs from the unimpaired flow pattern if science indicates that would be more beneficial to fish and wildlife. A new working group that includes water users from the affected tributaries and State Water Board and fish and wildlife agency staff would provide recommendations for adaptive management, operations, and biological objectives for the flows.

The proposed amendments also relax the southern Delta salinity standard for the protection of agricultural uses based on a scientific report that evaluated the salinity tolerances of Delta crops.

The San Francisco Public Utilities Commission's (SFPUC) Hetch Hetchy Reservoir is on the Tuolumne River and the CVP's New Melones Reservoir is on the Stanislaus River; the flow requirements could impact water supplies from both. In addition, DWR and Reclamation are currently responsible for meeting the salinity standard, and while the State Water Board proposes to relax the standard, the proposed program of implementation still holds DWR and Reclamation responsible for meeting the current, more stringent level.

The program of implementation also states that the State Water Board will include minimum reservoir carryover targets to help ensure that meeting the proposed flow objectives will not have adverse temperature or other impacts on fish and wildlife. These carryover targets are not specified nor analyzed but could also negatively impact SFPUC and CVP water supplies.

District staff has been working with SFPUC, the State Water Contractors, and the San Luis & Delta-Mendota Water Authority to review and comment on the documents throughout the Phase 1 process. Collectively, the District and these agencies have submitted hundreds of pages of comments, analyses, and supporting materials, with the most recent comments submitted on July 27, 2018.

The State Water Board had scheduled a public hearing to consider adoption of the proposed changes to the Bay-Delta Plan for August 21-22, 2018. In response to a letter from Secretary for Natural Resources, John Laird, the State Water Board has agreed to postpone the final Water Board action to a future Water Board meeting (Attachment 8). The State Water Board still plans to hear comments on the staff-proposed action on August 21-22. District staff will provide an oral update on the hearing.

## **2.2. Phase 2**

Phase 2 began in 2012 and is not as far along as Phase 1. Phase 2 focuses on flow objectives for the Sacramento River and its tributaries, Delta outflow and interior flow objectives, and cold-water habitat objectives. On July 6, 2018 the State Water Board released what it is calling a framework for the Sacramento/Delta update. Essentially, the framework describes the changes the State Water Board intends to propose later this year when it releases its formal proposal and supporting environmental document for public comment.



According to the framework, the State Water Board intends to propose an inflow requirement for the Sacramento River and its salmon-bearing tributaries that ranges between 45-65 percent of unimpaired flows, with a starting point of 55 percent. Similar to the Phase 1 requirement, these flows can be managed as a total volume of water and released on a pattern that differs from unimpaired flows to provide maximum benefit to fish and wildlife.

The framework also describes a Delta outflow requirement that is linked to the inflows to ensure the increased inflows are not diverted before they can reach the bay and ocean.

A new objective for maintaining cold water habitat is also proposed. This objective does not identify specific temperatures or flow volumes, rather, it says in part to, “maintain stream flows and reservoir storage conditions...to protect cold water habitat for sensitive native fish species...” Implementation of this objective is left to reservoir owners/operators to develop strategies and plans in coordination with the State Water Board and fisheries agencies.

Finally, the framework incorporates several of the requirements for operation of the SWP and CVP that are already imposed by the U.S. Fish & Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife Service (collectively, “Fish and Wildlife Agencies”). These current requirements include Delta outflow in the fall of above normal and wet water year types above that required in the Bay-Delta Plan, provisions for Delta Cross Channel gate closures, Old and Middle River reverse flow limits, and export limits in April and May based on San Joaquin River inflows levels. While the framework says these requirements can be changed in the Bay-Delta Plan if the Fish and Wildlife Agencies modify their requirements, it also leaves open the possibility that they will not change them in response. Put another way, if the Fish and Wildlife Agencies refine their requirements in ways that provide equal environmental protections at a lesser water cost, the State Water Board may require a quasi-legislative water quality control plan update process to also change them.

### **2.3. Phase 3**

Phase 3 involves changes to water rights and other measures to implement the changes to the Bay-Delta Plan from Phases 1 and 2. This phase has not started; however, the State Water Board is encouraging efforts of various stakeholders to develop voluntary agreements that would implement the proposed updated Bay-Delta Plan objectives. These voluntary agreements would need to be supported by the California Department of Fish and Wildlife and could allow a combination of flow and non-flow measures to achieve comparable outcomes for fish and wildlife with less impact on other beneficial uses. There still is some uncertainty as to whether the State Water Board will accept voluntary settlements only as a means to move within the proposed adaptive ranges of unimpaired flows, or as a means to abandon that approach entirely. Until Phase 3 is complete, or voluntary settlements are agreed to, the actual impacts of the proposed changes on specific water right holders will not be known with any certainty. The proposed changes to the Bay-Delta Plan merely describe the objectives that need to be met, they do not specify which entities need to provide the water to meet them.

## **3. Assessments**

Despite the uncertainty regarding how the objectives might be implemented, the State Water Board, District staff, and other potentially affected water right holders have analyzed the potential effects on water supplies, as well as on potential benefits to fish and wildlife. This section describes those assessments.

### 3.1. *Water Supply Assessments*

According to the State Water Board's own analysis, the Phase 1 proposed amendments would on average reduce available supplies by 293 thousand acre-feet (TAF) per year from the targeted tributaries on the San Joaquin River. Most of the impacts would be felt in dry and critical years when the average annual reduction would increase to between 624-673 TAF.

These Phase 1 reductions could significantly impact San Francisco's Regional Water System which derives about 85 percent of its supply from the Hatch Hetchy watershed and which Santa Clara County relies on for 15 percent of its water supplies. The State Water Board analyzed impacts to Hetch Hetchy supplies and found that the average annual supplies could be reduced by up to 119 TAF each year during a repeat of the 1987-1992 drought. District staff's analysis of potential impacts to Santa Clara County in the context of the County's entire water supply portfolio indicates the proposed amendments could result in a 4 to 15 percent increase in the frequency of shortages and a 5 to 19 percent increase in the magnitude of those shortages. This increase in the frequency and magnitude of shortage would require additional supply development by the SFPUC and/or District to avoid increased demands on groundwater, increased risk of overdraft, and increased risk of the return of inelastic land subsidence. The cost and feasibility of those additional supplies, on top of those already determined to be needed as part of the District's Water Supply Master Plan analyses, has yet to be determined.

The Phase 1 reductions could also negatively impact the District's ability to supplement County water supplies with inbound transfers. In dry years, statewide demand exceeds available transfer supplies, and sellers face political pressure and environmental considerations which restrain transfers of water outside their region. Implementation of the proposed Phase 1 amendments will exacerbate this situation. Even in years when transfer supplies are more plentiful, conveyance capacity across the Delta can be limited. For example, in 2016 there was no conveyance capacity for new transfers of non-SWP/CVP water. Referring to the Phase 1 limitations, the San Luis & Delta-Mendota Water Authority identified several current voluntary release, transfer and exchange programs (some of which benefit the District) that would likely be curtailed. The Authority estimated that these curtailments would reduce supplies available to South of Delta CVP Contractors by up to 50 TAF annually.

In a letter dated June 27, 2018 (Attachment 1), the Commissioner of the Bureau of Reclamation states that the Phase 1 proposed amendments would reduce storage in New Melones Reservoir by 315 TAF on average, even with reductions in deliveries to CVP contractors. The letter also discussed potential significant impacts to power generation and recreation from these lower storage levels. The Commissioner requests a postponement of the State Water Board's adoption hearing to allow additional time for the Secretary of the Interior to determine whether the State's proposed amendments interfere with the congressionally authorized purposes of the CVP and

## New Melones Project.

Impacts of the proposed Phase 2 changes have the potential to be even more severe for the District and Santa Clara County. According to the State Water Board's own analysis, their Phase 2 proposal would reduce system-wide available supplies by 2 million acre-feet (MAF) per year on average. Since the State Board has not yet provided a detailed Phase 2 proposal, it is too early to establish how much of a supply reduction would be borne by South of Delta CVP and SWP contractors, including the District.

The cumulative impacts of the Phase 1 and Phase 2 reductions are clearly of concern.

While the cumulative impacts of the Phase 1 and Phase 2 reductions to the WaterFix project benefits have not yet been analyzed, staff's working assumption is that the proposed amendments would have a significant impact on water supplies with or without WaterFix. However, WaterFix provides an additional tool and greater operational flexibility to cope with these new regulations. Recall that one of the fundamental conclusions in staff's analysis of the WaterFix is that the project would help sustain District CVP and SWP supplies as overall exports decline over time. The proposed new regulations as applied to South of Delta exports would likely be consistent with staff's projected general decline in export supply, although perhaps to greater magnitude than the downward trend staff assumed. Thus, while the District would likely experience a reduction in imported water supplies under the State Water Board's proposals, the magnitude of those impacts would likely be even greater without the WaterFix.

### 3.2. *Biological Assessments*

The State Water Board cites a large body of literature on the importance of a natural flow regime to support its proposed approach of requiring a percentage of unimpaired flows, arguing that unimpaired flows "more closely mimic the natural hydrographic conditions to which native fish species are adapted, including the relative magnitude, duration, timing, and spatial extent of flows as they would naturally occur."

The counter argument is that while unimpaired flows might mimic natural hydrographic conditions in some river systems, as described in the literature cited by the State Water Board, they do not mimic the conditions to which native fish species are adapted in the highly modified Sacramento-San Joaquin River and Delta ecosystem, and more water efficient methods are available to attain equal or greater biological benefit. The State Water Contractors point out in their March 2017 comment letter to the State Water Board that:

*Best available science shows that unimpaired flow from the upstream San Joaquin River tributaries is not an appropriate measure for natural flow on the valley floor or in the Delta. For example, see recent supporting scientific work by Howes et al. (2015) on the evapotranspiration from natural vegetation that was present in the Delta and Central Valley, work by Fox et al. (2015) that quantifies the expected mix of vegetation in the Delta and Central Valley under natural or predevelopment conditions, and work by Huang (2016) that utilized the above-cited work to compare annual and seasonal unimpaired and natural Delta outflow estimates. Huang found, similar to Fox et al. (2015), that unimpaired outflow estimates are a very inaccurate proxy for natural outflow estimates, significantly overestimating natural flows, because natural flows were not subject to the confines of levees, dams, and other anthropogenic*

*development and as such, spread over greater areas of the basin. Given that the best available science shows unimpaired flow to be an inappropriate indicator of natural flow on the valley floor or in the Delta, proposed flow standards should be justified based on flow function and not on purported benefits of unimpaired flows, which do not emulate natural conditions, nor provide the same functions.*  
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Unimpaired flows in the Sacramento-San Joaquin River and Delta will create higher flows in leveed and rock-lined channels which merely increases the depth and velocity of the flow. However, native fish species adapted to a more natural flow pattern where storm and spring-melt flows spill out onto the riparian, floodplain and other natural landscapes and create increased spawning habitat, greater food resources, and shelter from predators that inhabit the major river corridors. A more water efficient method to achieve these historic conditions is with physical modifications that reduce the flow level at which floodplains are inundated, restore channel margin and riparian habitat, and other actions that focus on restoring the functions that historic flows provided.

The State Water Board's analysis of benefits to native fish populations from the proposed increased flows in February through June focuses on improved temperature and floodplain habitat. There is broad agreement that favorable temperature and floodplain habitat conditions are important for the survival and recovery of salmon and steelhead in the San Joaquin River and its tributaries. However, there is not agreement on the most appropriate methods to achieve those conditions.

Temperature. There is a tremendous amount of scientific literature that describes the required temperatures for various life stages of salmon and steelhead, such as for reproduction, development, and migration. The State Water Board's analysis estimated the percentage of time temperature criteria are met for each salmon life stage under unimpaired flows ranging from 20-60 percent and determined that higher flows do increase how often the criteria are met. However, this is not the most water efficient method to meet those criteria since it does not take into account year to year variability in water and air temperatures, nor the year to year variation in the movements and distribution of the fish requiring that cool water habitat. For example, the State Water Board's modeling shows that in February, the temperature criteria in the Stanislaus River are met nearly 100 percent of the time in the first 30 miles of river below the dam under current conditions. Additional flows, up to the maximum level modeled of 60 percent of unimpaired, makes only a small difference in meeting the criteria within the full 58 miles of river to the confluence with the San Joaquin. This finding suggests that applying the State Water Board's unimpaired flow approach to the Stanislaus River in February may not make much difference in temperatures for salmon, at potentially large water cost to other beneficial users. Applying this example to other San Joaquin River tributaries, if the objective is to provide suitable temperature habitat for salmon, a more refined reservoir release strategy could be developed that continues to meet the temperature targets and uses limited water supplies more efficiently.

#### Floodplain Inundation.

As with temperature conditions, there is a tremendous amount of scientific literature documenting the numerous benefits of floodplain habitat to salmon, steelhead and other native fish species.

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The State Water Board's analysis estimates the frequency and magnitude of floodplain inundation events in February through June under current conditions and with unimpaired flows ranging from 20-60 percent and, not surprisingly, determines that the higher flow levels result in more acreage of floodplain area being inundated more often, with the greatest benefits accruing in the April through June. However, a more water efficient method to achieve an increase in floodplain acreage is with physical modifications that reduce the flow level at which floodplains are inundated.

The State Water Board continues to propose this inefficient approach in its Phase 2 Framework for the Sacramento/Delta. Available science indicates that non-flow measures, such as habitat restoration and food production, predation control, reduction of invasive species, and reduction of contaminant loading into the Bay Delta are critical to restoring the environmental health of the Bay Delta.

#### **4. Public Comments on the Proposed Amendments**

According to State Water Board staff, the State Water Board has received over 1,400 unique comment letters from local, state, and federal agencies, the public, and elected officials since the first draft amendments were released in 2012. The State Water Board has not yet posted the most recent comment letters on the final draft amendments; however, staff provided the District Board with copies of those that it had received in the August 3, 2018 Board non-agenda packet. The cover letters accompanying those comments are provided here as Attachments 1-6. Since that time staff, has received a copy of the Tuolumne River Trust comment letter. It is provided as Attachment 7. The main points of those and the District's own comment letter are described below.

##### **4.1. District Comment Letter**

The District's July 27, 2018 written comments emphasized the District's long-standing commitment to environmental stewardship, both within Santa Clara County as well as within the Delta and its watershed. It also reiterated staff's concern with the approach the State Water Board continues to take in the proposed plan amendments, stressing that the unimpaired flow approach is not an efficient way to use limited resources. The District's comments included a technical analysis of how the proposed amendments would negatively impact Santa Clara County's water supplies, and provided strong support of the State Water Board's consideration of voluntary agreements to help achieve desired biological benefits. The District believes that a science-based, voluntary settlement approach that incorporates non-flow measures and optimizes the use of limited water supplies is the best path to protecting and improving the Delta ecosystem while balancing other beneficial uses.

##### **4.2. SFPUC Comment Letter**

The SFPUC comment letter focuses on describing the inadequacy of the State Water Board's analysis of significant impacts to the Bay Area from the proposed amendments. In addition, SFPUC previously provided an alternative proposal to meet fish and wildlife beneficial uses on the Tuolumne River that the State Water Board did not appear to consider in its final proposed

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amendments to the Bay-Delta Plan. Along the same lines as the District's comments, SFPUC proposes an alternative approach that includes non-flow measures and flows targeted at providing specific functions to increase salmon survival on the Tuolumne.

#### 4.3. *State Water Contractor (SWC) Comment Letter*

The SWC's July 27, 2018 written comments also encourage the State Water Board's consideration of voluntary agreements. In addition, the SWC raise concerns with the proposed program of implementation for the revisions to the southern Delta salinity objectives. The SWC concerns about the program of implementation include: 1) it appears to assign responsibility for achieving the salinity objectives to the SWP and CVP without going through an adjudicatory water rights proceeding, 2) it appears to assign responsibility for achieving the salinity objectives only to the SWP and CVP despite acknowledging that multiple factors contribute to salinity levels, and 3) it provides insufficient detail on how compliance will be measured.

The SWC's submitted detailed technical comments with the San Luis & Delta-Mendota Water Authority (SL&DMWA) on the first draft amendments in 2013, reiterated those comments in response to the second draft in 2017, and in 2018 requested for a third time that the State Water Board respond to those comments. Those comments included detailed technical information 1) supporting the assertion that the State Water Board's unimpaired flow approach neither mimics natural hydrographic conditions, nor supports and maintains viable native fish populations, and 2) describing the multiple sources of southern Delta salinity and opposing the assignment of responsibility for compliance with the objectives to only the SWP and CVP.

#### 4.4. *South of Delta CVP Contractor Comment Letter*

The comments submitted by the SL&DMWA and other South-of-Delta CVP contractors focus on several legal inadequacies in the State Water Board's approach including those identified by the SWC. Similar to the SFPUC and District comment letters, the South of Delta CVP Contractors describe some of the inadequacies of the State Water Board's analysis of impacts to water users from significant reductions in water supplies as a result of the proposed amendments. The South-of-Delta CVP Contractors also reiterate their earlier position that flow is not a proper water quality objective parameter as defined in the Porter-Cologne Act and that the State Water Board's proposed amendments would be a waste and unreasonable use of water and would violate the coequal goals of the Delta Reform Act. The South-of Delta CVP Contractors also criticize the State Water Board for determining required flow levels without first establishing the biological objectives they are trying to achieve.

#### 4.5. *California Department of Fish & Wildlife with Department of Water Resources Comment Letter*

The California Departments of Fish and Wildlife and Water Resources (CDFW-DWR) submitted a joint letter on July 27, 2018 which, similar to the District's letter, expresses their support for the "*State Water Board's purpose, in updating the [Bay-Delta Plan], to improve protection for anadromous and pelagic fish in the Delta watershed, where these species are in crisis.*" The CDFW-DWR letter also demonstrates their support for voluntary settlements by describing their collective efforts to negotiate with water agencies, conservation groups and other stakeholders to

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develop agreements which would include a combination of flow and non-flow measures to provide better outcomes. CDFW-DWR's stated intent is to continue their best efforts to conclude negotiations and submit complete agreements for State Water Board consideration in 2018. They plan to make a presentation on adaptive implementation and voluntary settlement agreements during the August 21-22 State Water Board meeting.

Importantly, CDFW-DWR also suggest edits to both the proposed water quality objectives and the program of implementation to make clear that the State Water Board can accept voluntary agreements as an alternative to the unimpaired flow approach, and not just as a means to move within the proposed adaptive range.

#### 4.6. *U.S. Department of Interior Comment Letter*

In a letter signed by the Commissioner, the U.S. Bureau of Reclamation (Reclamation) requests more time to determine whether the proposed amendments are consistent with the congressional directives for the CVP and New Melones Project (Project). The Commissioner points out that the State does not have discretion to impose regulatory constraints that interfere with congressionally authorized purposes of a Reclamation project, claiming that, "*The [State Water 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.*"

Similar to the District's and other's comments, the Commissioner criticizes the State Water Board for focusing only on flow and not considering other factors affecting the fish or alternative approaches to recovery. And, similar to SWC and South-of-Delta CVP contractors, the Commissioner expresses concerns with the program of implementation for the salinity objective.

#### 4.7. *Tuolumne River Trust Comment Letter*

The Tuolumne River Trust's comment letter expresses support for the State Water Board's unimpaired flow approach, though believes even higher flows should be required than those proposed by the State Water Board. The Tuolumne River Trust also criticizes the SFPUC's alternative proposal for focusing almost exclusively on non-flow measures, and not considering multiple life stages, among other flaws. The Tuolumne River Trust does share the South-of-Delta CVP Contractor's criticism that SMART objectives were not established at the outset and then conservation actions chosen to achieve those objectives. However, Tuolumne River Trust points this criticism at the SFPUC's alternative proposal, not at the State Water Board.

#### 4.8. *Comments by Conservation Organizations*

The State Water Board has not yet posted all the comments it received on the third and final draft amendments; however, numerous conservation organizations submitted comments on the previous draft, and many of those comments are likely still relevant to the final draft. Conservation organizations previously submitting letters include: American Fisheries Society-CA-NV Chapter, California Sportfishing Protection Alliance, Friends of the San Francisco Estuary, several chapters of the Audubon Society, Natural Resources Defense Council with The Bay Institute, San

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Francisco Baykeeper and Defenders of Wildlife, Sierra Club with many others, The Nature Conservancy, and San Francisco Estuary Partnership, among others.

It is not possible to summarize all of the comments submitted by conservation organizations in this agenda memo; however, like the District, they universally express concern regarding the health of fish populations and the environment. Many organizations express support for the unimpaired flow approach; however, many also request even greater flows for the environment than those proposed by the State Water Board. Several organizations express concern about the State Water Board's proposed adaptive approach, others support it. Some express concern with the lack of measurable and enforceable performance measures. Many acknowledge the benefits of non-flow measures, but many request non-flow measures in addition to the State Water Board's proposed flow requirements. Finally, while several of the organizations support development of voluntary settlement agreements, many believe updates to the Bay-Delta Plan are long overdue and several specifically request that the State Water Board not delay its decision to allow additional time for agreements to be reached.

All of the comments submitted on the 2016 draft amendments (the second draft) can be viewed at the following web page:

[<https://www.waterboards.ca.gov/public\\_notices/comments/2016\\_baydelta\\_plan\\_amendment/>](https://www.waterboards.ca.gov/public_notices/comments/2016_baydelta_plan_amendment/)

## **5. A Better Path Forward**

The District supports the ultimate goal of restoring the Bay-Delta ecosystem and appreciates the State Water Board's efforts to improve conditions for fish and wildlife through updates to the Bay-Delta Plan. However, District staff continue to have significant concerns over the State Water Board's approach and believe that a science-based, voluntary settlement approach that incorporates non-flow measures and optimizes the use of limited water supplies is the best path to protecting and improving the Delta ecosystem while balancing other beneficial uses. A singular focus on flow volumes is not likely to provide meaningful benefits to the Delta ecosystem and detracts from the collective ability to develop a comprehensive, holistic approach to environmental restoration and wise water management. Focus on increasing flows to meet unimpaired flow targets will reduce the flexibility to adapt to changing conditions. It will also drain financial and water resources that could be used to better address a suite of stressors, focusing first on those that are most harmful to the Delta ecosystem.

## **6. Next Steps**

### **6.1. Phase 1 Adoption Hearings**

The State Water Board is currently scheduled to hear final comments on the Phase 1 proposed amendments during a public meeting on August 21-22, 2018. Written comments were due on July 27 and the District, SFPUC, SWC, SLDMWA, Reclamation, DWR and California Department of Fish and Wildlife Service all submitted comments, copies of which were provided to the Board in a non-agenda packet on August 3, 2018. Oral comments will be accepted during the meeting, but likely limited to three minutes.



The California Natural Resources Agency, Reclamation and others requested a postponement of the State Water Board decision on the proposed amendments, originally scheduled for the August 21-22 State Water Board meeting. Reclamation's request was to allow more time for them to consider the legality of the State imposing new requirements on a federal project. Other requests were to allow additional time for voluntary settlement agreements to be developed. On August 15, the State Water Board granted that request. A new date for final Water Board action has not been provided.

#### **6.2. *Phase 2 Proposed Amendments and Draft Environmental Documents***

The State Water Board intends to release its Phase 2 proposed amendments and draft Substitute Environmental Document for public comment in late 2018. District staff will work with other water agencies to review and provide comments within the established comment period.

#### **6.3. *Voluntary Settlement Agreements***

Former Secretary of the Interior, Bruce Babbitt, has been hired by the Governor to help facilitate voluntary settlement agreements. Settlement discussions have been occurring since late-2016. Whatever agreements are reached amongst the affected parties will need to be approved by the State Water Board and State Department of Fish and Wildlife. The affected parties generally intend that agreements on a package, or packages, of actions will collectively provide a more robust approach to improving conditions for the Bay-Delta ecosystem by addressing all of the stressors in a way that uses the limited water resources more efficiently than the State Water Board's proposal.

#### **6.4. *Water Rights Hearings***

If voluntary settlements are not developed and approved as an acceptable means to achieve the State Water Board's objectives, then the State Water Board will likely move to impose additional terms and conditions in the permits of water right holders to achieve its objectives. Staff is not clear at this time how the State Water Board might choose to impose responsibility with respect to water right seniority and type (e.g. appropriative, riparian, pre-1914, etc.) and how these impositions may apply differently to historic "Settlement Contractors" on the Sacramento, San Joaquin and Feather Rivers than they may apply to other CVP/SWP contractors who are beneficiaries of the CVP and SWP water right permits. Any changes to water right permits would occur through lengthy, public, quasi-judicial water rights proceedings. Staff further anticipates that litigation by affected parties against the State Water Board might affect the ultimate outcome and the timing of any final actions.

#### **FINANCIAL IMPACT:**

There is no financial impact associated with this item.

#### **CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a

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potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

**ATTACHMENTS:**

Attachment 1: Commissioner of Reclamation Comment Letter  
Attachment 2: District Comment Letter  
Attachment 3: SFPUC Comment Letter  
Attachment 4: SWC Comment Letter  
Attachment 5: CVP Contractor Comment Letter  
Attachment 6: CDFW-DWR Comment Letter  
Attachment 7: Tuolumne River Trust Comment Letter  
Attachment 8: State Water Board Reply  
Attachment 9: PowerPoint

**UNCLASSIFIED MANAGER:**

Garth Hall, 408-630-2750



# United States Department of the Interior

BUREAU OF RECLAMATION  
Washington, DC 20240

IN REPLY REFER TO:

June 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.<sup>1</sup> 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

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<sup>1</sup> 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.<sup>2</sup>

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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.<sup>3</sup>

### **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.

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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.").

<sup>3</sup> 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.<sup>4</sup> 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).<sup>5</sup>

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

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

<sup>5</sup> 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', followed by a long, wavy horizontal line.

Brenda Burman  
Commissioner

Attachment

July 27, 2018

State Water Resources Control Board  
Attn: Ms. Jeanine Townsend, Clerk of the Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, CA 95814-0100

Via email: [LSJR-SD-Comments@waterboards.ca.gov](mailto:LSJR-SD-Comments@waterboards.ca.gov)

Subject: Comment Letter – Revisions to Proposed Bay-Delta Plan Amendments

The Santa Clara Valley Water District (District) appreciates the opportunity to comment on the proposed final amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan). The District is the primary water resource management agency for Santa Clara County providing water supply and flood protection for Silicon Valley and its 1.9 million residents.

The District also has a long-standing commitment to environmental stewardship, both within Santa Clara County as well as within the Delta and its watershed. For many years, we have actively supported and participated in science, research, and habitat restoration in coordination with the Interagency Ecological Program and fishery agencies, and for the past two years have played a leadership role in the Collaborative Science and Adaptive Management Program.

The District remains concerned with the approach the State Water Board continues to take in the proposed plan amendments, and strongly supports the State Water Board's consideration of voluntary agreements to help achieve desired benefits. The District believes that a science-based, voluntary settlement approach that incorporates effective non-flow measures and optimizes the use of limited water supplies is the best path to protecting and improving the Delta ecosystem while balancing other beneficial uses.

**The unimpaired flow approach is not an efficient way to use limited resources**

Our considerable experience and knowledge in ongoing Delta science efforts have convinced us that a singular focus on flow volumes is not likely to provide meaningful benefits to the Delta ecosystem and detracts from the collective ability to develop a comprehensive, holistic approach to environmental restoration and wise water management. Focus on increasing flows to meet unimpaired flow targets will reduce the flexibility to adapt to changing conditions. It will



also drain financial and water resources that could be used to adaptively address a suite of stressors, focusing first on those that are most harmful to the Delta ecosystem.

The District supports the ultimate goal of improving the Bay-Delta ecosystem; however, we continue to have significant concerns over the State Board's unwillingness to consider more efficient ways to use the State's limited water supplies. On page 34 of the State Water Board's Master Response 1.1, the State Water Board acknowledges that "a more natural flow pattern would be beneficial to [fish and wildlife] beneficial uses." However, the comments do not address the District's March 17, 2017 comments on the draft Substitute Environmental Document (SED) that "unimpaired flows" do not have the same form and function as natural flows in the highly-altered Bay Delta system, and that the best available science should be used to craft approaches that recognize and respond to competing needs. Focusing solely on unimpaired flows will cause higher flows in leveed and rock-lined channels which, merely increases the depth and velocity of the flow. In contrast, a more natural flow pattern is one where storm and spring-melt flows spill out onto the riparian and floodplain landscape and create increased spawning habitat, greater food resources, and shelter from predators that inhabit the major river corridors. Beneficial use of riparian and floodplain landscapes can be accomplished with physical modifications that reduce the stage at which floodplains are inundated, and focuses on the functions of flow, providing benefits to native fish while also sustaining other beneficial uses of that water. Simply shaping flows, as proposed by the State Water Board, will not achieve these desired ecosystem functions without using unreasonable amounts of water in the absence of physical modifications.

The State Water Board continues to propose an inefficient approach in its recently released Framework for the Sacramento/Delta Update to the Bay-Delta Plan. Available science indicates that non-flow measures, such as habitat restoration and food production, predation control, reduction of invasive species, and reduction of contaminant loading into the Bay Delta are critical to restoring the environmental health of the Bay Delta. The Framework seems to imply that in certain circumstances voluntary agreements will only result in the State Water Board imposing the lower end of the unimpaired flow range. However, the District urges the State Water Board to strive towards replacing the unimpaired flow requirement in its entirety with voluntary agreements that holistically address stressors through a combination of functional flows, physical modifications, and other non-flow measures.

**The proposed amendments will have a significant impact on SFPUC wholesale customers in Santa Clara County**

The District is extremely concerned about the potential impacts to Santa Clara County's water supplies from the combination of Phase 1 and Phase 2 amendments to the Bay-Delta Plan. Santa Clara County relies on water from the Delta watershed for 55 percent of its water supply on average. Forty percent is conveyed through the Delta by the State Water Project (SWP) and Central Valley Project (CVP) and 15 percent, or about 60 thousand acre-feet (TAF) per year, comes from San Francisco's Regional Water System (RWS).



According to the State Water Board's own analysis, the 40 percent of unimpaired flows scenario could result in an average reduction of up to 137 TAF in supplies to San Francisco's RWS each year during a repeat of the 1987 to 1992 drought. The District's March 2017 comment letter described the significant impacts to Santa Clara County's water supplies that would result from a flow objective requiring 40 percent of unimpaired flow from the Tuolumne River and other tributaries to the San Joaquin River. The State Water Board's response dismissed the District's concerns, claiming that the District inflated the severity of rationing to RWS customers within Santa Clara County by prorating allocations to wholesale customers for shortages in excess of 20 percent based on the allocations prescribed for a 20 percent shortage. To the contrary, SFPUC managers have concurred that the rationing scenario the District modeled is a reasonable potential outcome of the Phase 1 amendments.

To capture the potential range of impacts, the District updated its modeling to include an alternative approach to rationing consistent with assumptions made in the March 2017 report, "Bay Area Socioeconomic Impacts Resulting from Instream Flow Requirements for the Tuolumne River", prepared for SFPUC by Dr. David Sunding. The updated analysis provides a possible range of impacts to RWS deliveries to Santa Clara County during a repeat of the 1987-1992 drought, as shown in the table below. The modeling shows reductions in deliveries of about 18% or 11 TAF during a repeat of the drought even without the unimpaired flow requirements. The table shows the additional shortage that would be attributed to the unimpaired flow requirement. Additional details on the analysis are provided in Attachment 1.

*Table 1: Average Annual Incremental Impacts of Phase I Unimpaired Flow Requirements on Santa Clara County's RWS Wholesale Customers During a Repeat of the 1987 to 1992 Drought.*

Unimpaired Flow Requirement	Incremental Reduction in RWS Deliveries to Santa Clara County Wholesale Customers (Percent)	Incremental Reduction in RWS Deliveries to Santa Clara County Wholesale Customers (TAF)
30%	21%-32%	12-18
40%	35%-55%	21-32
50%	50%-78%	29-45

**The proposed amendments will have a significant impact on Santa Clara County's water supply reliability**

When the District integrates these shortages into the entire water supply portfolio for Santa Clara County, including recycled water, local surface water, groundwater, conservation, SWP and CVP supplies, and groundwater banking in the Central Valley, they result in significant impacts to the county's water supply reliability.



In the base case, without the proposed unimpaired flow requirements, District modeling indicates that county-wide shortages occur in about 32% of years with an average annual magnitude of 69 TAF<sup>1</sup>. The proposed flow requirements would increase the frequency of shortages by 4-15 percent and increase the average magnitude of those shortages by 5-19 percent. More details on the analysis and results are included in Attachment 1.

To minimize county-wide shortages caused by the reductions in deliveries to Santa Clara County's RWS wholesale customers, these customers would draw more heavily on local groundwater supplies which are necessary to help get through extended dry periods. Therefore, in addition to increased shortages, the County's overall system reliability would be decreased in response to the unimpaired flow requirements. The reductions to RWS's wholesale customers in Santa Clara County, in particular when considered in the context of the potential Phase 2 amendments, will have a significant impact on the ability of the District to provide reliable water supplies to our communities, businesses, and local streams, and make it more difficult for us to protect our local groundwater basins and prevent land surface subsidence. The reduction in local storage would make Santa Clara County more vulnerable to future dry periods, emergencies, and facility outages. These groundwater depletions will require additional supplies to recharge groundwater levels; such incremental supplies are not identified and their impacts are not analyzed in the Final SED.

**Water managers cannot rely on water transfers to compensate for these magnitudes of reductions in supplies**

The State Water Board also asserts that SFPUC's water rationing-only approach is not reasonably foreseeable in part because SFPUC would be more likely to secure replacement supplies than to "*undertake a course of action that would have potentially devastating effects on the San Francisco Bay Area economy and that would be expected to be widely unacceptable to residents of the Bay Area community*" (See SED Master Response 8.5 at 19). However, the State Water Board's transfers-only approach is not reasonably foreseeable. The District previously commented that the District and SFPUC will be hard pressed to find the volume of transfer supplies that the State Water Board envisions. The State Water Board's response does not address our stated concern that in dry years demand exceeds available transfer supplies, and sellers face political and environmental pressures to abstain from transferring water outside of their region. Implementation of the 40 percent unimpaired flow requirements will exacerbate this situation, especially in light of the State Water Board's reference to future, unknown minimum reservoir carryover storage targets (see SED Appendix K at 28) and the recent Framework for the Sacramento/Delta Update to the Bay-Delta Plan, which contemplates an additional two million-acre-foot (MAF) reduction in available water supplies resulting from the proposed 55 percent unimpaired flow requirement.

The State Water Board's response also does not address our concern that in years when transfer supplies are more plentiful, conveyance capacity across the Delta can be severely

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<sup>1</sup> Based on modeling using 94-years of hydrologic data (1922 to 2015) and future demands.

limited. For example, in 2016, there was no conveyance capacity for new transfers of non-SWP/CVP water. Nor does the State Water Board response consider the impact of conveyance losses of up to 35% on the quantity or cost of transfer supplies. Attachment 1 provides additional information supporting the District's concerns with the State Water Board's analysis of water transfer availability and cost.

**Concerns regarding Phase 1 amendments are amplified given the recently released Phase 2 Framework for the Sacramento/Delta Update to the Bay-Delta Plan (Phase 2 Framework)**

The State Water Board's recently released Phase 2 Framework proposes a similar, but even higher unimpaired flow requirement than that proposed in Phase 1 for the San Joaquin River and its tributaries, repeating an approach that promotes the inefficient use of limited water supplies and magnifying the water supply impacts produced by the Phase 1 unimpaired flow requirements. The District's analysis of Phase 1 impacts likely understates water supply impacts, especially in light of the State Water Board's reference to future, unknown minimum reservoir carryover storage targets (see SED Appendix K at 28) and the Phase 2 Framework. While it is still unknown how much of the supply reduction from the Phase 2 Framework will be assigned to the SWP and CVP, it is likely that the District will see additional impacts to its water supplies, either as reductions in SWP and CVP imports which make up 40 percent of the District's water supplies on average, or as reduced availability of supplemental transfer supplies. The District requests that the State Water Board consider other more reasonable options to make the best use of California's precious water supplies, such as utilizing a functional flow approach coupled with physical modifications to optimize biological benefits, and allowing more time for voluntary settlement agreements to develop, instead of perpetuating the unimpaired flow approach in the Phase 2 amendments.

The District has long been committed to both reliable water supplies and environmental stewardship. We continue to encourage the State Water Board to develop solutions that meet both of these objectives.

Sincerely,



Norma J. Camacho  
Chief Executive Officer

Attachment 1: Technical Comments on Proposed Amendments to Bay-Delta Plan

cc: Santa Clara Valley Water District Board Members



**Attachment 1**  
**Technical Comments on Proposed Amendments to Bay-Delta Plan**

**Summary**

On March 17, 2017 the Santa Clara Valley Water District (District) submitted comments on the proposed amendments to the Bay-Delta Plan and draft Substitute Environmental Document (SED). This attachment provides information in response to the State Water Board's response to our comments and additional analysis of significant impacts to Santa Clara County, focusing on three areas:

1. Additional information in response to State Water Board comments regarding the District's March 17, 2017 comment letter.
2. Updated analysis on the potential impacts to Santa Clara County from the State Water Board's proposed adaptive range of 30 to 50 percent unimpaired flows.
3. Additional information on the cost and availability of water transfers as potential replacement supplies to minimize impacts of water supply reductions.

**Additional information in response to State Water Board comments regarding the District's March 17, 2017 comment letter**

The proposed amendments to the Bay-Delta Plan would establish an adaptively managed flow requirement on the Tuolumne River that would range between 30 percent and 50 percent of unimpaired flow with a starting point of 40 percent. The Final SED estimates impacts to San Francisco Public Utilities Commission (SFPUC) water reliability in Appendix L, indicating that San Francisco's Regional Water System (RWS) water supplies could experience an average shortage of 137 TAF during each year of a repeat of the 1987-1992 drought. Such a shortage would impact Santa Clara County's water supply reliability because the County relies on RWS supplies to meet 15 percent of its demand. The District's March 17, 2017 comment letter included an analysis of how this could impact the District's and Santa Clara County's water supply reliability. The State Water Board's response appears to dismiss the District's concerns by implying the District overstated potential impacts. Key issues raised by the State Water Board and the District's response are provided below.

- a) *The State Water Board claims the District amplified water supply effects by using SFPUC's future demands instead of fiscal year 2012-2013 actual demands or fiscal year 2015-2016 drought demands.*

Response: In a water supply planning approach, which the State Water Board itself assumes affected entities would use<sup>1</sup>, it is standard practice to analyze and plan for

<sup>1</sup> "The SED analysis is based on the reasonable assumption that affected entities such as SFPUC would use a water supply planning approach, to prepare for times when water supplies would be reduced." State Water Board Master Response 8.5 at 5.



future demands. District staff is unaware of any planning analysis that utilizes past demands to assess a future impact, as this typically does not provide for a well-reasoned analysis.

- b) *The State Water Board claims the District amplified water supply effects by pro-rating SFPUC's wholesale rationing approach for system-wide shortages greater than 20 percent.*

Response: The District disagrees with this claim given that SFPUC and their wholesale customers do not have an agreed upon plan to allocate supplies for system-wide shortages greater than 20 percent. Extrapolating from data on existing conditions to predict responses outside of the known range of responses is a common and accepted practice in water supply planning processes. With public health and safety at stake, it is entirely reasonable and appropriate to make conservative assumptions for water supply planning purposes.

However, to evaluate the full range of potential water supply impacts, the District updated its analysis to also include a fixed allocation approach resulting in lower cutbacks to SFPUC wholesale customers and larger cutbacks to SFPUC retailers. This fixed allocation approach is used by the Brattle Group in the report SFPUC attached to its March 17, 2017 comment letter on the Revised SED<sup>2</sup>, as well as a more recent 2018 Brattle Group report that SFPUC submitted to FERC<sup>3</sup>. The results of this updated analysis are provided below.

- c) *The State Water Board claims the District amplified water supply effects by assuming the Scenario 2 interpretation of the Fourth Agreement.*

Response: The Fourth Agreement between SFPUC and Turlock and Modesto Irrigation Districts allocates responsibility to meet instream flow requirements below New Don Pedro Reservoir that may be imposed on the irrigation districts during the FERC relicensing, among other things. According to SFPUC's March 2017 comment letter to the State Water Board, Article 8 of the Fourth Agreement could result in San Francisco being responsible to provide approximately 51.7 percent of the State Water Board's proposed flow requirement which corresponds to Scenario 2 in the State Water Board's analysis. In contrast, the State Water Board's Scenario 1 assumes SFPUC and the irrigation districts might modify their agreement whereby SFPUC might agree to provide monetary compensation to the irrigation districts in exchange for the irrigation districts agreeing to provide all of the water necessary to meet the new flow requirements. As SFPUC points out in footnote 6 of their March 2017 comment letter, "As a water supply provider to approximately 2.6 million people throughout the Bay

<sup>2</sup> San Francisco Public Utilities Commission. 2017. *Bay Area Socioeconomic Impacts Resulting from Instream Flow Requirements for the Tuolumne River*. March 2017

<sup>3</sup> San Francisco Public Utilities Commission. 2018. *Socioeconomic Impacts of Water Shortages within the Hetch-Hetchy Regional Water System Service Area*. January 2018

Area, San Francisco must utilize worst-case scenarios for water supply planning purposes.”

- d) *The State Water Board claims the water rationing-only approach used in the District's analysis is not a reasonably foreseeable method for compliance and that its use amplified water supply effects*

Response: While the District will make every reasonable effort to compensate for a reduction in available supplies, there is no guarantee that any such efforts will be successful. The District is already planning to invest about \$2 billion over the next ten years in new water supply projects to help fill the gap between future water demands and supplies that is predicted to occur even without the State Water Board's proposed amendments. Under such compromised conditions imposed by the proposed amendments, water rationing may be the only feasible recourse open to the District.

In addition, the State Water Board states that transfers can be secured to offset any water supply reductions caused by the proposed amendments. (see SED Appendix L, at 26). The District does not agree that the State Water Board's approach is reasonably foreseeable. Based on our experience, the District will be hard pressed to find the volume of transfer supplies necessary to compensate for reductions as a result of the proposed amendment. In dry years, demand exceeds available transfer supplies, and sellers face political and environmental pressures to abstain from transferring water outside of their region. Implementation of the proposed Phase 1 reductions in supply will exacerbate this situation, increasing the demand on even more limited water supplies. In years when transfer supplies are more plentiful, conveyance capacity across the Delta can be limited. For example, in 2016 there was no conveyance capacity for new transfers of non-SWP/CVP water. Conveyance losses are also high; as much as 35 percent of purchased water can be lost in transit.

Whether SFPUC and the District choose to address the potential water supply shortage created by the State Water Board's proposed amendments with water rationing, water transfers, or some other method does not change the fact that the State Water Board's own analysis estimates there would be an average shortage in SFPUC water supplies of 137 TAF during each year of a repeat of the 1987-1992 drought. Based on SFPUC's predicted future demand of 297 TAF, this would constitute a 46 percent shortage in supply that SFPUC and its water users, including common customers with the District, would need to find some way, or ways to replace. In relation to SFPUC's fiscal year 2012-2013 demands of 250 TAF, this reduction equates to a shortfall of almost 55 percent of the water supply for approximately 2.6

million people and the 19<sup>th</sup> largest economy in the world<sup>4</sup>. That is a very large quantity of water to make up by any approach.

The District's analysis likely understates potential water supply impacts, especially in light of the State Water Board's reference to future, unknown minimum reservoir carryover storage targets (see SED Appendix K at 28) and the recent Phase 2 Framework for the Sacramento/Delta Update to the Bay-Delta Plan which contemplates an additional two million-acre-feet reduction in available water supplies resulting from the proposed 55 percent unimpaired flow requirement. While it is still unknown how much of that supply reduction will be assigned to the State Water Project (SWP) and Central Valley Project (CVP), it is probably a safe assumption that the District will see additional impacts to its water supplies, either as reductions in SWP and CVP imports or as reduced availability of supplemental transfer supplies, if the Bay-Delta Plan is updated according to the Framework.

- e) *The State Water Board states that “the SCVWD analysis does not display modeling results in context of the complete water supply portfolio for SCVWD. The RWS provides approximately 15 percent of SCVWD’s water supply portfolio. Any reductions to the SFPUC portion of SCVWD’s water supply portfolio are likely to be addressed by the substantial flexibility they currently have in their system (e.g., use of water from the Central Valley Project [CVP] or SWP). (See SED Master Response 8.5 at 50)”*

Response: As described in the District's March 17, 2017 comment letter, the District's modeling analysis did indeed include and integrate the entire water supply portfolio for Santa Clara County, including recycled water, local surface water developed by both the District and by other agencies such as San Jose Water company, groundwater, conservation, SWP and CVP supplies, and groundwater banking in the Central Valley. It is through this comprehensive analysis that optimizes the functionality of its various supplies that specific shortage impacts have been determined. The State Water Board's statement that reductions in SFPUC deliveries would be addressed by flexibility in the District's system is unsupported by any analysis and is contrary to the careful work produced by those that understand and operate the District's water supply system. Further, the State Water Board claim that “any reductions to the SFPUC portion of SCVWD’s water supply portfolio are likely to be addressed by the substantial flexibility they currently have in their system (e.g., use of water from the Central Valley Project [CVP] or SWP)” does not take into consideration the State Water Board's recent Phase 2 Framework which contemplates an additional 2 million acre-feet reduction in available water supplies resulting from the proposed 55 percent unimpaired flow requirement on the Sacramento River and its tributaries and how that requirement may impact those SWP and CVP supplies.

<sup>4</sup> Bay Area Council Economic Institute. 2018. *Continuing Growth and Unparalleled Innovation: Bay Area Economic Profile, Tenth in a Series*. July 2018.

**Updated analysis on the potential impacts to Santa Clara County from the State Water Board's proposed adaptive range of 30 to 50 percent unimpaired flows**

The District's March 17, 2017 comment letter only included analysis of the proposed 40 percent of unimpaired flow requirement. The District has since updated its Water Evaluation and Planning (WEAP) model to better reflect future conditions and operations and to evaluate the full proposed adaptive range of 30 to 50 percent of unimpaired flow. The District also evaluated the range of possible shortage allocation scenarios between SFPUC and its wholesale customers.

Updates to the WEAP model in the updated analysis include reduced demand projections compared to the 2015 Urban Water Management Plan 2040 demand levels to reflect the following:

- 1) Assumption that retailers will meet their 20x2020 water use reduction targets (per Senate Bill X7-7)
- 2) Additional conservation savings based on the District Water Use Efficiency Model and new demand management programs
- 3) Updated growth projections based on studies from retailers and regional agencies

In addition to changes in demand projections, the District removed some potential infrastructure projects from the model that have not yet been approved by the District's Board of Directors or are not under construction since there are significant regulatory and financial uncertainties (e.g., indirect potable reuse). In their place, District Board-approved planning projects related to conservation, demand management, and storm water capture were added to the model.

The District also updated imported water assumptions to better reflect future regulatory assumptions. The original WEAP model used an imported water scenario representing existing regulatory conditions. The District replaced the imported water dataset with the scenario for greater outflows to the San Francisco Bay that is provided in the Department of Water Resources' 2015 Delivery Capability Report.

The District also evaluated an additional shortage allocation approach in which SFPUC and its wholesale customers agree to allocate shortages greater than 20 percent according to the same split specified in the Water Shortage Allocation Plan for a 20 percent shortage. This fixed allocation approach is used by the Brattle Group in the report SFPUC attached to its March 17, 2017 comment letter on the Revised SED<sup>5</sup>, as well as a more recent 2018 Brattle Group report that SFPUC submitted to FERC<sup>6</sup>. The fixed allocation approach allocates at least 62.5 percent of the available RWS supplies to the wholesale customers and results in more water being available to these customers than under the prorated allocation approach the District used for its March 17, 2017 comment letter on the Revised SED. However, SFPUC has provided no guarantee that the fixed allocation approach would be employed during a future shortage of greater than 20 percent, and so it can best be used as an optimistic bookend when considering the range of impacts to Santa Clara County. The modeling shows reductions in deliveries during a repeat of the drought even without the unimpaired flow

<sup>5</sup> San Francisco Public Utilities Commission. 2017. *Bay Area Socioeconomic Impacts Resulting from Instream Flow Requirements for the Tuolumne River*. March 2017

<sup>6</sup> San Francisco Public Utilities Commission. 2018. *Socioeconomic Impacts of Water Shortages within the Hetch-Hetchy Regional Water System Service Area*. January 2018

requirements. The table below shows the additional shortage that would be attributed to the unimpaired flow requirement.

**Table 1: Average Annual Incremental Impacts of Phase 1 Unimpaired Flow Requirements on SFPUC's RWS, its Wholesale Customers, and its Wholesale Customers in Santa Clara County During a Repeat of the 1987 to 1992 Drought.**

Unimpaired Flow Requirement	SFPUC RWS System-wide Shortage <sup>a</sup>		SFPUC RWS Wholesale Shortage <sup>b</sup>		SFPUC RWS Wholesale Shortage (Santa Clara County) <sup>b,c</sup>	
	Percent	(TAF/yr)	Percent	(TAF/yr)	Percent	(TAF/yr)
30%	20%	60	18%-27%	37-56	21%-32%	12-18
40%	34%	101	41%-48%	63-99	35%-55%	21-32
50%	49%	145	44%-69%	91-141	50%-78%	29-45

<sup>a</sup> Per SFPUC's analysis of a 2040 demand of scenario (297 TAF/yr). Represents the median shortage level over the 1987-1992 period.

<sup>b</sup> The Water Shortage Allocation Plan between SFPUC and the wholesale customers only specifies allocations for system-wide shortages of up to 20 percent. For shortages greater than 20 percent the District considered a range of possible outcomes bookended by two different assumptions:

1. Fixed allocation approach: Wholesale customers would continue to receive the same percentage share of the water as dictated for a 20 percent shortage under the Water Shortage Allocation Plan (62.5 percent).

or

2. Prorated allocation approach: Shortages to wholesale customers above 20 percent would be prorated based on the allocations under a 20 percent shortage. For example, since a 20 percent system-wide shortage results in a 28 percent shortage to the wholesale customers, a 40 percent system-wide shortage would result in a 56 percent shortage to the wholesale customers.  $40\% \times (28\% / 20\%) = 56\%$ .

<sup>c</sup> Assumes demand of 59 TAF/yr based on projections in the Urban Water Management Plans for the affected Santa Clara County agencies. Full delivery projections are smaller than total allocated amount.

The District used the updated WEAP model to analyze how the projected shortages to SFPUC RWS wholesale customers in Santa Clara County would affect the entire District service network under the full proposed adaptive range of unimpaired flow requirements and under both water shortage allocation approaches.

The District is already in the process of updating its Water Supply Master Plan to respond to potential future water supply shortages. The Water Supply Master Plan will describe new water supply investments the District is planning to make to provide a reliable and sustainable water supply in a cost-effective manner. Many of these new water supply investments are already included in the District's base case scenario. In the base case, without the proposed unimpaired flow requirements, District modeling indicates that county-wide shortages occur in about 32 percent of years with an

average annual magnitude of 69 TAF<sup>7</sup>. The proposed flow requirements would increase the frequency of shortages by 4 to 15 percent and increase the average magnitude of those shortages by 5-19 percent.

*Table 2. Percent of years Santa Clara County could be in shortage based on WEAP analysis<sup>7</sup>.*

SFPUC RWS Shortage Allocation Approach	Percent of Years in Shortage			
	No UF Requirement	30 % UF	40% UF	50% UF
Fixed	32%	36%	37%	43%
Prorated	32%	38%	43%	47%

*Table 3. Average Magnitude of shortages in Santa Clara County based on WEAP analysis<sup>7</sup>.*

SFPUC RWS Shortage Allocation Approach	Average Magnitude of Shortage (TAF)			
	No UF Requirement	30% UF	40% UF	50% UF
Fixed	69	73	76	76
Prorated	69	83	82	79 <sup>8</sup>

**Additional information on the cost and availability of water transfers as potential replacement supplies to minimize impacts of water supply reductions**

The State Water Board asserts that the impacts from the predicted supply reductions will not be as great as SFPUC and the District present because the affected water agencies will be able to secure transfer supplies to make up the difference. In its March 17, 2017 letter, the District commented that based on past experience it is not reasonable to assume the Bay Area would be able to secure a sufficient volume of transfer supplies to make up for the reductions anticipated under the 40 percent unimpaired flow requirement. The State Water Board's response does not address our stated concern that in dry years, demand exceeds available transfer supplies, and sellers face political and environmental pressures to abstain from transferring water outside of their region. Implementation of the 40 percent unimpaired flow requirements will exacerbate this situation, especially in light of the

<sup>7</sup> Based on modeling using 94-years of hydrologic data (1922 to 2015) and future demands.

<sup>8</sup> The magnitude of shortage decreases in the 50 percent unimpaired scenario relative to the 30 and 40 percent unimpaired scenarios because there are a greater number of shortages, many of which are smaller shortages that decrease the average size of shortage.

State Water Board's reference to future, unknown minimum reservoir carryover storage targets (see SED Appendix K at 28) and the recent Framework for the Sacramento/Delta Update which contemplates an additional two million acre-feet reduction in available water supplies resulting from the proposed 55 percent unimpaired flow requirement.

As an example, during the recent drought, surface water supplies, including available transfer supplies, were limited throughout California, resulting in the drawdown of local groundwater levels to the point of concern that land subsidence could be triggered in Santa Clara County, and significant land subsidence did indeed occur in the Central Valley. There were few sellers of transfer water and many buyers, and many of the potential sellers were reluctant to sell. With the State Water Board's 30 to 50 percent unimpaired flow requirement on the San Joaquin River and its tributaries, along with the potential 45 to 65 percent unimpaired flow requirement on the Sacramento River and its tributaries, there will be even less water available for transfer and more competition for that limited water during an extended drought.

The State Water Board's response also does not address our concern that in years when transfer supplies are more plentiful, conveyance capacity across the Delta and in SWP and CVP facilities can be limited. For example, in 2016, there was no conveyance capacity for new transfers of non-SWP/CVP water. Even if the District had been able to locate and negotiate additional transfer agreements, it would not have been able to arrange delivery of those supplemental supplies.

Finally, the State Water Board response does not consider the impact of conveyance losses on the quantity or cost of transfer supplies. The Department of Water Resources and U.S. Bureau of Reclamation apply carriage water losses to supplies transferred across the Delta that have ranged from 20 to 35 percent of the purchased water quantity. In drought years, losses have trended towards the higher end of this range. In other words, for every 1,000 acre-feet of water purchased, the buyer may only receive 650 acre-feet. This loss not only decreases the volume of water obtained but also increases the actual cost per acre foot of the water. For example, Table 8.5-6 in SED Master Response 8.5 lists the price at \$665 per acre-foot for several purchases by the San Luis & Delta-Mendota Water Authority in 2015. However, in 2015, the U.S. Bureau of Reclamation applied a 35 percent carriage water loss which means the San Luis & Delta-Mendota Water Authority and its member agencies, including the District, received 35 percent less water than they paid for, and therefore, the cost for water actually received was \$1,023 per acre-foot.

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July 27, 2018

**Via Electronic and U.S. Mail**

Ms. Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814  
LSJR-SD-Comments@waterboards.ca.gov

RE: *San Francisco's Comments to Plan Amendment and Final SED.*

Dear Ms. Townsend,

This office represents the San Francisco Public Utilities Commission ("SFPUC"), operator of the Hetch Hetchy Regional Water System ("RWS"), which provides water to over 2.6 million people throughout the Bay Area. On behalf of the SFPUC and the City and County of San Francisco ("San Francisco"), we respectfully request that the State Water Resources Control Board's ("Board") consider our comments to the proposed updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Plan Amendment") and reconsider its decision to preclude any additional comments on the Final Substitute Environmental Document for the Plan Amendment ("Final SED").

On July 18, 2018, San Francisco requested that the Board recirculate the Final SED, or, at the very least, expand the scope of permissible comments to include comments on the Final SED, extend the comment deadline by 30 days, and postpone the public hearing ("San Francisco's Letter"). By letter dated July 19, 2018, the Board denied San Francisco's request in its entirety, stating that recirculation is not required under the California Environmental Quality Act ("CEQA") or the CEQA Guidelines because the changes in the Final SED "do not result in any new potentially significant adverse impacts on the environment, any substantial increase in the severity of potentially significant adverse impacts on the environment, or establish any new feasible project alternatives or mitigation measures."<sup>1</sup> But San Francisco never asserted that recirculation was required under those bases.

Instead, as noted in San Francisco's Letter, Title 14, California Code of Regulations, section 15088.5(a)(4) provides that recirculation is also required if "[t]he draft [Environmental

<sup>1</sup> Letter from Eileen Sobeck, Executive Director, State Water Resources Control Board, to Dennis Herrera, City Attorney, and Jonathan Knapp, Deputy City Attorney, San Francisco City Attorney's Office, July 19, 2018, at 2.

Impact Report (“EIR”)] was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.” (*See also* Cal. Code Regs., tit. 23, § 3779(e).) The Board’s analysis in the Final SED of San Francisco’s potential actions in response to implementation of the Plan Amendment is “fundamentally and basically inadequate and conclusory in nature” because, among other reasons, it excludes any consideration of increased water supply rationing. The Board’s July 18, 2018 letter did not respond to this argument at all.

Under protest, and without waiving any legal claims that the Board has violated, among other things, its obligation to recirculate the Final SED under the CEQA Guidelines and California Code of Regulations, Title 23, California Code of Regulations, section 3779(e), San Francisco submits the following comments and urges the Board not to adopt the Plan Amendment or the Final SED.

### **San Francisco’s Comments on the Plan Amendment**

#### **1. The Board Is Not Authorized to Require Implementation of the Water Quality Objectives Through the Adoption of Regulations.**

The Plan Amendment states—we believe for the first time since the Board’s Plan Amendment process began over six years ago—that “the State Water Board may implement the [water quality] objectives by conducting water right proceedings, *which may include adopting regulations*, conducting adjudicative proceedings, or both, that take into consideration the requirements of the Public Trust Doctrine and the California Constitution, article X, section 2.”<sup>2</sup> The Board states that the addition of the phrase “including adopting regulations” is intended to clarify the “implementation measures within the State Water Board’s authority.”<sup>3</sup> However, the Board has no authority to implement the Plan Amendment through such quasi-legislative means.

This newly stated implementation authority—*i.e.*, conducting water rights proceedings by rulemaking—appears to be a continuation and expansion of the Board’s recent flawed proposal to adopt a Regulation on Waste and Unreasonable Water Uses to implement conservation measures by rulemaking. As the SFPUC informed the Board in a letter dated December 22, 2017, in the context of the waste and unreasonable use regulations, the Board does not have authority to restrict or limit the exercise of water rights without due process of law.<sup>4</sup> Water rights are real property that can be restricted only after the opportunity for a hearing and the presentation of evidence. To do otherwise would constitute an unlawful confiscation of property without due process of law. The Board’s exercise of authorities under the Public Trust Doctrine and article X section 2 of the California Constitution is adjudicative in nature, and demands fact-finding and balancing of numerous factors and consideration of the water rights of other diverters. This can only be accomplished by conducting comprehensive water right adjudicative proceedings. The Board’s rulemaking authority simply does not extend to restrictions on the otherwise lawful exercise of water rights.

<sup>2</sup> Appendix K at 26 (emphasis added).

<sup>3</sup> Master Response 2.1 at 4. *See also id.* at 12

<sup>4</sup> Comment Letter – Proposed “Prohibiting Wasteful Water Use Practices” Regulation, jointly submitted by the San Francisco Public Utilities Commission and the Bay Area Water Supply & Conservation Agency, December 22, 2017, attached hereto as Exhibit 1.

Further, even if the Board had the authority to implement the Plan Amendment through rulemaking, the Final SED fails to analyze the exercise of such authority as required by CEQA. This new proposed basis of implementation authority was not described in the Draft SED or prior versions of the proposed program of implementation and the public and affected parties have not had an opportunity to comment on the potentially significant environmental impacts of a rulemaking implementation approach. Moreover, the Final SED does not fully describe the proposed action and does not analyze the potential environmental impacts from a rulemaking approach such as might be the case if the Board does not take water rights priorities into account when it allocates responsibilities to water users to meet the flow requirements in the Plan Amendment. By not describing a known potential implementation action in the Final SED, the Final SED inappropriately segments environmental review of the proposed action. As a result, the Final SED fails to identify potentially significant impacts that may result from the proposed action and the potential effects of the action as a whole. The Board must recirculate the proposed program of implementation to more fully describe how the Board might “conduct water right proceedings [by] adopting regulations,” revise the Final SED to analyze the potential environmental impacts associated with that approach, and recirculate the Final SED.

### **San Francisco’s Comments on the Final SED**

#### **1. The Board Failed to Analyze Impacts to the Bay Area from Increased Water Supply Rationing.**

In its Responses to Comments, the Board recognizes that if it implements the Plan Amendment and a sequential-year drought occurs, San Francisco’s diversions from the Tuolumne River—on which the SFPUC relies to meet approximately 85% of demand for drinking water throughout the Bay Area—could be severely reduced.<sup>5</sup> For example, assuming a reoccurrence of the historical hydrological conditions preceding and including the 1987-92 drought, under a 40% unimpaired flow (“UIF”) objective San Francisco would, on average, be responsible for contributing approximately 116 million gallons per day (“mgd”) per year for each year of the six-year drought period, or more than 43% of the water needed in the Bay Area.<sup>6</sup> San Francisco has repeatedly explained to the Board that faced with such severe reductions it would be compelled to increase water supply rationing throughout the RWS service area.<sup>7</sup> Yet the

<sup>5</sup> See *e.g.*, Board’s Responses to Comments, Master Response 8.5, at 17 (where the Board incorrectly, as explained below, identifies the potential deficit to San Francisco’s water supply as 119,000 acre-feet/year or approximately 106 million gallons per day (“mgd”)).

<sup>6</sup> See Declaration of Matt Moses in Support of Comments by the City and County of San Francisco to the Draft Substitute Environmental Document in Support of Potential Changes to the Bay-Delta Plan, *see* Attachment 1 to the Moses Decl., SFPUC Analysis of Proposed Changes to Tuolumne River Flow Criteria, March 14, 2017 (“2017 SFPUC Water Supply Analysis”), at 17, Table 9 (showing that the reduction would be 129,884 acre-feet (“AF”)/year for each of the 6 years; 129,884 AF = 116 mgd.) This analysis assumes an RWS demand of 265 mgd, which is San Francisco’s contract obligation and consistent with projected 2040 RWS demand.

<sup>7</sup> The analysis in these Comments assumes a 51.7% flow contribution by San Francisco. As a water supply provider to over 2.6 million people throughout the Bay Area, San Francisco must utilize worst-case scenarios for water supply planning purposes. In presenting the potential water supply, environmental, and socioeconomic effects from certain interpretations of the Raker Act and the Fourth Agreement San Francisco does not waive arguments it may have about how the Raker Act or Fourth

Board's analysis of San Francisco's potential actions in response to implementation of the Plan Amendment entirely excludes consideration of *any* increase in water supply rationing over the 20% level allowed by the SFPUC's current drought management plan.<sup>8</sup> Instead, the Board has based its entire analysis of San Francisco's potential actions in response to the Plan Amendment on the unsupported assumption that San Francisco will be able to develop sufficient replacement water supplies in approximately four years, *i.e.*, prior to the Board's intended implementation of the Plan Amendment in 2022.<sup>9</sup> It is patently unreasonable for the Final SED to omit consideration of even the *possibility* that San Francisco would need to increase water supply rationing in these circumstances. And as we explained in our July 17, 2018 letter, this critical omission precludes meaningful public review of and comment on the most reasonably foreseeable water supply, environmental, and economic effects of the Plan Amendment on the Bay Area.

## **2. The Board Failed to Use San Francisco's Eight-and-a-Half-Year Design Drought in its Modeling of Water Supply Impacts.**

Following the 1987-92 drought, the SFPUC implemented the "design drought," which is a water supply planning methodology that ensures the SFPUC will retain adequate storage to withstand an eight-and-a-half year drought without imposing more than 20% system-wide rationing.<sup>10</sup> The SFPUC subsequently approved the design drought as part of its adoption of the goals and objectives for the Water System Improvement Program ("WSIP").<sup>11</sup> The Final SED rejects use of San Francisco's design drought because it represents hydrological conditions more severe than historically experienced by the RWS.<sup>12</sup> CEQA requires, however, that the Board

Agreement should or will be interpreted in future proceedings before the Board, the Federal Energy Regulatory Commission, courts of competent jurisdiction, or in any other context.

<sup>8</sup> See *e.g.*, Board's Responses to Comments, Master Response 1.1: General Comments ("Master Response 1.1"), at 47 (where the Board states it intends to implement the Plan Amendment by 2022); *see also* Master Response 8.5 at 49 (where the Board explains that rationing by the SFPUC throughout the RWS service area in response to the Plan Amendment would not exceed 20%, the maximum level of system-wide rationing that the SFPUC allows in its current drought management plan).

<sup>9</sup> See *e.g.* Board's Responses to Comments, Master Response 1.1 at 47.

<sup>10</sup> See *e.g.*, Comments by the City and County of San Francisco to the Draft Substitute Environmental Document in Support of Potential Changes to the Bay-Delta Plan ("San Francisco's 2017 Comments"), March 17, 2017, at 18-19, n.26 (explaining that the SFPUC's design drought is based on the hydrology of the six years of the worst sequential historical drought, 1987-1992, plus the two and a half years of the 1976 1977 drought, for a combined total of an eight-and-a-half-year design drought sequence).

<sup>11</sup> San Francisco Public Utilities Commission, Resolution No. 08-0200, attached hereto as Exhibit 2 (where the SFPUC approved the performance objective to "[m]eet dry-year delivery needs through 2018 while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts," which incorporates the eight-and-a-half year design drought methodology).

<sup>12</sup> Master Response 8.5 at 15, 18.

consider impacts to San Francisco from implementation of the Plan Amendment in accordance with the SFPUC's existing, adopted policies, such as its design drought.<sup>13</sup>

San Francisco developed its design drought after having lived through the consequences of basing the SFPUC's water supply operations "in accordance with rules based only on historical data."<sup>14</sup> Prior to the 1987-1992 drought, the SFPUC had based its water supply planning on "the experience of many years of historical operation, including the knowledge of previous drought events such as had occurred in 1976-1977."<sup>15</sup> It was therefore inadequately prepared when the 1987-1992 drought broke new records. As explained by the General Manager of the SFPUC during that drought, San Francisco "learned the painful lesson as to the adverse impacts that are caused by not planning for a drought worse than any experienced to date . . . . when the hydrology of the Tuolumne River and the City's operations through 1990 and early 1991 had created a situation where a 45 percent rationing program among City customers was initiated – a level of rationing that was found to be intolerable and not achievable."<sup>16</sup> "[G]iven the dire consequences of just being wrong in the forecasting of the length of drought that may hit the City" San Francisco responsibly relies on its water supply planning methodology to ensure it retains adequate water supplies during sequential-year droughts.<sup>17</sup> CEQA requires that the Board must take into account San Francisco's design drought when assessing impacts to the Bay Area from implementation of the Plan Amendment.

**3. Although the Board Concedes that the SFPUC's Hydrological Model is More Precise than the Board's Model, it Refuses to Use the SFPUC's Modeling Results.**

The Board concedes that the SFPUC's Hetch Hetchy and Local System Model ("HHLSM") model is more precise than the Board's Water Supply Effects ("WSE") model for calculating water supply effects to the RWS service area, yet the Board fails to use the HHLSM modeling results in the Final SED.<sup>18</sup> For example, instead of using the correct HHLSM figure

<sup>13</sup> Master Response at 52 (emphasis added) (where Board mischaracterizes San Francisco's adherence to the approved design drought methodology, the SFPUC's associated modeling of water rationing that would be required under a 40% UIF objective across the historical hydrology, and San Francisco's other supporting evidentiary submissions and related comments as a mere "statement of intent" that the Board may disregard at its own discretion: "*a statement of intent regarding future extreme water rationing is not sufficient and reliable information on which to base an environmental analysis of related impacts.*")

<sup>14</sup> Affidavit of Anson B. Moran ¶¶ 7, 16 Project No. 2299, January 26, 1994 (referred to below as "Moran Decl."), attached to San Francisco's 2017 Comments as Exhibit 7.

<sup>15</sup> Moran Decl. ¶ 7.

<sup>16</sup> *Id.* ¶ 8.

<sup>17</sup> *Id.* ¶ 16.

<sup>18</sup> Master Response 8.5 at 16 (explaining, [w]hile the HH/LSM is a more detailed model that simulates operation of the RWS service area, the WSE model and water bank balance provide similar water supply effects as the HH/LSM under the SFPUC middle demand level and SED Scenario 2"); *id.* at 18 (where the Board acknowledges, "[t]he SED uses a simple method to assess potential water supply reductions in the absence of having access to a model that simulates the operation of the entire RWS service area.").

for potential annual reductions to the SFPUC's water supply under a 40% UIF objective, assuming San Francisco's contract obligation of 265 mgd and a reoccurrence of the historical hydrological conditions preceding and including the 1987-92 drought, *i.e.*, 116 mgd or 129 thousand acre-feet/year ("TAF"), the Board continues to use 106 mgd or 119 TAF.<sup>19</sup> Similarly, although HHLSM shows significant impacts to San Francisco under a 40% UIF objective across the historical hydrological record, including years other than the 1987-1992 drought period, the Board continues to assert, "in all other years [outside of the 1987-92 drought period], SFPUC's water supply would not be affected and would be replenished."<sup>20</sup>

The Board's flawed analysis of water supply impacts to San Francisco from implementation of the Plan Amendment is attributable to two primary factors. First, the Board ignores San Francisco's dry-year management operations, including use of the design drought, and thus does not begin counting water supply impacts to the RWS until later in a drought sequence. This means that "shorter dry periods in which SFPUC experiences water supply shortages are not captured" in the Board's modeling.<sup>21</sup> Instead, the Board employs an "arbitrary" method of counting impacts to San Francisco that "is not based on SFPUC practices or explained logically in the [Board's] analysis."<sup>22</sup>

Second, the Board applies an incorrect percentage for determining the level of San Francisco's contribution to flow requirements on the Tuolumne River under the 1966 Fourth Agreement ("Fourth Agreement"), and thus over counts impacts to the RWS for the dry years in which the Board acknowledges that the SFPUC's water supply would be reduced under implementation of the Plan Amendment. Specifically, instead of using 51.7%, the percentage of increased Tuolumne River flows that San Francisco may be responsible for contributing under the Fourth Agreement,<sup>23</sup> the Board's analysis incorrectly applies 57.1% to calculate San

<sup>19</sup> *Id.* at 17 (where the Board identifies—but does not correct—the discrepancy).

<sup>20</sup> *Id.* at 13; *cf.* 2017 SFPUC Water Supply Analysis at 11 (showing that, assuming San Francisco's contract obligation of 265 mgd, under a 40% UIF objective on the Tuolumne River San Francisco would also be compelled to impose water supply rationing of 40% or more if the historical hydrological conditions experienced in the following fiscal years were to reoccur: fiscal years 1924-25, 1929-32, 1933-35, 1948-49, 1955-56, 1960-63, 1964-65, 1972-73, 1976-78, 1987-88, 1994-95, and 2007-09). Although FY 1987-88 is included in the Board's description of the 6-year drought, the Board does not assign any impacts for that year under its methodology. Memorandum from Matt Moses, Water Resources Engineer, San Francisco Public Utilities Commission, July 26, 2018 ("2018 Moses Memo"), attached hereto as Exhibit 3, at 2 n.2.

<sup>21</sup> 2018 Moses Memo at 3.

<sup>22</sup> *Id.* at 1-2 (where Mr. Moses generally describes the method used by the Board to calculate water supply impacts to San Francisco from implementation of the Plan Amendment).

<sup>23</sup> *See* San Francisco's 2017 Comments, at 3-5 (providing detailed explanation of San Francisco's obligations under the Fourth Agreement).

Francisco's flow contribution.<sup>24</sup> Accordingly, the Board's analysis under estimates, or completely ignores, water supply impacts to the RWS in shorter drought sequences, and over estimates impacts to the RWS in longer drought sequences.<sup>25</sup>

#### **4. The Board Failed to Substantively Consider the SFPUC's Methodology for Estimating Socioeconomic Impacts from Increased Rationing.**

The Board acknowledges that if sufficient alternative water supplies are not available to San Francisco to replace the reductions required by implementation of the Plan Amendment, "water rationing measures that would negatively affect commercial and industrial enterprises in CCSF's service area" would have severe economic effects "more than 100 times greater . . . than [the Board's purported] water supply planning approach."<sup>26</sup> But the Board nevertheless fails to substantively analyze *any* economic effects of increased rationing. In fact, the Board draws this comparison solely to support its summary dismissal of San Francisco's socioeconomic analysis by remarkably concluding that the Board's approach is more cost-effective.<sup>27</sup> The Board states that its economic analysis presented in Appendix L—which only considers rate impacts attributable to the cost of purchasing the requisite volume of replacement water—"is based on the *logical assumption* that additional water supplies are available, and these supplies could be developed to address potential shortages associated with implementing the plan amendments."<sup>28</sup> As San Francisco has repeatedly explained, however, our socioeconomic analysis is based on the *practical reality* that the SFPUC would not be able to obtain or develop sufficient alternative water supplies in the near term to make up for the unprecedented reduction in San Francisco's water supply, *i.e.*, 43% of the drinking water needed to serve the Bay Area for each year of a sequential-year drought, and thus the SFPUC would be compelled to increase rationing throughout the RWS service area by more than 20%. Further, because the Board does not analyze *any* rate impacts associated with constructing one (or more) large-scale desalination facilities, or other critical infrastructure, that would likely be necessary to make up for the substantial reduction in water supply, its economic analysis of the "mix of different water supply sources" is woefully inadequate and fails to disclose to the public the actual costs and economic impacts of the Plan Amendment.<sup>29</sup> This is hardly a good faith, reasoned analysis in response to

<sup>24</sup> *Id.* at 2 (explaining that this appears to be "a simple typographical error in the spreadsheet" the Board used for its analysis).

<sup>25</sup> *Id.* at 2-3, Table 1.

<sup>26</sup> Master Response 8.5 at 44, 51-52.

<sup>27</sup> *Id.* at 44; see also *id.* at 5 (where Board rationalizes its decision to omit any substantive consideration of San Francisco's economic analysis by arguing that its "water supply planning approach" is "economically justified.").

<sup>28</sup> *Id.* at 44 (emphasis added).

<sup>29</sup> *Id.* Significantly, the model the Board relied on to estimate rate impacts associated with the cost of purchasing water in the Final SED, IMPLAN, would have been equally appropriate for assessing rate impacts associated with constructing facilities and infrastructure, such as a large-scale desalination plant.

San Francisco's prior comments regarding the Plan Amendment's detrimental effects on the Bay Area's economy.<sup>30</sup>

**5. San Francisco's Socioeconomic Analysis Appropriately Relies on the Best Available Price Elasticity Data.**

In the Final SED, the Board criticizes San Francisco's economic expert, Dr. David Sunding, for using commercial/industrial/institutional employment and output multipliers from a 1994 study by MHB Consultants, Inc. ("MHB Study") in his 2014 draft report on socioeconomic impacts of water shortages within the RWS service area, and his 2017 report on socioeconomic impacts to the Bay Area from instream flow requirements on the Tuolumne River.<sup>31</sup> The MHB Study presented the results of a survey of commercial, industrial and institutional water customers to assess the responsiveness of their level of production to a reduction in water deliveries. The Board asserts that: (1) the MHB survey is outdated; (2) the MHB survey reflects an "upward bias" because it was conducted shortly after the 1987-92 drought, and MHB Consultants, Inc. used marginal coefficients to estimate the response of businesses to water shortages; and, (3) the response rates, *i.e.*, 13% for commercial and 30% for industrial businesses "are considered very low," raising the question as to whether the sample is representative of the larger population.<sup>32</sup>

As explained in the attached memorandum from Dr. Sunding, dated July 26, 2018, the Board's critiques of the MHB Study is unwarranted. First, the MHB Study remains the "best available evidence of its kind" to date, and thus "is a standard reference commonly utilized by water agencies and consultants when analyzing planning and resource allocation decisions."<sup>33</sup> Second, in survey research it is preferable to query survey respondents about actions that they recently undertook. Surveying shortly after the 1987-92 drought did not result in a bias but rather likely produced more accurate results.<sup>34</sup> Finally, the 30% and 13% response rates for the

See Memorandum from David Sunding, The Brattle Group, Inc., to San Francisco Public Utilities Commission, July 26, 2018 ("2018 Sunding Memo"), attached hereto as Exhibit 4, at 2.

<sup>30</sup> San Francisco's 2017 Comments, 27-32; see e.g., *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 723 (citing *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357 (emphasis added) [explaining that "[i]t is not enough for the EIR simply to contain information submitted by the public and experts. Problems raised by the public and responsible experts require a good faith reasoned analysis in response. The requirement of a detailed analysis in response ensures that stubborn problems or serious criticism are not 'swept under the rug.'"]).

<sup>31</sup> Master Response 8.5 at 20-21; *Bay Area Socioeconomic Impacts Resulting from Instream Flow Requirements for the Tuolumne River*, The Brattle Group, prepared by David Sunding, Ph.D., March 15, 2017, attached to San Francisco's 2017 Comments as Appendix 3.

<sup>32</sup> Master Response 8.5 at 20.

<sup>33</sup> 2018 Sunding Memo at 1.

<sup>34</sup> *Id.*



industrial and commercial sectors, respectively, are not very low but in fact are “typical of mail surveys that appear in the scientific literature.”<sup>35</sup>

**6. The Board Erroneously Relies on the SFPUC’s Long-Term Planning Documents to Establish the Alleged Availability of Alternative Water Supplies in the Near Term.**

The Board asserts that the “common water strategies” it proposes are “viable and economically feasible options for SFPUC and other local agencies because they are identified as potential components of drought contingency plans.”<sup>36</sup> But the alternative water supply projects identified in the SFPUC’s long-term planning efforts, such as the 2015 Urban Water Management Plan (“2015 UWMP”), are intended to meet existing dry-year demand and projected 2040 demand in the RWS service area. The projects are not intended to provide replacement supplies to make up for the additional, unanticipated reductions caused by implementation of the Plan Amendment.<sup>37</sup>

Further, the Board mischaracterizes San Francisco’s “approach” to analyzing impacts to the RWS service area that would result from implementation of the Plan Amendment as relying on the premise that the SFPUC would not even *attempt* to obtain or develop alternative water supplies.<sup>38</sup> The SFPUC is actively involved in efforts to diversify the sources of its water supply, as reflected in the SFPUC’s long-term planning efforts. But alternative water supply projects are difficult to fund, require many years to develop, and often represent limited

<sup>35</sup> *Id.* at 2.

<sup>36</sup> Master Response at 23. See also *id.* at 49 (where Board argues that its “water supply planning approach” is consistent with San Francisco’s 2015 Urban Water Management Plan and the “SFPUC’s own management actions and those typically taken by other water suppliers.”).

<sup>37</sup> Significantly, in San Francisco’s 2017 Comments, we previously explained that any additional yield San Francisco may be able to obtain from potential, future projects identified in the SFPUC’s long-term planning efforts, *e.g.*, water transfers or some portion of yield from a regional desalination plant located in the Delta, would be used to meet existing dry-year demand and/or 2040 demand. See San Francisco’s 2017 Comments at 84-86, 94-95.

<sup>38</sup> Board’s Comment Response Letter 1166, Table 4-1. Response to Comments, Response to Comment 1166-10 (emphasis added) (where the Board states that its analysis of potential actions in response by San Francisco to implementation of the Plan Amendment did not include “the severe mandatory rationing described by SFPUC because it was not reasonably foreseeable that a water supplier would impose drastic mandatory rationing on its customers *without first attempting other actions to replace any reductions in water supplies with alternative sources of water*, such as through water transfers.”); see also Master Response 8.5 at 49 (emphasis added) (where Board states that under San Francisco’s “water-rationing only approach” the “SFPUC would not pursue opportunities to supplement current water supplies or to replace any of the potential water supply reductions” because the “intent” of San Francisco’s approach “is to deliver the limited available supplies *without expanding yields from existing sources of water or without developing water supplies from new sources*.”).

additional yield.<sup>39</sup> Here, these obstacles are especially challenging given that the Board intends to implement the Plan Amendment by 2022. As the third largest municipal water provider in California, the SFPUC must responsibly plan for the pragmatic, worst case scenario, which is that notwithstanding the SFPUC's efforts to obtain and develop alternative supplies by 2022, no significant additional yield may be available within the next four years.<sup>40</sup>

**7. The Three Methods of Compliance for San Francisco Identified in the Final SED Rely on Unsupported Assumptions.**

**A. The Board's Assumptions Regarding a Large-Scale Water Transfer Are Unsupported.**

In the Final SED, the Board included several charts from a Pacific Institute Report in an apparent effort to support its assumption that a massive volume of water will be available for transfer from the Central Valley to San Francisco during future, sequential-year droughts to replace the reduction in the Bay Area's water supply following implementation of the Plan Amendment.<sup>41</sup> Specifically, the Board includes a chart excerpted from the Pacific Institute Report which shows that a substantial volume of transfer water was purchased by municipalities from the agricultural sector between 2009 and 2014.<sup>42</sup> But the Pacific Institute Report includes a subsequent chart, excerpted below, that the Board did not include in the Final SED, which clarifies that the vast majority of the water transferred during that period went to the "South Coast," *i.e.*, southern California, not the Bay Area.<sup>43</sup>

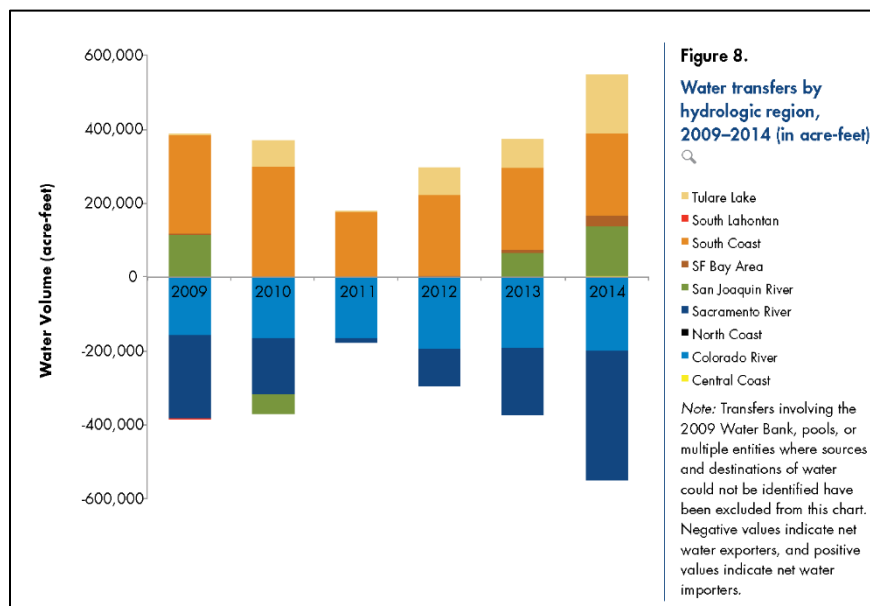
<sup>39</sup> See *e.g.*, 2018 Sunding Memo at 3 (where Dr. Sunding explains that "many potential water transfers may look attractive in theory but are never implemented due to a host of political, technical, or legal reasons.").

<sup>40</sup> The Final SED also rejects San Francisco's analysis of impacts from rationing because, according to the Board, it is "an unproven approach that has not been implemented at the suggested scale described by SFPUC." Master Response 8.5 at 19. Of course, at its core, the Board's "water supply planning approach" relies on nothing more than the convenient "assumption" that beginning in 2022 an unprecedented volume of dry-year supplies will be available to the SFPUC throughout subsequent sequential-year droughts of potentially increasing severity and duration.

<sup>41</sup> See *e.g.*, Master Response 8.5 at 28 (*citing* "Impacts of California's Ongoing Drought: Agriculture," Pacific Institute, August 2015 7 [referred to below as "Pacific Institute Report"], at 14, Figure 7) (where Board excerpts chart from Pacific Institute Report showing total volume of water transfers between 2009 and 2014 by buyer sector).

<sup>42</sup> Master Response at 28.

<sup>43</sup> Pacific Institute Report, at 15, Figure 8.



In fact, Figure 8 shows that transfers from agriculture to the Bay Area during the recent drought comprised a relatively meager share of the overall volume of water transferred. This dynamic occurred during the 1987-92 drought as well, where the Metropolitan Water District of Southern California purchased the lion's share of water available through the now-defunct state administered drought water bank.<sup>44</sup> As Figure 8 above demonstrates, it is reasonable to assume there will be significant competition from Southern California for any agricultural water that may be available to transfer to the Bay Area in future sequential-year droughts.

Further, as noted by the authors of the Pacific Institute Report, as the drought intensified "a large volume of water [was] transferred to the Tulare Lake and San Joaquin River regions, the nation's leading agriculture areas."<sup>45</sup> Given the accelerating trend of farmers shifting to higher-value crops such as fruits and nuts that require water year around and cannot be fallowed during drought periods,<sup>46</sup> it is reasonable to assume that there will also be significant competition from the San Joaquin Valley for any future water available for transfers from the North Coast.

Finally, it is improper for the Board to continue to rely on the environmental analysis in the WSIP for a potential 2 mgd transfer between San Francisco and the Modesto Irrigation District and Turlock Irrigation District ("Districts") implemented through conservation to analyze impacts that would result from a an exponentially larger transfer of water to be made up

<sup>44</sup> See San Francisco's 2017 Comments, at 68, n.185 (citation omitted) (noting that of the 389,970 AF in total water purchases from the 1991 state water bank by twelve entities, the Metropolitan Water District of Southern California accounted for 55% of purchases).

<sup>45</sup> Pacific Institute Report at 15.

<sup>46</sup> *Id.* at 8.

through groundwater substitution.<sup>47</sup> The Board needs to identify a legitimately comparable environmental analysis, *i.e.*, for a project that involved the transfer of a large volume of surface water from an agricultural water district to a municipality in which the water district then replaced the exported water through increased groundwater pumping.<sup>48</sup>

**B. The Board Has Failed to Support its Assumptions Regarding a Large-Scale Desalination Plant at Mallard Slough.**

The Board's passing references in the Final SED to a 12 mgd desalination plant in Newark and a planned 6 mgd desalination plant in Antioch fail to support the Board's assumption that San Francisco will be able to develop a large-scale desalination plant at Mallard Slough, especially by 2022.<sup>49</sup> The Board conducted no substantive analysis of either the Newark or Antioch projects, and fails to provide a good faith, reasoned explanation for why these projects are comparable to the large-scale desalination plant in Mallard Slough envisioned in the Final SED.<sup>50</sup> In fact, each of these projects reflects a fraction of the total production capacity of the Poseidon Desalination Facility in Carlsbad, *i.e.*, 56,000 AF/year or approximately 50 mgd.

Further, the Newark Desalination Facility was placed into service in 2003,<sup>51</sup> over a decade prior to enactment of the 2015 Ocean Plan Amendments, which, as San Francisco has previously explained, applied new regulatory requirements to all new desalination projects.<sup>52</sup>

<sup>47</sup> See San Francisco's 2017 Comments at 80-82.

<sup>48</sup> Master Response at 31-32 (where the Board confusingly asserts, among other things, that "the SED, however, does not limit its transfer discussion to a particular type of transfer, such as a conserved water transfer."). In fact, the Final SED assumes that reductions in surface water under the Plan Amendment would be replaced by increased groundwater substitution. See Chapter 16 at 16-14 (emphasis added) (where the Final SED explains, "[c]hapter 9 assumes that reductions in surface supply would be replaced with groundwater pumping up to a maximum amount. Based on this analysis, significant impacts would occur on four primary subbasins [Eastern San Joaquin, *Turlock*, *Modesto*, and the extended Merced].").

<sup>49</sup> Master Response 8.5 and 32-33 (where the Board generally discusses brackish water desalination projects in the state and specifically identifies the Newark plant and planned Antioch project).

<sup>50</sup> See *e.g.*, Chapter 16 at 16-71 (emphasis added) (where the Board explains that "[a] desalination project would likely need to be larger than analyzed in the WSO report, or the BARDP feasibility studies, for LSJR Alternatives 3 and 4. *Therefore, costs and environmental impacts associated with the larger Poseidon Desalination Facility in Carlsbad are also provided below.*"). Notwithstanding the Board's reliance on "costs and environmental impacts" associated with the Poseidon Desalination Facility in its analysis of a potential desalination plant at Mallard Slough, in its responses to San Francisco's 2017 Comments the Board remarkably states "[t]he SED does not assume that a 56,000 AF/y [sic] would be required or considered at Mallard Slough or [sic] any other location." Table 4.1. Responses to Comments, Response to Comment Letter 1166-69.

<sup>51</sup> Alameda County Water District website, available at <http://www.acwd.org/index.aspx?NID=383> (providing description of Newark Desalination Facility).

<sup>52</sup> San Francisco's 2017 Comments at 91.

The Board's analysis in the Final SED continues to fail to take into consideration these new regulatory requirements.

**C. The Board Has Failed to Support its Assumptions Regarding an In-Delta Diversion Project.**

The Board's supplemental analysis in support of its in-Delta diversion proposal is not only "fundamentally and basically inadequate and conclusory in nature," it is also nonsensical. The Board states:

Therefore, an agency determination that an in-Delta diversion was infeasible under one set of circumstances does not render it infeasible in all future circumstances. Thus, in light of changed circumstances since 2008 and increasing awareness of the need to prepare for a variety of hydrologic and water supply conditions in the future, *it is reasonable to identify an in-Delta diversion as one potential action in a suite of actions to augment water supplies regardless of whether SFPUC ultimately concludes in the future that an in-Delta diversion remains infeasible.*"<sup>53</sup>

The Board not only acknowledges that the SFPUC has already analyzed the possibility of a new in-Delta diversion project and determined that it was infeasible, but also concedes that the project may well remain infeasible. In fact, the referenced "changed circumstances since 2008,"<sup>54</sup> *i.e.*, "Pelagic Organism Decline, climate change, California WaterFix, and the State Water Board's Final Report on the Development of Flow Criteria for the Sacramento Delta Flow Criteria,"<sup>55</sup> indicate there will be stricter regulation and/or more restrictive environmental conditions in the Delta that would likely make a new in-Delta diversion even less feasible.<sup>56</sup> Nevertheless, the Board continues to insist that it is reasonable to include this project as one of San Francisco's potential responsive actions to implementation of the Plan Amendment.

**8. The Board's Assumption that Implementation of the Plan Amendment Would Result in Minimal Effects to Economic Growth and Housing Starts in the Bay Area is Unsupported.**

The Final SED asserts, "[a]s demonstrated during the recent drought, limited water supplies and increases in water rates to encourage conservation do not appear to have materially affected current levels of economic growth in the Bay Area."<sup>57</sup> This statement ignores the critical fact that the reduction in RWS system deliveries in fiscal year 2015-16 of approximately 20% did not exceed the "tipping point" that would require rationing in the commercial and

<sup>53</sup> Master Response at 8.5 at 33 (emphasis added).

<sup>54</sup> *Id.*

<sup>55</sup> Appendix L at 24.

<sup>56</sup> *See* San Francisco's 2017 Comments at 96.

<sup>57</sup> *Id.* at 47.

industrial sectors.<sup>58</sup> As San Francisco has previously explained, the first 20% to 30% of RWS water supply reductions can generally be borne by the residential sector and dedicated irrigation alone.<sup>59</sup> Therefore, one would not expect to see significant losses in business sales or jobs in the Bay Area attributable to the recent drought. The magnitude of the reductions that San Francisco could be required to impose if the Plan Amendment is implemented and a sequential-year drought occurs, would result in much higher rationing levels that exceed the 20-30% tipping point, and thus would directly affect the commercial and industrial sectors.<sup>60</sup> By ignoring entirely the possibility of such higher rationing levels, the Board fails to acknowledge, much less analyze, the potential economic impacts to the Bay Area of the Plan Amendment.

Further, the fact that housing starts in some parts of the Bay Area may have increased between 2009 and 2017 does not mean that severe reduction of the Bay Area's dry year and future water supply would not pose a risk to regional growth.<sup>61</sup> Contrary to the Board's contention, the Plan Amendment could also "alter the existing condition" of development in the lower-cost Central Valley, as opposed to the Bay Area, by significantly accelerating it as people migrate outward to areas with more reliable dry year and future water supplies.<sup>62</sup>

**9. The Board Failed to Analyze the SFPUC Alternative as a Reasonable Alternative to the Plan Amendment.**

In San Francisco's 2017 Comments, we included a reasonable, science-based alternative for Tuolumne River ecosystem improvements that would meet fish and wildlife beneficial uses on the river without the significant environmental and economic impacts to the Bay Area that

<sup>58</sup> 2017 SFPUC Water Supply Analysis at 1-2 (noting that in fiscal year 2015-16 system-wide deliveries were reduced by 21.5% as compared to RWS deliveries prior to the recent drought, in fiscal year 2012-13); see *id.* (where Mr. Moses explains, "[i]n response to drought conditions, SFPUC requested rationing within the retail wholesale service area during this period, and the State of California also mandated rationing for all municipal water agencies during this period. The reduced demand relative to fiscal year 2012-2013 is attributed to these calls for rationing.").

<sup>59</sup> San Francisco's 2017 Comments at 28 (this assumes a pre-drought level of water supply demand of 223 mgd within the RWS service area). See also Declaration of David L. Sunding in Support of Reply Comments of the City and County of San Francisco, Don Pedro Hydroelectric Project Relicensing Proceeding, Federal Energy Regulatory Commission Project No. 2299, March 13, 2018, attached hereto as Exhibit 5, at ¶ 9.

<sup>60</sup> For example, assuming 1987-1992 hydrology and maximum SFPUC contract deliveries of 265 mgd, the additional reduction in water supply San Francisco would experience under a 40 percent unimpaired flow objective on the Tuolumne River, *i.e.*, 129,884 AF/year for each of the 6 years, would result in a 40% reduction in deliveries for the first year of the drought, and a 54% reduction in deliveries in each of the subsequent 5 years. 2017 SFPUC Water Supply Analysis at 16, Table 9; *id.* at 10, Table 2.

<sup>61</sup> See Master Response 8.5 at 48.

<sup>62</sup> See Master Response 6.1 at 13.

would result under the Plan Amendment (“SFPUC Alternative”).<sup>63</sup> The Board neither analyzed the SFPUC Alternative in detail, nor analyzed the relative merits of the SFPUC Alternative as compared to other alternatives, based on the Board’s conclusion that the SFPUC Alternative “fails to meet the fundamental purpose and goal to establish flow objectives for the reasonable protection of fish and wildlife beneficial uses in the [Lower San Joaquin River] watershed.”<sup>64</sup> Modeling results presented as part of the SFPUC Alternative predict a significant relative increase in fall-run Chinook salmon smolt productivity on the Tuolumne River compared to current conditions while remaining reasonably protective of water supply reliability. Based on the Board’s conclusory analysis of the SFPUC Alternative, however, it appears that the Board entirely ignored the fishery benefits of San Francisco’s proposal.

Thank you for your consideration of our comments.

Very truly yours,

DENNIS J. HERRERA  
City Attorney

-s-

Jonathan P. Knapp  
Deputy City Attorney

cc: Via Electronic Mail Only  
Michael Carlin, Deputy General Manager and Chief Operating Officer, SFPUC

<sup>63</sup> San Francisco’s 2017 Comments, Attachment 2, Alternative to promote expansion of fall-run Chinook salmon and *Oncorhynchus mykiss* populations in the lower Tuolumne River while maintaining water supply reliability ( “SFPUC Alternative”), at 1.

<sup>64</sup> Master Response 2.4 at 21.

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July 27, 2018



*Submitted via email: [LSJR-SD-Comments@waterboards.ca.gov](mailto:LSJR-SD-Comments@waterboards.ca.gov)*

Ms. Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

Subject: Comment Letter – Revisions to Proposed Bay-Delta Plan Amendments

The State Water Contractors (“SWC”) appreciate this opportunity to provide comments regarding the Phase 1 Proposed Final Amendments to the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (“WQCP”). The SWC submit these comments on behalf of itself and its 27 member agencies.

The SWC and its members maintain a commitment to improve Delta water quality and the Delta ecosystem through collaborative scientific efforts, scientific studies, and habitat restoration. We continue to support the Water Board’s consideration of voluntary agreements to help achieve benefits comparable to its proposed objectives. The SWC feel that a comprehensive, science-based, voluntary settlement approach is the best path to providing the durability, and resilience needed to protect and improve Delta water quality and the Delta ecosystem over the long-term.

At the same time, the SWC are concerned about the revised south Delta agricultural salinity standards and implementation described in Appendix K. The program of implementation (Appendix K) for the southern Delta salinity standards appears to pre-determine water right conditions and assign specific water right holders responsibility for implementation of the salinity objectives without providing or enumerating how due process would be honored. An adjudicatory water rights proceeding is the proper forum for identifying water right conditions and assigning implementation responsibility. The draft program of implementation appears to unlawfully conflate the Water Board’s quasi-legislative water quality planning authority with its quasi-adjudicatory water rights authority.

The draft program of implementation is also inequitable as it does not reflect appropriate consideration of the factors contributing to southern Delta salinity concentrations. The Department of Water Resources (“DWR”) has repeatedly demonstrated to the State Water Resources Control Board (“Water Board”) that there are multiple causes of salinity in the south Delta and the State Water Project and the Central Valley Project (“SWP-CVP”) have limited ability to control salinity in that region. See e.g., ICF, 2016 (attached, Appendix A). In response, the Water Board has also acknowledged that multiple factors influence salinity concentrations in the southern Delta, yet only the SWP-CVP are assigned responsibility for addressing south Delta salinity in Appendix K.

The SWC are further concerned about the use of compliance “reaches” rather than compliance locations. The Water Board appears to acknowledge the extreme difficulty in implementing compliance reaches as it defers the creation of a compliance monitoring plan to some point in the future, while inappropriately assigning sole responsibility for the creation of the monitoring plan to the SWP-CVP. Similarly, the Water Board inappropriately defers the creation of “specific performance goals” for its south Delta agricultural salinity standards to some point in the future, while again improperly assigning sole responsibility for the creation and implementation of those performance goals to the SWP-CVP. By imposing open-ended future obligations on the SWP-CVP, the SWP-CVP’s due process rights are further violated as the full scope of the regulatory obligations are undefined in nature and magnitude. The SWP-CVP has insufficient information to further explain concerns because the implementation for which they have been pre-maturely assigned is too vague.

The SWC and San Luis and Delta Mendota Water Authority (SLDMWA) jointly provided detailed comment letters outlining our concerns with the 2013 draft implementation plan and the Draft Substitute Environmental Document. These comments were not addressed in the development of the 2016 Draft SED, and therefore were reiterated in our March 2017 letter regarding the 2016 Draft SED. (See attached, Appendix B.) The SWC urge the Water Board to address these comments.

We look forward to working with the Water Board toward our shared goal of an effective, viable, and integrative proposal for the San Francisco Bay-Sacramento San Joaquin Delta Estuary.

Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer Pierre", with a stylized, cursive script.

Jennifer Pierre  
General Manager

Attachments



July 27, 2018

**VIA ELECTRONIC MAIL ONLY**

State Water Resources Control Board  
 Attn: Jeanine Townsend, Clerk to the Board  
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Re: Comment Letter – Revisions to Proposed Bay-Delta Plan Amendments

Dear Members of the State Water Resources Control Board:

The public water agencies that are signatories to this letter (“South of Delta CVP Contractors”)<sup>1</sup> are significantly disappointed with the proposal for the Phase 1 updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (“Phase 1 Bay-Delta Plan Updates”). The Phase 1 Bay-Delta Plan Updates are not supported by policy, science, or the law.<sup>2</sup>

The approach taken to protect water quality for the beneficial use of water by San Joaquin River watershed fish populations (often referred to as the “San Joaquin River flow objectives”) is crude. It assumes that, in the highly altered San Joaquin River watershed, dedication of more water will result in increases in the year-to-year abundance

<sup>1</sup> Signatories to this letter include the San Luis & Delta-Mendota Water Authority and member agencies Byron-Bethany Irrigation District, Central California Irrigation District, Del Puerto Water District, Firebaugh Canal Water District, Henry Miller Reclamation District 2131, James Irrigation District, Mercy Springs Water District, Pacheco Water District, Panoche Water District, San Benito County Water District, San Luis Water District, Tranquillity Irrigation District, Westlands Water District and West Stanislaus Irrigation District.

<sup>2</sup> South of Delta CVP Contractors have submitted extensive comments on previous drafts of the Phase 1 Bay-Delta Plan Updates. Those comments remain relevant to the latest iteration of the revised objectives and are incorporated herein by reference.

of fish. That assumption is not supported by credible science. The State Water Resources Control Board (“State Water Board”) would demand the dedication of more water without first establishing biological or environmental objectives – no less objectives that are biologically specific, measurable, achievable, relevant, and timely (“S.M.A.R.T”). For each component of flow that would be required, there is no description of the desired outcomes for species across relevant viability parameters that are S.M.A.R.T. And, there is no description of the physical, chemical, and biological conditions necessary to support biological objectives or how the proposed flow standard would enhance those conditions for the beneficial use by San Joaquin River watershed fish populations. Flow is not an appropriate parameter for a water quality objective. Rather, it is a tool, amongst other non-flow measures, that can be used to implement an objective. As the State Water Board has done in all other circumstances, it must *first* establish S.M.A.R.T. biological goals, *next* set scientifically supported water quality objectives to meet those goals, and *finally* consider the comprehensive approach (water quality, water rights, and other actions) necessary to achieve those objectives.<sup>3</sup>

In addition, the proposed Program of Implementation inexplicably imposes new requirements – minimum storage requirements for the reservoirs on tributaries to the San Joaquin River and a requirement that flows are protected “through Delta.” It also directly and “as applied” prematurely assigns responsibility to water right holders. The addition of new requirements and assignment of responsibility, which will affect vested property interests, are not supported by the facts or the law. Prior to imposing responsibility on water right holders, basic principles of due process - which arise from the Constitution and cannot be overridden by statute – require that the water right holders be given notice and an opportunity to be heard in a quasi-judicial proceeding before their water rights can be modified. The proposed Program of Implementation has other flaws as well, including its inclusion of an “assimilative capacity” component in the southern Delta salinity objective, and its treatment of dissolved oxygen.

Finally, the final Substitute Environmental Document (“Final SED”) does not consider a reasonable range of alternatives – as a result of the focus on flow, alternatives that consider objectives for water quality constituents or characteristics (e.g., temperature and turbidity) are ignored. The Final SED ignores significant impacts by assuming the impacts of reduced surface water will be offset by groundwater pumping and by ignoring impacts to areas south of the Delta, including those served by the South of Delta CVP Contractors. Also, the Final SED unlawfully segments analysis of impacts from Phase 1 and Phase 2 and ignores the cumulative impacts of the full update to the Bay-Delta Plan.

South of Delta CVP Contractors respectfully request the State Water Board decline to adopt the Phase 1 Bay-Delta Plan Updates in their current form, and instead conform

<sup>3</sup> In contrast, the Program of Implementation in the Phase 1 Bay-Delta Plan Updates indicates that the State Water Board will set S.M.A.R.T. biological goals in the future, after adoption of the Phase 1 Bay-Delta Plan Updates. (Appendix K, pp. 30, 32, 33.)

the Phase 1 Bay-Delta Plan Updates, as well as the Phase 2 documents currently being prepared, to these comments, attachments, and referenced materials. Going forward, South of Delta CVP Contractors urge the State Water Board to make significant changes in its approach to and framework for the Phase 2 updates.

**1. The Approach Taken To Protect Water Quality For The Beneficial Use Of Water By San Joaquin River Watershed Fish Populations And In The Proposed Program Of Implementation Ignores The Separate Functions Of The State Water Board And Two Of The Most Important Cases Decided On Bay-Delta Water Quality Planning**

**A. The Law Is Well Established – The State Water Board Cannot Conflate Its Water Quality And Water Rights Authority**

The State Water Board performs dual functions – a legislative function of developing and amending water quality control plans and an adjudicatory function of allocating water rights. Different standards and processes apply to each. The State Water Board commits serious error when it blends the two functions, as it would if it were to follow the proposed approach to protect water quality for the beneficial use by San Joaquin River watershed fish populations and in the Program of Implementation. The law is clear, “[i]n performing its regulatory function of ensuring water quality by establishing water quality objectives, the [State Water] Board acts in a legislative capacity. The Water Quality Control Plan itself is thus a quasi-legislative document.” (*U.S. v. SWRCB* (1986) [“*Racanelli*”] 182 Cal.App.3d 82, 112.) In contrast, “in undertaking to allocate water rights, the [State Water] Board performs an adjudicatory function.” (*Id.* at 113.)

When the State Water Board performs an adjudicatory function, it must follow procedures to ensure due process. An “adjudicative proceeding” means an “evidentiary hearing for determination of facts pursuant to which the State [Water] Board or a Regional Board formulates and issues a decision.” (Cal. Code Regs., tit. 23, § 648, subd. (a); Gov. Code, § 11405.20.) All “adjudicative proceedings” before the State Water Board are governed by Title 23 of the California Code of Regulations, section 648 et seq., chapter 4.5 of the Administrative Procedure Act. (Gov. Code, § 11400 et seq.), sections 801-805 of the Evidence Code, and section 11513 of the Government Code. (Cal. Code Regs., tit. 23, § 648, subd. (b).) Those regulations and statutory provisions provide procedural protections for the party or parties whose water rights may be modified by an adjudicative proceeding.

The courts have cautioned the State Water Board against blending its dual functions and have voided State Water Board action when it does blend its functions. In *Racanelli*, which involved Decision 1485, the Court of Appeal explained:

We think the procedure followed – combining the water quality and water rights functions in a single proceeding – was unwise. The Legislature issued no mandate that the combined functions be performed in a single proceeding. The fundamental defect inherent in such a procedure is dramatically demonstrated: The Board set only such water quality objectives as could be enforced against the [CVP and SWP] . . . [I]n order to fulfill adequately its water quality planning obligations, we believe the Board cannot ignore other actions which could be taken to achieve Delta water quality, such as remedial actions to curtail excess diversions and pollution by other water users.

(*Racanelli*, 182 Cal.App.3d at 119-20.)

*State Water Resources Control Board Cases* (2006) [“SWRCB Cases”] 136 Cal.App.4th 674, provides a second example of the defect in mixing the State Water Board’s legislative and adjudicatory functions. There, the Court of Appeal considered challenges to Decision 1641, a water rights decision that, among other things, assigned partial responsibility for implementing objectives adopted in the 1995 Bay-Delta Plan. The program of implementation in the 1995 Bay-Delta Plan stated that the Vernalis pulse flow objective would be implemented through a subsequent water rights proceeding, although it did not provide for its sequential implementation. (SWRCB Cases, 136 Cal.App.4th at 727-28.) In Decision 1641, however, the State Water Board adopted a proposal for staged implementation. In rejecting this approach, the Court of Appeal explained that the State Water Board could not, in effect, amend the 1995 Bay-Delta Plan through the water rights proceeding:

[T]he Board could not properly adopt the San Joaquin River Agreement’s alternate flow regime, even on a temporary basis, in the water rights proceeding under the guise of a ‘staged implementation’ of the objectives in the 1995 Bay-Delta Plan, because that ‘staged implementation’ fundamentally altered those objectives, and such an alteration could be accomplished only through a properly noticed and conducted regulatory proceeding.

(*Id.* at 729.)

**B. Notwithstanding The Law, The Phase 1 Bay-Delta Plan Updates Unlawfully Assign Implementation Responsibility To Water Rights Holders**

If the State Water Board accepts the recommendations of staff, the updated Bay-Delta Plan will provide:

Most of the objectives in this ongoing plan are being, and will continue to be, implemented by assigning responsibilities to water right holders because the parameters to be controlled are primarily impacted by flows and diversions. This plan, however, is not to be construed as establishing the responsibilities of water right holders. Nor is this plan to be construed as establishing the quantities of water that any particular water right holder or group of water right holders may be required to release or forego to meet the objectives in this plan. The State Water Board will consider, in a future water rights proceeding or proceedings, the nature and extent of water right holders' responsibilities to meet these objectives.

(Appendix K, p. 4.) Those are important statements, as they reflect the law established by *Racanelli* and the *SWRCB Cases*. Unfortunately, the Phase 1 Bay-Delta Plan Updates do not adhere to those statements and thus the law.

Instead, the approach taken to protect the beneficial use of water by San Joaquin River watershed fish populations unlawfully assigns responsibility to water right holders in the present quasi-legislative proceeding. Under the approach, compliance would be measured at specific locations on the Stanislaus, Tuolumne and Merced Rivers. By setting the compliance locations upstream, there is no way to implement the objectives other than condition specific water rights – those held by Oakdale Irrigation District, South San Joaquin Irrigation District, Modesto Irrigation District, Merced Irrigation District, Tuolumne Irrigation District, and the City and County of San Francisco.

Further, the proposed Program of Implementation explicitly assigns to the United States Bureau of Reclamation ("Reclamation") and California Department of Water Resources ("DWR") responsibility for southern Delta salinity objectives.<sup>4</sup>

<sup>4</sup> The assignment of responsibility to the CVP is inexplicable, in addition to the legal defect, because the levels of salinity in the south Delta are due to multiple factors, only some of which are attributable to the CVP. The Phase 1 Bay-Delta Plan Updates concede this point, stating: "Salinity problems in the southern Delta primarily result from low flows, tidal action, diversions by the CVP, SWP and local water users, agricultural return flows, poor circulation, and channel capacity." (Appendix K, p. 46.) Further, as South of Delta CVP Contractors have explained in prior comments, in many circumstances, the CVP improves water quality in the southern Delta because it brings fresher water from the Sacramento River into the south Delta.

“USBR shall be required to continue to comply with these salinity levels, as a condition of its water rights.” (Appendix K, p. 42.)

“As part of implementing the salinity water quality objective for the interior southern Delta, the State Water Board will amend DWR's and USBR's water rights to continue to require implementation of the interior southern Delta salinity water quality objectives consistent with this plan.” (Appendix K, p. 42.)

“DWR's and USBR's water rights shall be conditioned to require development of information that will be used to determine the appropriate locations and methods to assess attainment of the salinity objective in the interior southern Delta...” (Appendix K, p. 43.)

“Prior to State Water Board approval of the Monitoring and Reporting Plan, compliance of the salinity objective for the interior southern Delta will be assessed at stations C-6, C-8, and P-12, which USBR and DWR shall be required to continue to operate as a condition of their water rights.” (Appendix K, p. 43.)

“DWR's and USBR's water rights shall be conditioned to require continued operations of the agricultural barriers at Grant Line Canal, Middle River, and Old River at Tracy....” (Appendix K, p. 45.)

In response to comments, the Phase 1 Bay-Delta Plan Updates explain why the State Water Board staff believe the State Water Board can assign responsibility to water right holders in a water quality control plan:

Some commenters stated water right conditions cannot be determined in a program of implementation as part of a water quality control plan proceeding, but must instead be established through an adjudicatory proceeding, which affords due process. However, these commenters are incorrect. Water Code section 13242 requires a program of implementation for achieving water quality objectives, which must include a description of the nature of actions that are necessary to achieve the objectives. (Wat. Code, § 13242, subd. (a).) Consistent with this requirement, the proposed



implementation program for the plan amendments sets forth the actions necessary to achieve the salinity objectives; specifically, it states that through water right actions, USBR and DWR would be required to continue complying with salinity requirements as conditions of their water rights. The State Water Board has been granted a “‘broad,’ ‘open-ended,’ and ‘expansive’ authority to undertake comprehensive planning and allocation of water resources.” (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 449.) This includes the authority to enact rules and regulations that condition water rights. (*Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463, 1484-1487 [the Board’s broad adjudicatory and regulatory authority is coincident with that of the Legislature and includes the power to enact regulations governing the reasonable use of water] citing *California Trout, Inc. v. State Water Resources Control Board* (1989) 207 Cal.App.3d 585.) Moreover, it has long been established that a legislative act, like a regulation or rulemaking, such as the proposed plan amendments, can dictate the outcome that would otherwise be decided in a later evidentiary hearing. (See, e.g., *U.S. v. Storer Broadcasting* (1956) 351 U.S. 192.)

(Master Response 3.3, p. 15.) That response is not a legally supportable excuse, for at least two reasons.

First, a statute such as Water Code section 13242 cannot sanction or excuse a violation of the Constitutional right to due process. If section 13242 required the State Water Board to deny water rights holders due process, which it does not, it would be void. (*Calfarm Ins. Co. v. Deukmejian* (1989) 48 Cal.3d 805, 821.) Second, while section 13242, subdivision (a) does require a “description of the nature of actions which are necessary to achieve the objective,” the Program of Implementation can meet that requirement simply by stating that “modification of water rights” is one such action. Nothing in section 13242, subdivision (a) requires the State Water Board to call out a particular water right holder in the Program of Implementation. Moreover, if the State Water Board were to adopt the staff’s recommendation, it would prejudge the outcome of the adjudicatory process demanded by basic principles of due process. It would be reminiscent of numerous lines from western movies, to the effect, “we will give you a fair trial, and then hang you.”

In sum, the State Water Board must take care not to mix its legislative and adjudicatory functions. Stating in the Phase 1 Bay-Delta Plan Updates that objectives will be met by modifying specific water rights preordains the outcome of any subsequent

water rights proceeding. The “guiding principle” in any water right proceeding commenced to implement a water quality control plan is that the State Water Board's power to act in such a water rights proceeding “is constrained by the terms of the plan it is implementing.” (*SWRCB Cases*, 136 Cal.App.4th at 729.) By identifying modification of specific water rights as the means to meet objectives, the State Water Board assures that is what it must order at the conclusion of any water rights proceedings. The Phase 1 Bay-Delta Plan Updates mix the State Water Board's legislative and adjudicatory functions, and would thus deprive water right holders of their Constitutionally afforded due process, rendering the Phase 1 Bay-Delta Plan Updates unlawful.

## **2. Flow Is Not An Appropriate Water Quality Parameter**

South of Delta CVP Contractors explained in prior comments that adoption of the proposed objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations would be unlawful because flow is not a proper water quality objective parameter. The Porter-Cologne Act defines “water quality objectives” as “limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.” (Wat. Code, § 13050, subd. (h).) Examples of such constituents or characteristics include ammonia, bacteria, chemical constituents, color, pH, sediment, suspended materials, temperature, toxicity, turbidity. It is appropriate for the State Water Board to set water quality objectives targeting these specific constituents and characteristics, but not flow.

The flow-based approach taken in the Phase 1 Bay-Delta Plan Updates runs counter to scientific recommendations as well, including those made by the United States Environmental Protection Agency. (See U.S. E.P.A. April 25, 2012 comments [“The WQCP should contain standards that, to the greatest extent possible, address conditions or parameters that directly affect beneficial uses and are measurable in the field. For example, salinity or temperature may directly affect the aquatic resource and are readily measurable”]; U.S. E.P.A. August 17, 2012 comments [“The Board should connect percent unimpaired flows (UIF) to the physical or chemical variables that directly affect beneficial uses and are measurable in the field. For example, salinity or temperature may directly affect the aquatic resource (e.g., fish, invertebrate, algae) and are readily measurable”].) The Phase 1 Bay-Delta Plan Updates do not accept these recommendations. The proposal offers no meaningful explanation why the parameters for the objectives are flow-based.

In Chapter 19 of the Final SED, there is the suggestion that a flow-based approach is being taken because flow is the “master variable.” A principal scientific article cited in the Final SED to explain the benefits of the flow-based approach describes flow as the “master variable” because it influences many environmental factors that affect fish, including water quality constituents or characteristics such as temperature and water

chemistry. (Final SED, Ch. 19, p.19-5.) If that is the reason for the approach, it does not justify specifying flow as a water quality objective. Water quality objectives are “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area,” (Water Code section 13050(h)), which historically have been factors like: ammonia, bacteria, chemical constituents, color, pH, sediment, suspended materials, temperature, toxicity, or turbidity. As such, the concept of flow as the “master variable” should be used for water quality implementation, not as a water quality objective itself.

Indeed, identical to the Delta Stewardship Council’s Independent Science Board’s criticisms of the unimpaired flow approach presented for Phase 2, the Phase 1 Bay-Delta Plan Updates continue to be devoid of explanations of:

- a) how the fixed annual quantity of water would be used, with and without successful agreements among basin water managers and b) how the annual water volumes would be calculated (by basin and/or by tributary).

(ISB Comment letter, p. 2.) And, “[t]he ‘unimpaired flows’ label seems to better describe the basis for annual volume calculation, rather than the perhaps more ecologically important issue of how the volume would be managed.” (*Ibid.*)

Text throughout the Phase 1 Bay-Delta Plan Updates discusses how fish populations may be impacted by water quality constituents and characteristics. (See, e.g., Appendix K, pp. 28, 31, 39, 41, 45, 46.) Nowhere, however, do the Phase 1 Bay-Delta Plan Updates adequately explain why it does not establish objectives for the underlying biological mechanisms, the water quality constituents and characteristics needed to provide reasonable protection for beneficial uses. Instead, the Phase 1 Bay-Delta Plan Updates conclude:

It is consistent with state and federal water quality law for the plan amendments to include a narrative inflow objective that represents water quality conditions from the SJR Watershed to the Delta that will support fish and wildlife beneficial uses.

(Master Response 1.2, p. 5.) This conclusory statement does not justify use of flow as an appropriate parameter for a water quality objective, or how flow may be considered a “water quality constituent or characteristic.” Instead, the Phase 1 Bay-Delta Plan Updates inexplicitly defer consideration of water quality constituents and characteristics to the Stanislaus, Tuolumne, and Merced Working Group. (Appendix K, p. 32.)

3. **The Dedication Of Water Required By The Phase 1 Bay-Delta Plan Updates Would Be A Waste And Unreasonable Use Of Water And A Violation Of Article X, Section 2, Of The California Constitution And The Delta Reform Act**

The State Water Board has discretion when establishing water quality objectives. That discretion, however, has limits. The limits include the California Constitution and state policy established when the Delta Reform Act became law.

The California Constitution declares that the water resources of the State must "be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use . . . of water be prevented . . . ." (Cal. Constitution Art. 10, § 2; see Wat. Code, § 100 [same].) The prohibition against waste or unreasonable use derives from statewide considerations of transcendent importance, among which is the increasing need to conserve scarce water resources to accommodate increasing demands for new consumptive uses as California's population and economy continued to grow, *Joslin v. Marin Municipal Water District* (1967) 67 Cal.2d 132, 140, and "[a]ll uses of water, including public trust uses, must now conform to the standard of reasonable use." (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 443, 446.)

Through the Delta Reform Act, Water Code, section 85000 et seq., California established "coequal goals" of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem" as the water policy priorities for the Delta. (Wat. Code, § 85054.) And yet, the Phase 1 Bay-Delta Plan Updates would give priority to protecting, restoring, or enhancing the Delta ecosystem over a more reliable water supply for California by annually dedicating hundreds-of-thousands of acre-feet of water to instream flow, in the mere hope that the action would benefit fish. This annual dedication would have the concomitant impact on the people and economy of the San Joaquin Valley and beyond, and it would amount to an unreasonable use of water, a violation of Article X, Section 2, of the California Constitution, and a violation of California's co-equal goals.

The proposed objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations will result in the waste and unreasonable use of water because they are unlikely to provide any meaningful benefits to desirable fish species due to diminished and disrupted habitats in the Bay-Delta watershed such as lost floodplains, the proliferation of invasive species, shifts in the food-webs, and increases in pollutants, among other changes. Water dedicated to meet the objectives will be sent on a doomed mission, because many of the ecosystem functions necessary for that water to protect or enhance fish abundance are not present, or because non-flow factors will interfere with those functions. In exchange for uncertain benefit for fish species and contrary to the goal of providing a more reliable water supply for California, implementing the objectives will deprive existing beneficial uses of much needed water, harming the farms, communities, and environment of the San Joaquin Valley and the Silicon Valley.

It is unreasonable and contrary to the Delta Reform Act to inflict such harm on other beneficial uses, with little or no predictable benefit for fish, simply based on the assumption that the other elements needed to realize the benefits of the flows for fish will someday materialize.

**4. If The State Water Board Wants To Set Flow As A Water Quality Objective, It Must First, and Through a Separate Effort, Follow Formal Rulemaking Procedures**

The use of flow as a parameter for a water quality objective runs afoul of the California Administrative Procedure Act, California Government Code §§ 11340 *et seq.* (“APA”). A “regulation” within the meaning of the APA includes “every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure” (Gov. Code, § 11342.600). Under the APA, a promulgating agency “must comply with the procedures for formalizing such regulation, which include public notice and approval by the Office of Administrative Law. . .” (*County of Butte v. Cal. Emergency Medical Services Authority, Inc.* (2010) 187 Cal.App.4th 1175, 1200 [internal quotations and citations omitted].) The State Water Board has not done that here.

In *Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 571, the California Supreme Court explained that a regulation is subject to the APA if it has two principal identifying characteristics: (1) “the agency must intend its rule to apply generally, rather than in a specific case;” (2) “the rule must ‘implement, interpret, or make specific the law enforced or administered by [the agency], or . . . govern [the agency’s] procedure.’” (Citing Gov. Code, § 11342, subd. (g).) The State Water Board staff’s interpretation of “water quality objective” to include flow meets these criteria. Yet, the State Water Board has never complied with the requirements of the APA to formally adopt its expanded definition of water quality objectives. Accordingly, a water quality objective defined by flow would be based on an underground regulation, and hence invalid. (*Niles Freeman Equipment v. Joseph* (2008) 161 Cal.App.4th 765 [citing *Kings Rehabilitation Center, Inc. v. Premo* (1999) 69 Cal.App.4th 215, 217].)

South of Delta CVP Contractors have previously raised this point in comment letters. However, the State Water Board staff’s response to this comment is inadequate. The response to this comment directs one to refer to Master Response 1.2 and 2.1. (Final Amendments and SED (July 6, 2018), Table 4.1-Responses to Comments at Ltr. No. 1270, Cmt. No. 20.)

Master Response 1.2 states:

Pursuant to Government Code section 11353, however, the State Water Board must submit the regulatory provisions of water quality control plan amendments to OAL for approval before the amendments become effective.

(Master Response 1.2, p. 8.) This response misses the point of South of Delta CVP Contractors' comment. That the State Water Board plans to submit its specific revised water quality objectives to the OAL for approval is irrelevant to South of Delta CVP Contractors' comment. Notably, Master Response 2.1 does not even mention the APA, and hence is nonresponsive as well.

In sum, even if the State Water Board's interpretation of "water quality objective" as including flow were a permissible reading of the statute, its failure to comply with the APA renders it an underground regulation, and hence any flow-based objectives are invalid.

**5. The Proposed Compliance Locations For The Southern Delta Salinity Objective Are Not Justified**

The compliance location for the southern Delta salinity objectives has been modified in a way that is not justifiable. Whereas under D-1641, the southern Delta salinity objectives required compliance at specific compliance points, now, the proposed compliance locations extend to the entire reach of the water course – "San Joaquin from Vernalis to Brandt Bridge -and- Middle River from Old River to Victoria Canal -and- Old River/Grant Line Canal from Head of Old River to West Canal." (Appendix K, Table 1, p. 23, emphasis not included.) This change would make compliance very difficult, if not impossible. The proposed Program of Implementation explains the rationale for this change as follows: "so that compliance with the southern Delta salinity objective can be better determined in a Delta environment subject to alternating tidal flows." (Appendix K, p. 43.) This explanation ignores the potential for Delta water users along the three water course segments to discharge in a manner that will cause exceedances. This practical difficulty is problematic for the additional reason that it is not tied to the protection of the beneficial uses that are protected by the southern Delta salinity objectives – agriculture. If a discharge causes a spike in salinity at a point along the specified reach, but there are no agricultural diversions for a long stretch of the water course, then there may be no adverse impact on agricultural beneficial use.

**6. The Proposed Program Of Implementation Would Impermissibly Add New Requirements To The Bay-Delta Plan**

**A. New Carryover Storage Targets**

The proposed Program of Implementation includes a new carry-over storage requirement:

When implementing the LSJR flow objectives, the State Water Board will include minimum reservoir carryover storage targets or other requirements to help ensure that providing flows to meet the flow objectives will not have significant adverse temperature or other impacts on fish and wildlife or, if feasible, on other beneficial uses.

(Appendix K, p. 28.) This requirement conflates the State Water Board's water quality and water rights authorities. It falls outside of what is permissible for a water quality control plan. It is a condition that must be considered in a water right proceeding that affords potentially affected water right holders a level of due process that is not provided in the quasi-legislative water quality control planning process. The carryover storage provision should be removed.

**B. New Requirement To Protect Flows "Through Delta"**

The proposed Program of Implementation provides:

The State Water Board will exercise its water right and water quality authority to help ensure that the flows required to meet the LSJR flow objectives are used for their intended purpose and are not diverted for other purposes. . . .

Although the lowest downstream compliance location for the LSJR flow objectives is at Vernalis, the objectives are intended to protect migratory LSJR fish in a larger area, including within the Delta, where fish that migrate to or from the LSJR watershed depend on adequate flows from the LSJR and its salmon-bearing tributaries.

(Appendix K, pp. 28-29.) The Phase 1 Bay-Delta Plan Updates provide no cited scientific support for these statements, which would effectively change the scope of the water quality objectives without the due process afforded in quasi-legislative water quality control planning and fail to consider the environmental impacts of limiting the beneficial use of water.

The Phase 1 Bay-Delta Plan Updates concede there is no cited scientific support for the new requirement to protect unimpaired flows through the Delta. In response to comments, for example, the State Water Board explains why it has segmented its analysis of the new objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations from its analysis of new objectives in the Sacramento River and Delta. (See, e.g., Master Response 1.2, p. 17 [explaining that it is appropriate to segment because “[t]he environmental conditions in the LSJR are different than those in the Sacramento River and Delta tributaries”].) Nowhere has the State Water Board noticed the scope of Phase 1 to include establishing San Joaquin River objectives for the protection of fish outside of the San Joaquin River basin – “to a larger area, including within the Delta.”

Further, the above-quoted statement prejudices the outcome of Phase 2, which as described in the July 6, 2018 “Summary of Proposed Amendments to the Bay-Delta Water Quality Control Plan” will be the place the State Water Board considers whether protection of San Joaquin River flows – what Delta flows – are needed:

[U]pdating flow requirements for the Sacramento River, its tributaries, and the Delta and its tributaries, including the Calaveras, Cosumnes, and Mokelumne Rivers, *Delta outflow objectives*, Delta interior flow objectives, and cold water habitat objectives.

(Emphasis added.)

**7. The Proposed Program Of Implementation Would Unlawfully Require Reclamation To Operate To Provide A Water Quality Beyond That Needed To Protect Beneficial Uses And Unjustifiably Increases The Burden To Meet the Southern Delta Salinity Objective**

The best available science indicates that agriculture in the southern Delta will be reasonably protected from adverse impacts of salinity by setting the southern Delta salinity objectives at 1.0 EC at all times of the year.<sup>5</sup> As such, the southern Delta salinity objectives in Table 2, including the objective measures in the San Joaquin River at Vernalis, California, would be set at 1.0 EC during all months of the year.<sup>6</sup> (Appendix K, p. 15.) The changes to the Program of Implementation, nonetheless, would require Reclamation to operate the Central Valley Project to maintain a different water quality in

<sup>5</sup> The 2010 report prepared by Dr. Glenn J. Hoffman, title “Salt Tolerance of Crops in the Southern Sacramento-San Joaquin Delta”, suggests that a higher EC might be possible without unreasonable impacts to crops grown in the southern Delta.

<sup>6</sup> While Table 2 indicates that salinity at Vernalis is set at 1.0, in the narrative of the Phase 1 Bay-Delta Plan Updates, there are statements that appear to contradict Table 2. At page 42, for example, the text states: “...D-1641 imposes conditions on USBR’s water rights requiring implementation of EC levels of 0.7 mmhos/cm from April through August and 1.0 mmhos/cm from September through March . . . . As part of implementing the salinity water quality objective for the interior southern Delta, USBR shall be required to continue to comply with these salinity levels, as a condition of its water rights. . . .”.



the San Joaquin River at Vernalis, California. The proposed Program of Implementation would require Reclamation to operate to maintain 0.7 EC at that location. (Appendix K, pp. 43, 45.) The reason for the difference is to allow for water quality degradation to occur in the interior southern Delta. (Appendix K, p. 45 [requiring DWR's and Reclamation's water rights to be conditioned "to address the impacts of SWP and CVP export operations on water levels and flow conditions that might affect southern Delta salinity conditions, including the *assimilative capacity for local sources of salinity in the southern Delta*" (emphasis added)].) It is not reasonable or appropriate to impose an obligation on Reclamation to mitigate for water quality degradation not attributed to the CVP.

As noted above, the salinity concentrations in the southern Delta are due to multiple factors. The Phase 1 Bay-Delta Plan Updates recognize this long-standing fact: "Salinity problems in the southern Delta primarily result from low flows, tidal action, diversions by the CVP, SWP and local water users, agricultural return flows, poor circulation, and channel capacity." (Appendix K, p. 45.)<sup>7</sup> Nowhere do the Phase 1 Bay-Delta Plan Updates explain why the State Water Board staff believe it is appropriate for the State Water Board to assign responsibility to Reclamation to overachieve the water quality required in the San Joaquin River at Vernalis, California to allow for discharges by in-Delta water users that add salinity.

**8. If Implemented, The Working Group Established In The Proposed Program Of Implementation Must Include Representatives Of South Of Delta CVP Contractors**

The proposed Program of Implementation, as currently drafted, includes the establishment of a Stanislaus, Tuolumne and Merced Working Group ("STM Working Group"). (Appendix K, p. 32.) The proposed composition of the STM Working Group is described in the proposed Program of Implementation as follows:

The State Water Board will seek participation in the STM Working Group by the following entities who have expertise in LSJR, Stanislaus, Tuolumne, and Merced Rivers fisheries management, hydrology, operations, and monitoring and assessment needs: the DFW; NMFS; USFWS; and water

<sup>7</sup> On page 45 of Appendix K, it states: "As early as the 1991 Bay-Delta Plan, the State Water Board recognized the need to meet the salinity objectives largely through regulation of water flow. This Bay-Delta Plan continues Revised Decision 1641's obligations on the CVP and SWP to meet the salinity water quality objectives." The first sentence is not accurate. Nowhere has the State Water Board stated that the salinity objectives would be implemented "largely through regulation of water flow." The second sentence is misleading. The sentence suggests that the State Water Board assigned full responsibility for salinity objectives to Reclamation and DWR. That suggestion is misleading at best. In the 2006 Bay-Delta Plan, the State Water Board explained: "The salinity objectives at Vernalis can be attained by releasing dilution water from New Melones and other sources, completing a drain to remove the salts generated by agricultural drainage and municipal discharges from the San Joaquin Valley, and conducting measures in the San Joaquin Valley such as the measures discussed below for controlling salinity in the interior southern Delta. The salinity objectives for the interior southern Delta can be implemented by measures that include state regulatory actions, state funding of projects and studies, regulation of water diversions, pollutant discharge controls, improvements in water circulation, and long term implementation of best management practices to control saline discharges." (2006 Bay-Delta Plan, p. 28.)

users on the Stanislaus, Tuolumne, and Merced Rivers. The STM Working Group will also include State Water Board staff and may include any other persons or entities the Executive Director determines to have appropriate expertise. Subgroups of the STM Working Group may be formed as appropriate and State Water Board staff may also initiate activities in coordination with members of the STM Working Group.

(*Ibid.*, emphasis not included.) The proposed Program of Implementation gives the STM Working Group significant responsibility. For example, “the State Water Board will seek recommendations from the STM Working Group on biological goals; procedures for implementing the adaptive methods described above; annual adaptive operations plans; and the SJRMEP....” (*Ibid.*) If the State Water Board’s Executive Director agrees with the STM Working Group, he or she can adopt its recommendations. If the Executive Director disagrees with the Working Group, its recommendations will be presented to the full State Water Board, at which point the recommendation(s) could be adopted. Through adoption by the State Water Board, the STM Working Group’s recommendations regarding biological goals, adaptive method implementation procedures, annual adaptive operations plans, and the SJRMEP have the potential to impact South of Delta CVP contractors. In light of the STM Working Group’s significant responsibility and the potential impacts its recommendations, South of Delta CVP Contractor representatives should be included in the STM Working Group. (*Ibid.* [“The STM Working Group . . . may include any other persons or entities the Executive Director determines to have appropriate expertise.”].)

#### **9. The Discussion Of Measures Required To Implement The Dissolved Oxygen Objectives Needs Updating**

The proposed Program of Implementation does not reflect the best available information regarding dissolved oxygen in the San Joaquin River. It should but fails to acknowledge that the Dissolved Oxygen Aeration Facility at the Port of Stockton, first implemented in 2012, has been highly successful in preventing exceedances of the Dissolved Oxygen Objectives (“DO Objectives”), and has done so at a relatively reasonable price and without immitigable adverse impacts on fish, wildlife, water quality and other resources. (See Appendix K, pp. 54-55.)

Further, the proposed Program of Implementation continues to assign responsibility to the San Luis & Delta-Mendota Water Authority (and other parties) for meeting the DO Objectives, based on an estimated contribution of nutrients to the San Joaquin River through drainage discharges. There is not a sufficient justification for this approach because the connection between what is discharged and the actual cause of

the low dissolved oxygen is subject to speculation. There is particular uncertainty regarding the rate of algae growth, time of travel, and contribution of nutrients. Lacking a way to calculate the impacts to the Delta at Stockton, the result of reductions in algae and nutrients cannot be determined. In addition, the fact that nutrient contribution is an ever-changing (decreasing) number, whereas the allocation of responsibility is fixed provides an additional reason for reexamining responsibility for the DO Objectives. Finally, the TMDL fails to take into account that San Joaquin River flow has been diverted by other parties who are not held accountable for the effect of low flow/low dissolved oxygen when the river reaches the Deep Water Ship Channel. As the Central Valley Regional Water Board continues to implement the recently adopted dissolved oxygen TMDL, it should continue to seek out and receive information that would better inform assignment of responsibility.

## **10. The Final SED Ignores Significant Impacts**

### **A. The Final SED Does Not Consider The Impacts Of Carryover Storage Targets**

The fundamental flaws identified in the Draft SED and recirculated draft SED remain pervasive in the Final SED, which fails to correct these deficiencies and instead relies and builds upon them, in violation of CEQA. As one example, Appendix K of the Final SED provides:

When implementing the LSJR flow objectives, the State Water Board will include minimum reservoir carryover storage targets or other requirements to help ensure that providing flows to meet the flow objectives will not have significant adverse temperature or other impacts on fish and wildlife or, if feasible, on other beneficial uses.

(Appendix K, p. 28.)

By deferring its duty to identify these “minimum reservoir carryover storage targets or other requirements” as key elements of the proposed plan amendments and failing to analyze the impacts of those measures in the Final SED, the State Water Board once again fails to provide information minimally necessary to meet CEQA’s basic requirements. (Pub. Resources Code, § 21061; CEQA Guidelines, §§ 15002(a), 15124(b), 15126.4, 15126.6; see *Sierra Club v. State Board of Forestry* (1994) 7 Cal.4th 1215 [the State Water Board’s fundamental CEQA duties include analysis and disclosure of adverse environmental effects, mitigation of those effects through feasible measures or alternatives, and justification of the proposed action based on specific and clearly articulated balancing of environmental, economic, social, or other conditions].) The Final SED violates CEQA because it lacks supported analysis and evidence in support of its assumptions and conclusions regarding anticipated effects and outcomes likely to result

from implementation of the plan amendments. (CEQA Guidelines, § 15384; *Ebbetts Pass Forest Watch v. Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 943-45.) Instead, the Final SED again defers identification of key elements of the plan amendments and continues to assume that whenever they are finally developed, these “targets” will result in long-term environmental benefits without any performance criteria by which to measure whether and to what degree any such benefits occur, and *at what cost* to the environment and economy. This approach violates CEQA. (*POET, LLC v. California Air Resources Board* (2013) 218 Cal.App.4th 681.)

## **B. The Final SED Does Not Adequately Consider The Impacts Of The San Joaquin River Flow Objectives On Water Supply**

At a minimum, the conclusions in the Final SED must be supported by substantial evidence. (CEQA Guidelines, § 15091(b).) Without the requisite substantial evidence, however, the Final SED significantly discounts the shortage in supply that water users will suffer.<sup>8</sup> As discussed in Section 6.B above, the Phase 1 Bay-Delta Plan Updates suggest that increased flows associated with the proposed San Joaquin River flow objectives will be protected as they flow through the Delta. (Appendix K, pp. 28-29.) This “protection” would result in the reduction of southern Delta pumping and therefore the water supply for many South of Delta CVP Contractors. However, the analysis in the Final SED shows increases in CVP and SWP southern Delta pumping caused by changes in San Joaquin River flows. The Final SED explains the reason for this inconsistency as follows:

To estimate the possible effects on exports, analysis related to exports and outflow assumes the State Water Board will not change the export constraints to protect any increased flows downstream of Vernalis because the LSJR Alternatives . . . would not affect export regulations.

(Final SED, Ch. 5, p. 5-60.) This assumption is unfounded and is inconsistent with the State Water Board’s stated intent to “protect” increased flows into the Delta as outflow. The analysis in the Final SED ignores impacts from protecting inflow, and therefore unlawfully fails to analyze the overall impact of the San Joaquin River flow objectives to southern Delta pumping, in violation of CEQA. (CEQA Guidelines, §§ 15126 – 15126.4, 15130, 15131(b).)

<sup>8</sup> The degree to which impacts to specific water users are underestimated are described, for example, in the March 17, 2017 comments of Santa Clara Valley Water District, a member agency of the San Luis & Delta-Mendota Water Authority. Santa Clara Valley Water District’s updated comments, submitted also on July 27, 2018, provide further analysis of potential impacts from the reduction in supplies to San Francisco’s regional system from the Phase 1 Bay-Delta Plan Updates. The comments submitted by the City of Tracy also highlight significant impacts from the Phase 1 Bay-Delta Plan Updates. With 70% of Tracy’s source water being supplied by the South San Joaquin Irrigation District, Tracy faces a decrease in supply, which in turn may require reliance on lower quality groundwater, with concomitant effects on Tracy’s ability to meet the proposed salinity objective (as a discharger).

The Final SED also concludes, again without substantial evidence, that significant adverse impacts caused by large reductions in surface water available to existing water users will be offset by groundwater pumping. Such assumptions of increased groundwater pumping are unrealistic and not supported by any analysis consistent with implementation of the Sustainable Groundwater Management Act (“SGMA”). The Final SED recognizes that the new objectives will lead to increased groundwater pumping yet fails to identify environmental impacts associated with increased reliance on groundwater such as agricultural land fallowing, water supply and water quality impacts, air quality impacts, and economic hardship not only on agencies that rely on water from the Stanislaus, Tuolumne, and Merced Rivers, but also on South of Delta CVP Contractors. Those impacts are not adequately disclosed and mitigated in the Final SED. (CEQA Guidelines, §§ 15126 – 15126.4, 15130, 15131(b).)

**i. Impacts Are Ignored Because Of The Unjustified Assumption That Reductions In Water Supply Will Be Offset With Groundwater Pumping**

The assessment of impacts caused by the proposed objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations assumes that impacts will be offset by groundwater pumping within the areas currently served by agencies that rely on water from the Stanislaus, Tuolumne and Merced Rivers. The Eastern San Joaquin (Basin Number 5-22.01) and Merced (Basin Number 5-22.04) groundwater basins are categorized as “basins subject to critical conditions of overdraft” in Bulletin 118 Interim Update 2016 (Bulletin 118). Reductions in surface water deliveries for agriculture would likely increase groundwater pumping and cause overdraft conditions to worsen. Although the Phase 1 Bay-Delta Plan Updates (e.g., Table ES-4) report that the mean annual groundwater pumping is expected to increase by 105,000 acre-feet, the findings failed to quantify the cumulative lowering of groundwater levels resulting from increased groundwater pumping and loss of recharge from agricultural irrigation and deep percolation. At a minimum, a reasonable good faith effort to assess and disclose these effects would have included the State Water Board’s consultation with each Groundwater Sustainability Agency managing the preparation of Groundwater Sustainability Plans (“GSP”) in these basins to determine the cumulative groundwater impacts associated with the proposed amendments. The Final SED does not reflect that any such consultation occurred. Concluding statements in the Final SED that “groundwater pumping would continue to offset some of the surface water supply deficits” thus have no basis, considering that implementation of the SGMA will restrict groundwater pumping in the Eastern San Joaquin and Merced groundwater basins.

The Final SED does not justify the data on groundwater use, for example in Tables ES-5 and ES-7 – “Annual Average Applied Water Demand, Groundwater Pumping, and Unmet Demand.” (Final SED, Exec. Summary, pp. ES-26, ES-27.) Those tables present data based on 2009 and 2014 levels of groundwater pumping. The Final SED does not

explain how those data accurately forecast unmet demand under future SGMA GSP pumping restrictions. Basins that are currently in overdraft conditions (e.g., Eastern San Joaquin and Merced) will likely implement management measures that increase surface water supply, or reduce groundwater pumping, or some combination thereof. Since implementation of the new objectives for the beneficial use by San Joaquin River watershed fish populations will reduce surface water supplies to agricultural users, the GSPs will likely give greater emphasis to measures that reduce groundwater pumping than they otherwise would have. That will increase the unmet water demand to levels much greater than those reported in Tables ES-5 and ES-7. Again, there is no information that suggests the State Water Board consulted with each GSA to accurately forecast the unmet water demand and resulting environmental, social, and economic impacts associated with the new objectives the beneficial use by San Joaquin River watershed fish populations.

The Modesto (Basin Number 5-022.02) and Turlock (Basin Number 5-022.03) groundwater basins are not currently designated as basins subject to critical conditions of overdraft in Bulletin 118, but the reduction in surface water deliveries for agriculture that will result from the new objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations will increase groundwater pumping. Once again, the Final SED does not reflect a consultation with each GSA managing the preparation of GSPs in these basins to support a reasonable forecast in groundwater pumping, and to determine whether the reasonably foreseeable increase in groundwater use would exceed sustainable yields.

Reference to the July 27, 2018 comment letter submitted by Santa Clara Valley Water District reveals that the reasonably likely impacts of the Final SED to several cities in northern Santa Clara County will be reduction in Hetch-Hetchy deliveries (sourced mainly from the Tuolumne River) followed by increased dry-year pumping from the Santa Clara Sub-basin. Inevitably, groundwater depletions in the Santa Clara sub-basin will call for additional supplies applied to groundwater recharge; such incremental supplies are not identified, and their impacts are not analyzed, in the Final SED.

As a result of the deficiencies noted above, the Final SED fails to reflect a reasonable, good faith effort at full disclosure; it lacks adequate analysis of environmental impacts, including degraded groundwater quality, land subsidence, and lowering of groundwater levels, all of which are considered undesirable results in SGMA and could lead to findings of significant impact in a substitute environmental document.

**ii. Impacts To Areas South Of The Delta Resulting From Reduced Supplies Available For Release Programs, Transfers, And Exchanges Are Ignored**

The Delta-Mendota (Basin Number 5-22.07), Kings (Basin Number 5-22.08), Westside (Basin Number 5-22.09), Tulare Lake (Basin Number 5-22.12), and Kern County (Basin Number 5-22.14) basins can be expected to be negatively impacted by the proposed objectives intended to protect the beneficial use of water by San Joaquin River watershed fish populations. South of Delta CVP Contractors that overlay these basins historically receive water from the Stanislaus River that is available as a consequence of voluntary programs implemented by the Oakdale and South San Joaquin Irrigation Districts ("OID and SSJID"). At times, OID and SSJID have released water during the April-May "pulse flow" and October-November "attraction flow" periods for the benefit of fisheries on the Stanislaus River. The water supply of South of Delta CVP Contractors has benefit because of those releases. The additional water available to them has helped to offset groundwater pumping. In addition to this program, Merced Irrigation District has transferred water to South of Delta CVP Contractors. These programs will likely be curtailed, and may end entirely, if the proposed objectives are adopted. That could reduce supplies available to South of Delta CVP Contractors by up to 50,000 acre-feet annually, if not more. The environmental impacts of those reduced supplies are not considered in the Final SED.

**C. The Final SED Unlawfully Segments Analyses Of Impacts From Phase 1 And Phase 2 And Ignores The Cumulative Impacts Of The Full Update To The Bay-Delta Plan**

The State Water Board currently is considering updates to the Bay-Delta Plan in two proceedings that address different watersheds, sometimes referred to as Phases 1 and 2 of the Bay-Delta Plan Update. While these proceedings may be construed to have "independent utility" for purposes of environmental review, approaching these proceedings as independent actions does not excuse the State Water Board from good faith evaluation and full disclosure of impacts. The State Water Board must thoroughly evaluate and fully disclose, both individually and in combination, impacts on resources including but not limited to surface water supply, hydrology and water quality, groundwater sustainability and subsidence, fallowing or conversion of agricultural resources, air quality impacts, and impacts to fish and wildlife, particularly where certain species may be adversely affected as a result of the plan updates' dedication of water resources to other species.

In response to comments regarding these reasonably foreseeable and predictably devastating impacts, the Final SED states:



Moreover, in Chapter 17, Cumulative Impacts, Growth-Inducing Effects, and Irreversible Commitment of Resources, the SED evaluates the potential cumulative environmental effects associated with the LSJR flow and SDWQ objectives together with other projects and programs that could cause related impacts, including the Sacramento/Delta watershed update to the Bay-Delta Plan (Phase II). A cumulative impact from several projects is “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” (Cal. Code Regs., tit. 14, § 15355, subd. (b).) Chapter 17 recognizes that the environmental impacts of the export/inflow objectives and reverse flow objectives for Old and Middle River, in combination with the plan amendments in this proceeding, could have cumulative effects on surface hydrology, water quality, aquatic biological resources, agricultural resources, and service providers. Thus, *to the extent feasible and without engaging in unnecessary speculation*, the potential cumulative environmental effects of the different proceedings are evaluated in the SED.

(Final SED, Master Response 1.2, pp. 19-20 [italics added].)

The Final SED violates CEQA because the cumulative environmental impacts of the Phase 1 and Phase 2 Bay-Delta Plan updates are not the least bit speculative; not only are they reasonably foreseeable, they are predictable, readily susceptible to analysis and quantification, and are certain to be severe. As such, the environmental impacts of Phases 1 and 2 are subject to the standards of disclosure and mitigation applicable to all reasonably foreseeable environmental effects. (CEQA Guidelines, §§ 15126 – 15126.4.) The Final SED violates CEQA because its superficial treatment of significant environmental impacts fails to comply with these standards.

**D. Because Of Its Myopic Focus On Flow, The Final SED Fails To Consider A Reasonable Range Of (Non-Flow) Alternatives**

In prior comments, South of Delta CVP Contractors noted, contrary to the requirement of law, the draft SED and draft recirculated SED do not consider a reasonable range of alternatives to protect water quality for the beneficial use of water by San Joaquin River watershed fish populations. This failing is not corrected in the Final SED. In the response to comments, State Water Board staff provides reference to Table 2.4-1,

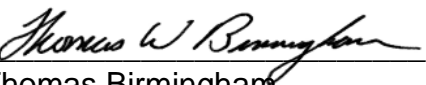
Summary of Inability of Non-Flow Measures Alone to Achieve the Purposes and Goals of the Plan Amendments, and to Master Responses 2.4, 3.1, and 5.2. (Final SED, Table 4.1-Responses to Comments at Ltr. No. 1270, Cmt. No. 7.) But neither Table 2.4-1 nor the referenced Master Responses adequately excuse the legal defect. The table and responses suggest that implementing non-flow measures alone would not meet identified purposes and goals of the plan amendments, including “[m]aintain[ing] inflow conditions . . .,” “[p]rovid[ing] flows that more closely mimic the natural hydrographic conditions . . .,” “[p]rovid[ing] flows in a quantity necessary to achieve functions essential to native fishes . . .,” and “[a]llow[ing] adaptive implementation of flows that will afford maximum flexibility in establishing beneficial habitat conditions for native fishes . . .” (Master Response 2.4, p. 18.) This misses the point. The purposes and goals, *because they are narrowly focused on flow*, result in an inadequate range of alternatives. As a result of the focus on flow, alternatives that are based on establishing parameters for water quality constituents or characteristics (e.g. temperature and turbidity) are improperly ignored.


## 11. Conclusion

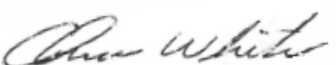
South of Delta CVP Contractors appreciate this opportunity to provide the State Water Board with comments on the Phase 1 Bay-Delta Plan Updates. While we are discouraged by the latest proposal, the hope of South of Delta CVP Contractors is that in providing these comments, the State Water Board will conform the Phase 1 Bay-Delta Plan Updates, as well as the Phase 2 documents currently being prepared, in order to ensure that the amended Bay-Delta Plan is consistent with policy, science, and law.

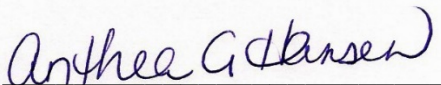
Sincerely,


By:   
\_\_\_\_\_  
Frances C. Mizuno  
Interim Executive Director  
San Luis & Delta-Mendota Water Authority


By:   
\_\_\_\_\_  
Thomas Birmingham  
General Manager  
Westlands Water District


By:   
\_\_\_\_\_  
Rick Gilmore  
General Manager  
Byron-Bethany Irrigation District


By:   
\_\_\_\_\_  
Chris White  
General Manager  
Central California Irrigation District

By:   
Anthea Hansen  
General Manager  
Del Puerto Water District


By:   
Jeff Bryant  
General Manager  
Firebaugh Canal Water District


By:   
John Wiersma  
General Manager  
Henry Miller Reclamation District 2131


By:   
Steven Stadler  
General Manager  
James Irrigation District

By:   
Ara Azhderian  
General Manager  
Mercy Springs Water District, Pacheco  
Water District, and Panoche Water District

By:   
Jeff Cattaneo  
District Manager/Engineer  
San Benito County Water District

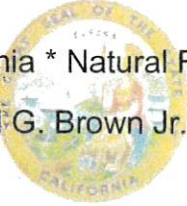
By:   
Lon Martin  
General Manager  
San Luis Water District

By:   
Danny Wade  
General Manager  
Tranquillity Irrigation District

By:   
Robert Pierce  
General Manager  
West Stanislaus Irrigation District

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Edmund G. Brown Jr., Governor



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July 27, 2018

Felicia Marcus, Chairman  
Steven Moore, Vice-Chairman  
Tam M. Doduc, Member  
Dorene D'Adamo, Member  
E. Joaquin Esquivel, Member  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

Dear Chairman Marcus, Vice-Chairman Moore, and Members:

**Re: Proposed Final Amendments and Final Substitute Environmental Document for Lower San Joaquin River Flow Objectives and Southern Delta Salinity Objectives**

The California Department of Fish and Wildlife (CDFW) and California Department of Water Resources (CDWR) submit these comments on the "Proposed Final Amendments and Substitute Environmental Document for the Lower San Joaquin River and Southern Delta" (July 6, 2018) (SED), which updates the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (WQCP). We write in response to the Fact Sheet, which states: "While the revised amendments enhance flexibility, the Board remains interested in receiving potential plan amendment language which would authorize, with the affirmative concurrence from the California Department of Fish and Wildlife, a coordinated control of flows and other, non-flow factors that would achieve benefits comparable to the unimpaired flow requirements." We submit such alternative language in the enclosure to this letter.

The Departments support the State Water Board's purpose, in updating the WQCP, to improve protection for anadromous and pelagic fishes in the Delta watershed, where these species are in crisis. Fact Sheet, p. 1. With gratitude, the Departments recognize the extraordinary efforts of the State Water Board to develop this update, including continuing engagement of stakeholders in the update process.

The Departments have commented and participated actively in this process. Since 2016 we have also undertaken negotiations with water agencies and districts, conservation groups, and other stakeholders to develop voluntary settlement agreements, which would be proposed as the Program of Implementation in the San Joaquin Basin, as well as the Sacramento Basin and legal Delta. As you note, "the State Water Board cannot order these collaborative efforts in a regulation, but can accept them as offered." Fact Sheet, p. 4. The enclosure to this letter includes alternative language that would support our continued progress towards reaching such agreements in 2018.

### **Voluntary Settlement Agreements**

The Proposed Final Amendments recognize that voluntary settlement agreements may inform and expedite implementation of water quality objectives in a durable manner. SED, Appendix K ("Revised Water Quality Control Plan"), p. 36. The Departments agree. This letter describes our continuing approach to development of such agreements.

Restoring the viability of anadromous fishes in the Lower San Joaquin River Basin will require improvements in a wide range of baseline conditions that affect habitat availability and quality. These conditions include: elevated water temperatures, passage barriers, lack of floodplain inundation, blockage of substrate transport, and predation by non-native species. In voluntary agreements, CDFW proposes to coordinate functional flows with non-flow actions to substantially improve habitat availability and biological outcomes for the anadromous fishes. Such improvements would begin immediately if the State Water Board accepts the agreements and would continue for the defined term of the agreements, which could be 15 years subject to renewal.

The Proposed Final Amendments provide for future development of biological goals to inform adaptive implementation. Fact Sheet, p. 5; SED Appendix K, pp. 32-33. The Departments support use of goals to improve effectiveness of implementation. CDFW proposes to include outcomes in the voluntary agreements, and specifically, to increase habitat availability sufficient to support doubling of the average adult escapement of anadromous fishes that occurred between 2001-2015 in each of the San Joaquin tributaries. These outcomes would compare favorably with the State Water Board's findings about the benefits of the proposed narrative objective. See SED, Table 19-32, pp. 74-89.

Consistent with the Proposed Final Amendments (SED Appendix K, pp. 34-36), CDFW proposes that the voluntary agreements would include a robust science process to

evaluate effectiveness of implementation. This process would involve continuous monitoring in open-source format, measurable indicators, and testable hypotheses, including competing hypotheses where existing science is particularly uncertain. CDFW would have lead responsibility for implementation of the science process, but will emphasize improved coordination with other regulatory agencies, universities, and other entities.

### **Non-Flow Actions**

The Proposed Final Amendments permit non-flow actions in voluntary settlement agreements. SED, Appendix K, p. 36. The Departments conclude that such actions will materially enhance habitat and biological outcomes. This point deserves emphasis. CDFW proposes that voluntary agreements would include a robust set of non-flow actions, such as replenishment of spawning gravels, riparian tree plantings, enhancement of habitat complexity, restoration of floodplain habitat, water hyacinth removal, potentially a fish segregation weir on the Tuolumne, hatchery improvements on the Merced, and actions to reduce predation rate by non-native predators.

### **Functional Flows**

The Proposed Final Amendments require maintenance of 40% unimpaired flow, subject to an adaptive range of 30 to 50%, from February in each of the tributary rivers. SED, Appendix K, pp. 28-31. The "unimpaired flow requirement is designed to mimic the natural cues that species have evolved to respond to, but is not intended to be a rigid and fixed percentage of unimpaired flow." Indeed, the proposed requirement allows shaping and shifting between months and years to achieve ecological functions. Fact Sheet, p. 3; SED Appendix K, pp. 30-31. CDFW agrees that functional flows, including mimicry of ecological processes and associated cues, are critical to restore the viability of anadromous fishes, while understanding that unimpaired flows are one of several reasonable metrics for management of functional flows.

The State Water Board has made it clear that it will permit flexibility in the unimpaired flow requirement if voluntary settlement agreements would provide better outcomes in protection of anadromous fishes and the proposed alternative language in the enclosure would enhance that flexibility. In the continued development of voluntary agreements, CDFW is pursuing a coordinated approach which would implement non-flow actions, integrate them with an enhanced year-round base flow, and use pulse flows to activate habitat for juvenile rearing and growth. In cooperation with other stakeholders, CDFW will undertake further modeling analysis, understanding the evidentiary burden of demonstrating comparable outcomes. Assuming that voluntary agreements are reached, CDFW will be prepared to sponsor a workshop panel of experts with respect to outcomes of coordinated control of flow and non-flow actions in the context of the San Joaquin Basin, as well as the Sacramento Basin and legal Delta.



**Conclusion**

Since 2016 the Departments have undertaken negotiations with public water agencies, conservation groups, and other stakeholders to reach voluntary agreements as the basis for implementation of the updated WQCP with respect to anadromous and pelagic fishes. Those negotiations, while difficult and slow, show great promise.

The Departments will continue our best efforts to conclude negotiations and submit complete agreements for your consideration later this year. We appreciate your consideration of our proposed language.

Thank you for consideration of these comments.

Sincerely,



Karla A. Nemeth  
Director  
Department of Water Resources



Charlton H. Bonham  
Director  
Department of Fish and Wildlife

Encl: Proposal of Alternative Language



### Proposal of Alternative Language

We recommend the addition of alternative language in the new narrative objective for the San Joaquin Basin, as highlighted below:

*Maintain inflow conditions from the San Joaquin River watershed to the Delta at Vernalis sufficient to support and maintain the natural production of viable native San Joaquin River watershed fish populations migrating through the Delta. Inflow conditions that reasonably contribute toward maintaining viable native migratory San Joaquin River fish populations include, but may not be limited to, flows that more closely mimic the natural hydrographic conditions to which native fish species are adapted, including the relative magnitude, duration, timing, and spatial extent of flows as they would naturally occur. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity.*

*Maintain 40% of unimpaired flow, with an allowed adaptive range between 30% - 50%, inclusive, from each of the Stanislaus, Tuolumne, and Merced Rivers from February through June; **or in the alternative, undertake flow and non-flow actions in a coordinated manner, to achieve comparable outcomes for fish and wildlife beneficial uses.***

"Amendments and Substitute Environmental Document for Lower San Joaquin River and Southern Delta" (July 6, 2018), Appendix K, Table 3 ("Water Quality Objectives for Fish and Wildlife Beneficial Uses"), p. 18.

We suggest conforming changes to the Program of Implementation, and specifically, the section entitled "Voluntary Agreements," as highlighted below:

*The State Water Board recognizes that voluntary agreements can help inform and expedite implementation of the water quality objectives and can provide durable solutions in the Delta watershed.*

*Subject to acceptance by the State Water Board, a voluntary agreement may serve as an implementation mechanism for the LSJR flow objectives for the LSJR Tributaries as a whole, an individual tributary, or some combination thereof. Voluntary agreements may include commitments to ~~meet the flow requirements and to undertake non-flow actions~~ **undertake flow and non-flow actions in a coordinated manner. The State Water Board may accept an agreement as the Program of Implementation for the affected waters, even though the flow requirement is outside of the range of unimpaired flows otherwise prescribed by the flow objective, provided: (1) the agreement will reasonably be expected to achieve comparable outcomes by comparison to unimpaired flows within the range; and (2) DFW supports the agreement.** ~~If the voluntary agreements include non-flow actions recommended in this Plan~~*

~~or by DFW, the non-flow measures may support a change in the required percent of unimpaired flow, within the range prescribed by the flow objectives, or other adaptive adjustments otherwise allowed in this program of implementation. Any such changes must be supported by DFW and satisfy the criteria for adaptive adjustments contained within this program of implementation. At a minimum, to be considered by the State Water Board, voluntary agreements must include provisions for transparency and accountability, monitoring and reporting, and for planning, adaptive adjustments, and periodic evaluation, that are comparable to similar elements contained in the program of implementation for the LSJR flow objectives.~~

The State Water Board encourages parties to present any executed voluntary agreement to the State Water Board for its review as soon as feasible to improve conditions in the watershed.

Appendix K, p. 36.



July 26, 2018

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Felicia Marcus, Chair  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

**Re: Comment Letter – Revisions to Proposed Bay-Delta Plan Amendments**

Dear Chair Marcus:

Thank you for the opportunity to comment on the final SED for Phase 1 of the Bay Delta Water Quality Control Plan. The Tuolumne River Trust agrees with the State Water Board's approach of basing instream flow requirements on a percentage of unimpaired flow. In fact, contrary to its public position on the Bay Delta Plan, The San Francisco Public Utilities Commission (SFPUC) embraces this approach in its Water Enterprise Environmental Stewardship Policy:

It is our policy to operate the water system in a manner that protects and restores native fish and wildlife downstream of our dams and water diversions, within reservoirs, and on our watershed lands. Releases from reservoirs will (consistent with our mission described above, existing agreements, and applicable state and federal laws), mimic the variation of the seasonal hydrology (e.g., magnitude, timing, duration, and frequency) of their corresponding watersheds in order to sustain the aquatic and riparian ecosystems upon which these native fish and wildlife species depend.<sup>1</sup>

We believe it was disingenuous of the SFPUC to have submitted an alternative proposal to the State Water Board along with its comments on the Draft SED for the Bay Delta Plan that proposed a different approach to instream flows.

*The SFPUC Alternative to promote the expansion of fall-run Chinook salmon and *Oncorhynchus mykiss* populations in the lower Tuolumne River while maintaining water supply reliability* (submitted on March 16, 2017) focuses almost exclusively on non-flow measures, such as habitat restoration and predator control, and fails to acknowledge that the Tuolumne's instream flows are currently inadequate to: 1) maintain water quality conditions associated with cold-water fisheries, 2) inundate off-channel, floodplain habitat that is critical to rearing and outmigration of juvenile fish, 3) encourage growth of native streamside riparian vegetation, including cottonwoods; 4) repress invasions of the Tuolumne River

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<sup>1</sup> SFPUC Water Enterprise Environmental Stewardship Policy –  
<http://sfwater.org/index.aspx?page=181>

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by non-native species such as bass and water hyacinth; and 5) improve water quality conditions in the lower San Joaquin River and southern Delta.

Adequate flows are necessary to increase fish incubation and migration success via improved water temperatures, dissolved oxygen (including intra-gravel conditions, which are negatively impacted by sediments deposited in low-flow conditions) and other water quality parameters, as well as by increasing inundation of key rearing habitats. The net result of providing adequate flows in the Tuolumne River will be to restore a functioning river ecosystem in which native fish are favored over non-native predators.

History has shown that non-flow measures, in the absence of sufficient instream flow, are destined to fail. In 1995, the SFPUC and Modesto and Turlock Irrigation Districts entered into a Settlement Agreement with many of the parties that remain interested in the health of the Tuolumne River today, including the US Fish and Wildlife Service, the California Department of Fish and Game (now Dept. of Fish and Wildlife), and a number of NGOs. The 1995 Settlement Agreement arose out of Article 37 of the original 1964 license for the Don Pedro Project issued by the Federal Energy Regulatory Commission (then the Federal Power Commission) which required that dam releases and operations be modified upon the recommendation of the California Department of Fish and Game after the first 20 years of operation of the Don Pedro Project in order to maintain the salmon fishery.

The 1995 Settlement Agreement's three objectives for the recovery of Tuolumne River Chinook salmon were to: 1) increase naturally occurring salmon populations, 2) protect any remaining genetic distinction, and 3) increase salmon habitat in the Tuolumne River. The basic approach of Agreement was to rely heavily on non-flow measures, in particular predator habitat reduction projects, to improve the Chinook salmon run. While the Agreement did include a small increase in flows, the increase was insignificant.

Despite the best efforts of the Irrigation Districts and others to improve habitat in the river for salmon, the fall run Chinook salmon population has actually decreased since 1995. In short, the 1995 Settlement Agreement failed to meet its goal of recovery of Tuolumne River Chinook salmon. It failed to increase naturally occurring salmon populations, and it failed to protect any remaining genetic distinction. And even though there was a focus on increasing salmon habitat, it failed in many respects to do that as well. We believe the primary focus on physical habitat manipulations, with a much smaller emphasis on flow measures, is the primary reason for this failure.

The 1995 Settlement Agreement also had a significant focus on reducing predators and predator habitat, and provides a good lesson in misplaced priorities. The Special Run Pool (SRP) 9 project was designed to reduce predator habitat by filling in an old in-channel gravel pit that had become excellent habitat for predator fish, primarily large-mouth bass. After expending approximately \$2.8 million, the project failed to reduce predator habitat. In fact, by the Districts' own admission, the project simply exchanged one non-native predator (largemouth

bass) with another (smallmouth bass).

The Districts' post-project monitoring report was very clear about the impact of high flows in affecting predator habitat. Here is an example of what the report had to say about flows and predator habitat:

During extremely wet years, high flows can flush largemouth bass out of a stream, but typically a sufficient number of adults can find shelter in flooded areas to repopulate the stream during lower flow conditions (Moyle 2002). During the years following the flood, largemouth bass abundance was controlled by spring and summer flow conditions that were unfavorable for reproduction. Largemouth bass require low water velocities and warm water temperatures to reproduce. (Moyle 2002, Swingle and Smith 1950, Harlan and Speaker 1956, Mraz 1964, Clugston 1966, Allan and Romero 1975, all as cited in Stuber et al 1982) (p 130).

Unfortunately, despite the many lessons we have learned through the implementation of the actions included in the 1995 Settlement Agreement (and similar habitat-centric approaches throughout the Central Valley, such as Calfed and CVPIA/AFRP), the SFPUC Alternative to the State Water Board Plan continues to emphasize the same myopic approach. Indeed, the flow-related aspects of the SFPUC Alternative are in some respects regressive from the current flow schedule. Very simply, we believe the SFPUC Alternative is doomed to fail and would generally be a misuse of taxpayer and ratepayer money, as well as a violation of the SFPUC's (and Modesto and Turlock Irrigation Districts') responsibility to protect the public trust.

We believe the fundamental premise of the SFPUC Alternative is flawed for several reasons. First, there is no unifying ecological principle that guides the SFPUC Alternative. Rather, the SFPUC Alternative attempts to replace the functions of flowing water (e.g., sediment mobilization, invasive species control, recruitment of desirable native riparian vegetation and inundation of rearing habitat) with costly, manual actions, which the SFPUC asserts will lead to the expansion of salmon and steelhead populations, despite evidence to the contrary. As we describe above, a similar approach was taken in the 1995 Settlement Agreement that did not result in increased numbers of native fish species.

As described in the Recovery Plan for the Evolutionary 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 (NMFS 201x), a salmon and steelhead recovery plan must be based on two key salmonid conservation principles.

First, is that functioning, diverse, and interconnected habitats are necessary for a species to be viable. Put simply, the full ecosystem needs to be restored, not just a limited set of specific elements that are part of the ecosystem. Salmon and steelhead recovery cannot be achieved without providing sufficient habitat throughout the full spawning, rearing and migratory route. The SFPUC Alternative's proposed actions to modify spawning and in-channel rearing habitat

are very limited geographically, and they ignore the need for habitat improvements in the Tuolumne River corridor and downstream as far as the Delta.

Second, a successful restoration strategy must address the four attributes of fish species viability (spatial structure, diversity, productivity and abundance) as outlined in McElhany et al. (2000). The Recovery Plan for the Evolutionary 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 (2014) summarizes these attributes:

Abundance and population growth rate are self-explanatory parameters that are clearly important to species and population viability, while spatial structure and diversity are just as important but less intuitive. Spatial structure refers to the arrangement of populations across the landscape, the distribution of spawners within a population, and the processes that produce these patterns. Species with a restricted spatial distribution and few spawning areas are at a higher risk of extinction from catastrophic environmental events (e.g., a single landslide) than are species with more widespread and complex spatial structure. Species or population diversity concerns the phenotypic (morphology, behavior, and life-history traits) and genetic characteristics of populations. Phenotypic diversity allows more populations to use a wider array of environments and protects populations against short-term temporal and spatial environmental changes. Genetic diversity, on the other hand, provides populations with the ability to survive long-term changes in the environment. It is the combination of phenotypic and genetic diversity expressed in a natural setting that provides populations with the ability to adapt to long-term changes (McElhany et al. 2000).

The SFPUC Alternative provides no targets for population abundance, growth rate or phenotypic/genetic diversity. Rather, the proposal provides an estimate of what the biological outputs of its approach will be, rather than establishing biological goals at the outset and designing conservation actions in support of achieving those goals. This approach is backward. Biological targets that comply with and articulate existing City, State and Federal policies should be defined in specific, measureable, achievable, relevant and time bound (SMART) terms in order to set the stage for the overall scope and specifics of recovery actions. These targets must be the driving force behind the SFPUC's alternative plan to meet its obligations under the Clean Water Act, Porter-Cologne Act, Federal and State Endangered Species Acts and the Public Trust Doctrine.

As to spatial structure, the SFPUC Alternative relies heavily on two stages of salmonid life cycle (spawning and egg incubation) and a portion of a third stage (juvenile migration). By restricting actions to benefit spawning and egg incubation habitat, and only a portion of juvenile migration habitat (in-channel rearing habitat above RM 26), the SFPUC Alternative misses opportunities to improve periodically inundated habitat (loosely "floodplains") throughout the Tuolumne River and into the lower San Joaquin River. Floodplain habitat has been demonstrated to strongly support growth of juvenile salmonids and the spawning and incubation success of other native fish species such as Sacramento splittail. Along the Tuolumne, there is poor

channel-floodplain connectivity; thus, there is a significant opportunity to improve productivity of several fisheries that has been completely omitted from the SFPUC proposal. Any improvements to the system that may be achieved upstream are likely to be undermined unless improvements are made along downstream portions of the River as well.

Different stretches of floodplain support different life stages of fish species. Additionally, floodplain distribution supports life history diversity, survival in different water year types, and successful outmigration. We believe the proposal should focus not just on habitat quality, but also on the extent and distribution of frequently inundated floodplain habitat needed to support agreed upon fish populations.

Finally, in the case of Chinook salmon, the SFPUC Alternative is focused almost exclusively on parr production, rather than providing for successful migration for a range of life history types, including fry, parr and smolts. Restricting the plan to focus primarily on successful parr outmigration will limit the success of the population over the long-run because the lack of phenotypic diversity in migrating salmon will make the population more susceptible to environmental stressors and future environmental changes. Rather than focusing on a single life-history strategy, it is imperative to provide an outmigration environment that improves survival of fry, parr and smolts.

We have reviewed initial results of floodplain modeling conducted to date. Although San Francisco contends there is sufficient rearing habitat, we strongly disagree. Our floodplain analysis indicates an inadequate amount of rearing habitat. The SFPUC appears to be confusing rearing “habitat” in the main stem with off-channel rearing habitat needs. Not only are these two different types of habitat, but the SFPUC’s finding of abundant rearing “habitat” only confirms that the mainstem is a warm, shallow, slow moving stream that favors predators over native species and provides inadequate migratory habitat for salmonids and other migratory fishes.

A more comprehensive approach to floodplain enhancement and management is needed, including reaches of the lower Tuolumne River below Geer Road. Different reaches of floodplain support different life stages of fish species. Functional floodplain habitat can be restored through flow modifications, topographic modifications, or a combination of both.

We believe the SFPUC’s focus on manual predator suppression is a severe weakness of their proposal. There are significant environmental conditions (e.g., warm water temperatures, water velocity, etc.) that support a predator population that also need to be addressed. Additionally, we would prioritize investments that reduce predation pressure while simultaneously addressing other critical stressors (e.g., restoration of floodplain habitat, temperature management, etc.). We want to avoid a situation in which resources are expended without producing measurable results, especially considering that significant resources will be required for successful floodplain restoration.



The reality is that the presence of abundant non-native predators is a symptom, not a cause, of the malfunctioning Tuolumne River environment. The manual predator suppression program is a time- and money-intensive strategy that is unlikely to work. Similar strategies (that are much more intensive and better funded) have completely failed in the Pacific Northwest, where the Federal government has spent hundreds of millions of dollars on a bounty program for native predators, and scaring away nesting terns and fish-eating marine mammals. Furthermore, predator removal has potential downsides. For example, removing large predatory fish can actually cause an increase in smaller predators. As described above, this is exactly what happened at the SRP 9 project where smallmouth bass replaced largemouth bass.

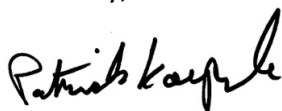
Existing flow schedules for the Tuolumne amount to approximately 20% of unimpaired flow being released for environmental purposes. The SFPUC Alternative proposes minor changes to these schedules, and in wetter years actually reduces the quantity of water released from 300,923 acre-feet under existing rules to an estimated 286,867 acre-feet under the SFPUC Alternative. The bottom line is that the SFPUC Alternative is far below the 60% of unimpaired flow the Water Board's flow criteria study determined would be necessary to protect fish species in the San Joaquin River basin. It will not achieve the objectives we are pursuing, and likely will not even provide incremental benefits.

Finally, while the SFPUC Alternative seeks to promote the expansion of fall-run Chinook salmon and *O. mykiss* populations in the lower Tuolumne, the three San Joaquin tributaries and associated water purveyors are responsible not only for protecting water quality in the San Joaquin tributaries, but also meaningful contributions to protecting water quality in the lower San Joaquin River and the Delta. Nothing in the SFPUC proposal addresses any obligation to maintain water quality downstream, and thus its scope is too narrow.

In summary, the Tuolumne River Trust agrees with the State Water Board's approach of basing instream flow requirements on a percentage of unimpaired flow. We believe at least 50% of unimpaired flow should be required between February and June. We also agree with the Water Board that a successful restoration plan will include both flow and non-flow elements. The SFPUC and Modesto and Turlock Irrigation Districts will have many opportunities to test their proposed measures for success. We look forward to working with them to identify the best ways to truly restore the Tuolumne River, and are certain higher flows will play a major role in our success.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Koepele". The signature is fluid and cursive, with the first name "Patrick" being more prominent than the last name "Koepele".

Patrick Koepele  
Executive Director

## State Water Resources Control Board

August 15, 2018

Honorable John Laird  
Secretary for Natural Resources  
California Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

**VIA U.S. MAIL AND EMAIL**

Dear Secretary Laird:

I have received the request you submitted on behalf of the California Natural Resources Agency, Department of Fish and Wildlife, and Department of Water Resources for an opportunity to present at next week's board meeting on adaptive implementation and voluntary settlement agreements. Your letter also requests that the board defer final action on the item. As discussed below and after conferring with the Executive Director, both requests are granted.

Throughout the last two years, board members and staff have repeatedly emphasized that voluntary settlement agreements can provide a faster, more durable solution to reasonably protect beneficial uses in the Lower San Joaquin River and its tributaries. The pending board action recognizes the importance of both flow and non-flow actions to enhance the fisheries and provides significant flexibility for adaptive implementation. Voluntary settlement agreements present the opportunity to make the non-flow elements more concrete and reduce the potential water supply impact. I look forward to hearing from the parties involved in the voluntary settlement agreement process about their progress in this regard.

Board staff will issue a revised agenda that makes clear final action will occur at a subsequent board meeting. The agenda item next week will provide the final opportunity for comment on the staff-proposed action, but final board action on the water quality control plan update will be continued to a future board meeting.

Sincerely,



Felicia Marcus  
Chair

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

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# Update on Amendments to State Water Board Bay-Delta Plan

August 28, 2018



## **Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary**

December 13, 2006

# Presentation agenda



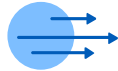
**Overview** of Bay-Delta Plan



Current Phased **Review and Update**



Water Supply and Biological **Assessments**



**Next steps**



Staff **Recommendations**



# *Bay-Delta Plan – authority and purpose*

Pursuant to Porter Cologne Act and federal Clean Water Act

- Establishes **beneficial uses**
- Establishes **water quality objectives** to ensure reasonable protection of beneficial uses
- Establishes a **program of implementation** for achieving the objectives
- **Periodically reviewed**



## *Periodic updates*

- 1978 Bay-Delta Plan first adopted
- Revised in 1991, 1995, and 2006
- Continuing decline of several native fish species
- Current revision process began in 2008
- SWP & CVP responsible for meeting most objectives



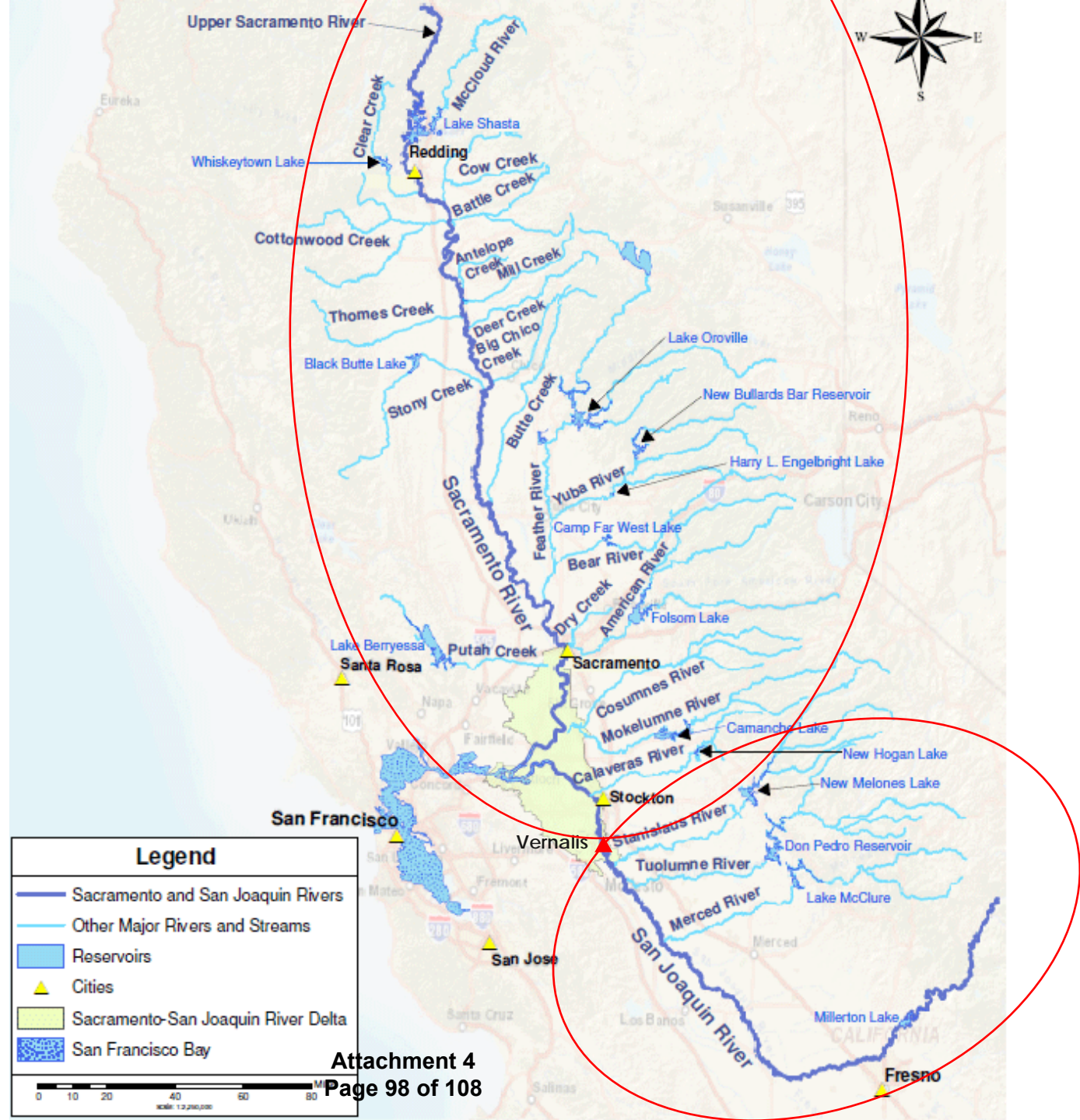
## *Current update is occurring in phases*

Current review and update:

- **Phase 1** – San Joaquin River and tributary flows and southern Delta salinity – started in 2008
- **Phase 2** – Sacramento River and tributary flows, Delta outflow and interior flows, gate operations, and cold water habitat – started in 2012
- **Phase 3** – Implementation – not started



# Sacramento-San Joaquin Rivers and major tributaries



## Phase 1 – proposed amendments

- Requires **40 percent of unimpaired flows** to remain in Tuolumne, Stanislaus and Merced Rivers from Feb-Jun
- Flows can be **adaptively managed** between 30-50 percent of unimpaired
- Flows can be adaptively managed as a **total volume of water**
- **San Joaquin River base flow** requirement
- Undefined **reservoir carryover target**
- **New working group** to recommend biological objectives, adaptive management and operations plans
- Southern Delta **salinity objective relaxed**



## Phase 2 – proposed amendments

- Requires **55 percent of unimpaired flows** to remain in Sacramento River and its tributaries and in tributaries to the Delta
- Flows can be **adaptively managed** between 45-65 percent of unimpaired
- Flows can be adaptively managed as a **total volume of water**
- Narrative and numeric inflow-based **Delta outflow** requirement
- Narrative **cold water habitat** objective



## *Phase 2 – proposed amendments (continued)*

- Adopts **requirements from biological opinions** for operation of SWP and CVP including:
  - Fall Delta outflow objective
  - Old & Middle River reverse flow limits
  - Export limits based on San Joaquin River inflow levels
  - Delta Cross Channel gate closures





# Water supply assessments

State Water Board assessment:

Phase 1: **293,000 AF** average system-wide  
supply reduction all years

**624,000-673,000 AF** average  
system-wide supply reduction  
dry and critical years

Phase 2: **2,000,000 AF** average system-wide  
supply reduction



# Water supply assessments

Impacts to Santa Clara County:

Phase 1: **4-15 percent** increase in frequency of shortages

**5-19 percent** increase in magnitude of shortages

Reduced availability of supplemental transfer supplies

Phase 2: Unknown, but likely significant



# Biological assessments

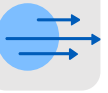
- Unimpaired flows are different from historic flows to which **native fish adapted**
- Biological **objectives to be determined**
- **State Water Board shows improvements** to temperature control and floodplain inundation under proposed amendments
- **More water-efficient methods exist** to attain similar or better biological benefits
- Voluntary agreements with **non-flow measures** is best path forward



# Public Comments

- SCVWD
- San Francisco Public Utilities Commission
- State Water Contractors
- CVP South-of-Delta Contractors
- California Departments of Fish & Wildlife and Water Resources
- Tuolumne River Trust
- Conservation Organizations





## Next Steps

- Phase 1, public comment on final proposed amendment – **August 21-22, 2018**
- Phase 1, adoption hearing – **to be determined**
- Phase 2, public comment on proposed changes and environmental document – **late-2018**
- Voluntary settlement agreement negotiations – **ongoing**
- Water rights hearings – **to be determined**

# Staff recommendations

## Summary:

- Receive an update on the State Water Board's proposed amendments
- Direct staff to participate in voluntary settlement agreement discussions



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