



SOUTH YUBA RIVER CITIZENS LEAGUE

January 19, 2024

State Water Resources Control Board
Division of Water Rights
Attn: Bay Delta & Hearings Branch
P.O. Box 100
Sacramento, CA 95812-2000

Delivered via email to: SacDeltaComments@waterboards.ca.gov

Re: Comments on the Draft Staff Report for Updates to the Water Quality Control Plan for the Bay Delta Phase II.

Dear Chair Esquivel and Members of the Board:

The South Yuba River Citizens League (SYRCL) respectfully submits comments and recommendations for the Draft Staff Report/Substitute Environmental Document (Staff Report) in support of possible updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento San Joaquin Delta Estuary (Bay Delta Plan). The updates are focused on the Sacramento River Watershed, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), interior Delta, and Delta.

I. Introduction

SYRCL is a membership-based public benefit 501(c)3 organization with over 3,500 members and nearly 1,000 active annual volunteers supporting the mission to protect and restore the Yuba River and the greater Yuba watershed. SYRCL has been the leading advocate for the protection of water quality, river health, and watershed restoration within the Yuba basin. SYRCL

has a large water quality monitoring program that has been collecting water quality data throughout the watershed for nearly twenty-five years.

SYRCL recognizes that part of the need for an update to the Bay-Delta plan is driven by the inability of salmon to access a significant portion of their historic spawning and rearing habitat. The Cold Water Habitat requirements seek to substitute the spatial historic range of salmon with cold water releases in the remaining accessible portions of Central Valley rivers. This creates an inherent conflict in the development of the Plan because the timing for water storage necessary to provide cold water in the summer is the same time that additional water releases are necessary to ensure sufficient Delta inflow and outflow. To further complicate things, the timing of high discharge during summer months for power generation and irrigation is the opposite of what is biologically required for anadromous and estuarine species.

SYRCL is the Project Lead, including securing funding for design, permitting, and implementation from state and federal grants on a number of lower Yuba River restoration projects. The projects include the Rose Bar Project (5 acres, spawning)¹, Hammon Bar Project (5 acres, floodplain)², the Long Bar Project (42 acres, floodplain)³, and the Upper Long Bar Project (25 acres, floodplain)⁴. SYRCL is a partner on the Hallwood Restoration Project (157 acres)⁵ which was led by cbec eco engineering. Together, these projects aim to create and enhance rearing and spawning habitat for the benefit of Chinook salmon and steelhead. This restoration work is being led by SYRCL as part of our core mission and is not associated with any existing or anticipated regulatory requirements for any agency. Additional technical expertise and some supplemental financial contributions from Yuba Water Agency (YWA) have also contributed to these projects.

For nearly fifteen years, SYRCL has been involved in multi-year relicensing proceedings before the Federal Energy Regulatory Commission (FERC) for hydroelectric projects on the Yuba and Bear rivers, including the Yuba River Development Project (P-2246), Yuba Bear Project (P-2266), Drum Spaulding Project (P-2310), Lower Drum Project (P-14531), and Narrows 1 Project (P-1403). In these proceedings, SYRCL has advocated for watershed health, including improved river flows, fish passage, rearing habitat, spawning habitat, and removing barriers to the outmigration of critical species. SYRCL acknowledges that the Bay Delta process will ultimately have some impact on the outcomes of these processes.

SYRCL participates in many collaborative forums relating to river and watershed management in the Yuba River watershed, including the River Management Team, the Yuba Reintroduction Working Group, the North Yuba Forest Partnership, and the Integrated Regional Water Management Groups. We have also been included in three technical meetings related to the proposed Nature Like Fishway at Daguerre Point Dam. We play an active role in these

¹ <https://yubariver.org/projects/upper-rose-bar-enhancement-project/>

² <https://yubariver.org/posts/hammon-bar-a-restoration-success-story/>

³ <https://yubariver.org/projects/lower-long-bar-restoration-project/>

⁴ <https://yubariver.org/projects/upper-long-bar-restoration-project/>

⁵ <https://www.hallwoodproject.org/>

collaborative agency forums and serve as the source of information for the community for what happens in those forums. SYRCL values our participation in these collaborative forums and looks forward to continuing to do good work through them.

A. SWRCB Responsibilities and Authorities

The legal framework guiding the State Water Resources Control Board's (SWRCB) responsibilities lie within the California Environmental Quality Act (CEQA), the Porter Cologne Act, the Clean Water Act and the Public Trust Doctrine.

The Staff Report outlines the State Water Board's responsibilities under CEQA and how it understands that it is fulfilling them. As part of a certified regulatory program, the Board adopts water quality control plans, thus exempting it from certain CEQA requirements. The Staff Report serves as a Substitute Environmental Document (SED) meeting CEQA requirements and analyzing the environmental effects of the proposed project and alternatives.

The Porter-Cologne Water Quality Control Act safeguards California's water resources through a comprehensive approach to managing water quality and supply allocation. It grants the State Water Resources Control Board the authority to create water quality control plans and enforce standards to “ensure the reasonable protection of beneficial uses.” It is important to note that the “reasonable protection” standard calls for significant changes in water quality, as opposed to small incremental steps.

The Federal Clean Water Act mandates that states establish water quality criteria to protect designated uses, such as drinking water, recreation, and aquatic life. The Act requires that, “such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. **For waters with multiple use designations, the criteria shall support the most sensitive use**” (emphasis added).⁶

In California, the Public Trust Doctrine establishes that certain natural resources, such as navigable waters, wetlands, and fisheries, are held in trust by the state for the benefit of the public. These natural resources are owned by all Californians and must be managed and conserved for present and future generations to enjoy. The Board must ensure that when it sets water quality objectives and establishes instream flow requirements, that these water management decisions prioritize the public's interest in maintaining our public trust resources.

The Staff Report notes that “Water Code section 275 directs the State Water Board to take all appropriate proceedings or actions to prevent waste or violations of the reasonable use standard. In addition, all water rights are subject to the public trust doctrine. In regulating water use, the state must consider the public trust and protect the public trust when feasible. Even after an

⁶ Staff Report, p. 1-19

appropriation has been approved, the public trust imposes a duty of continuing supervision. In applying the public trust doctrine, the State Water Board has the power to reconsider past water allocations even if the Board considered public trust impacts in its original water allocation decision”.⁷

B. Support for Updates to the Bay Delta Plan

SYRCL supports the updates to the Bay Delta Plan due to their potential to significantly improve the health of the Yuba watershed and the Delta watershed, both are crucial for the survival of many species, including the spring-run Chinook salmon. The Plan’s emphasis on maintaining adequate river flows and improving water quality aligns with SYRCL’s mission to advocate for a healthy Yuba watershed, and the health of those ecosystems. We hope these updates will help balance the demands on California’s limited water supply, ensuring the survival of critical species and the quality of life of our communities.

We also appreciate the effort put into the Staff Report, including the detailed alternatives analysis, and the inclusion of the Voluntary Agreements as proposed by selected water agencies so that they may be compared to the alternatives analysis and the Staff recommendation to the update to the Bay-Delta plan.

SYRCL believes that a collaborative effort between Water Agencies, state regulators, and environmental groups could result in an update to the Bay-Delta Plan with an increased emphasis on the health of salmon and the Bay-Delta ecosystem. The voluntary implementation pathway, as described in Section 5.4.1, provides an important opportunity for a similarly collaborative process, allowing individual sub-watersheds to develop an agreement better suited to the unique needs and management constraints of their watershed.

C. The Science for Healthy Ecosystems is Settled

The precipitous decline of the wild salmonid fishery is largely due to the loss of approximately 90% of salmon habitat behind dams. While efforts to increase habitat below dams, or drive fish around them are commendable, the lost habitat is not mitigable. Science shows that the most significant factor influencing the survival of the species is flow. Not coincidentally, flow is the most impactful measure the Board can implement in a timely and expeditious manner. As described in the Staff Report and VAs, the benefits of additional flow can be enhanced through restoration actions. In the absence of access to the full range of historic habitat, ensuring that the portions of a watershed which are accessible to species of concern is also necessary for there to be hope of survival. Increased flow can be more effective if paired with restoration actions, however the best available science is clear that key to the health of the Delta is more water.

⁷ Staff Report, p. 5-7.

The last major update of the Bay Delta Plan was in 1995. Since then, increased water usage and diversions have had devastating impacts. As a result, water isn't getting past the Delta and to the Golden Gate as it should. In some water years, just 20% of freshwater flows make it to the ocean and most of those flows aren't regulated or protected. With the possibility of new water supply diversions, increasing urban growth demands, and climate change impacts changing when and how precipitation falls, and driving an increase in agribusiness demands, it's crucial to implement regulations and safeguards and ensure freshwater flows through the Delta and out to the Golden Gate.

There is broad scientific consensus that the key to improving the health of the Bay-Delta and the survival of salmon is more water. The necessity for this additional water is necessary to compensate for a lack of accessible habitat due to rim dams for anadromous species and the series of canals and levees for those species endemic to the Delta. The best available science begins with the 2017 Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows (2017 Scientific Basis Report)⁸. Since the 2017 Scientific Basis Report was finalized, numerous scientific papers have been published that significantly improve our understanding of the relationship between flow and survival for Chinook salmon and other species that rely on the Bay-Delta.

Recent science has demonstrated that flow during juvenile outmigration has an outsized impact of survival to adulthood on Central Valley Chinook salmon. A study published in 2019⁹ found that flow predicts the ratio of juvenile salmon surviving to adulthood better than ocean conditions, and that up to one half of the variability in survival to adulthood could be explained by successful outmigration. Another study published in 2022 by Hassrick et al.¹⁰ found that mean annual flow had the strongest positive effect on survival and that higher survival was exhibited during years with high flows or pulse flows. In a 2020 study examining low flow conditions, Sturrock et al.¹¹ found that lower flows delay juvenile outmigration timing and survival. The Board, in section 3.4.5.3¹², also recognizes the important role that sufficient flows play in the survival of Chinook salmon.

Scientific research also demonstrates clearly that some additional flow is insufficient. There are critical flow thresholds that greatly impact biological outcomes. Below these thresholds, aquatic species are much less likely to survive, and exceeding those thresholds creates

⁸ 2017 Scientific Basis Report [201710-bdphasell-sciencereport.pdf \(ca.gov\)](https://www.water.ca.gov/baydelta/2017-scientific-basis-report)

⁹ Michel, Cyril J. "Decoupling outmigration from marine survival indicates outsized influence of streamflow on cohort success for California's Chinook salmon populations." *Canadian Journal of Fisheries and Aquatic Sciences* 76.8 (2019): 1398-1410. <https://doi.org/10.1139/cjfas-2018-0140>

¹⁰ Hassrick, Jason L., et al. "Factors Affecting Spatiotemporal Variation in Survival of Endangered Winter-Run Chinook Salmon Out-migrating from the Sacramento River." *North American Journal of Fisheries Management* 42.2 (2022): 375-395. <https://doi.org/10.1002/nafm.10748>

¹¹ Sturrock, Anna M., et al. "Unnatural selection of salmon life histories in a modified riverscape." *Global Change Biology* 26.3 (2020): 1235-1247. <https://doi.org/10.1111/gcb.14896>

¹² Staff Report, Section 3.4.5.3 pg 3-43

an opportunity for population growth of those species. A 2021 study by Cyril et al.¹³ found that a flow of 10,712 cfs (which they classified as the “historic mean”) at Wilkins Slough in the spring greatly improved survival in juvenile salmon migrating out to sea. Cyril et al. go on to state that from 1993-2019, that flow (10,712 cfs) was only achieved in 37% of days during the April 15 to May 15 peak outmigration period. In below average water years, that drops to 10% of days during the April 15 to May 15 period. The current baseline at Wilkins Slough is 5,000-7,000 cfs; it would be 7,500-8,800 cfs at a 55% unimpaired flow, and 10,000-11,700 cfs at 75% unimpaired flow. Downstream of Wilkins Slough, at Freeport, even greater flows have a similar correlation with increased juvenile Chinook salmon survival. A 2022 study by Dalton et al.¹⁴ found that flow of 35,000-52,000 cfs at Freeport was strongly correlated with salmon survival. In Table 3.4-7, The Staff Report claims that a juvenile Chinook salmon outmigration flow threshold greater than 20,000 cfs, measured at Freeport, between February and June, benefiting fall- and winter-run Chinook, would increase the abundance and survival of those species, in part due to water velocities sufficient to minimize entrainment of juvenile salmonids to the interior Delta where increased water temperatures and predation may be a greater issue. It is likely that these flows would also aid juvenile spring-run Chinook and steelhead, both of which emigrate out of the Delta between February and May. However, the 2022 study¹⁴ indicates that increased survival during outmigration is associated with an even greater critical flow threshold of 35,000 to 52,000 cfs at Freeport.

It is clear that flow is a master variable for healthy biological outcomes necessary to achieve the narrative goals of the proposed update to the Bay Delta Plan. Additionally, recent studies have suggested that habitat is not a key limiting factor for salmon populations¹⁵. This suggests that, while an important part of ecosystem recovery, habitat restoration cannot be a substitute for water. Key to the survival and population recovery of salmon is sufficient flow for juvenile outmigration through the Delta and under the Golden Gate Bridge. Fish need to swim.

D. Water Needs to Reach the Golden Gate

Since the last update of the Bay Delta Plan in 1995, the region has experienced a significant decline in Delta outflow, leading to severe ecological and the near collapse of the native fisheries. This decline is attributed to increased water diversions and exports from the Delta, which have reduced the natural flow out to the Golden Gate by nearly half (from 28.5 million acre-feet (MAF) to 15.5 MAF). In addition, over half of these exports occur during the critical January-June period, exacerbating the stress on native fish populations. Unfortunately, most of the current Delta outflow

¹³ Michel, Cyril J., et al. "Nonlinear survival of imperiled fish informs managed flows in a highly modified river." *Ecosphere* 12.5 (2021): e03498. <https://doi.org/10.1002/ecs2.3498>

¹⁴ Hance, Dalton J., et al. "From drought to deluge: spatiotemporal variation in migration routing, survival, travel time and floodplain use of an endangered migratory fish." *Canadian Journal of Fisheries and Aquatic Sciences* 79.3 (2022): 410-428. <https://doi.org/10.1139/cjfas-2021-0042>

¹⁵ Munsch, Stuart H., et al. "Science for integrative management of a diadromous fish stock: interdependencies of fisheries, flow, and habitat restoration." *Canadian Journal of Fisheries and Aquatic Sciences* 77.9 (2020): 1487-1504. <https://doi.org/10.1139/cjfas-2020-0075>

is unregulated and unprotected, further threatening the region's ecological balance and fishery resources.

1. Current Regulations Requiring Flow are Minimal and Unprotected

As noted in the staff report, current Delta outflow requirements are far below protective levels. The Staff Report states, “(A)s described in prior chapters, D-1641 Delta outflow requirements are very minimal and the 2019 BiOps do not include Delta outflow requirements, with the exception of some fall Delta outflows. Further, the BiOp requirements do not apply to other water users outside of the SWP And CVP, which is also largely the case for D-1641.”¹⁶

These current regulatory minimum Delta outflows are only about 5 MAF, **less than a third of current outflows** and less than 20% of unimpaired outflows.

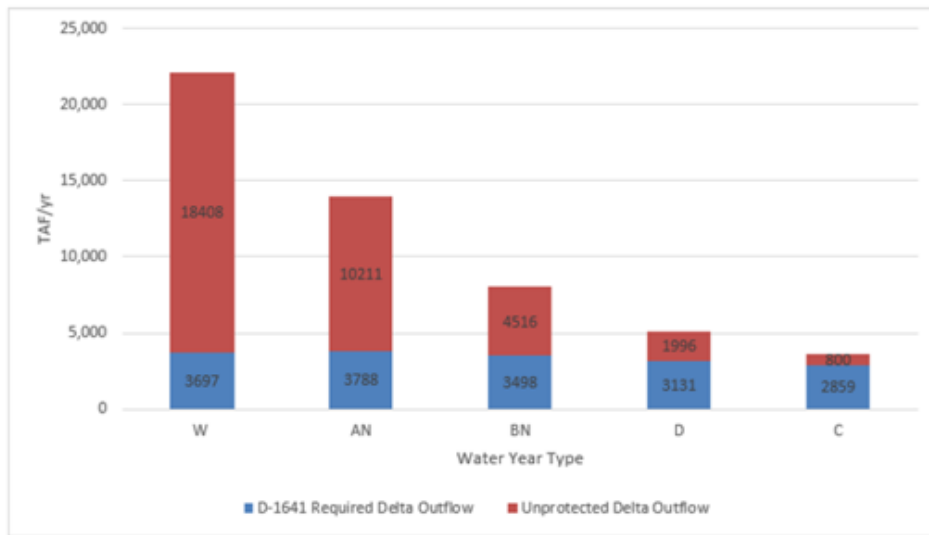


Figure 7.24-1. SacWAM Modeled D-1641–Required Delta Outflow and Existing Average Unprotected Delta Outflow (January–June) by Water Year Type

Figure 7.24-1 from the Staff Report shows D-1641 Required Delta outflow in blue and the Unprotected Delta Outflow in red. In most water year types, unregulated and unprotected flow accounts for 25%-75% of the current Delta outflow.

Notably, these unprotected outflows could be reduced further with new water diversions, urban growth demands, and climate change impacts. The impact of this cannot be overstated.

2. Delta Outflow Objective Should be more Than Maintenance

¹⁶ Staff Report, p. 9-199

The Staff Report establishes new narrative and numeric objectives as targets to provide specific, measurable actions to achieve. For the new Delta outflow narrative, the Staff Report states, “(m)aintain Delta outflows sufficient to support and maintain the natural production of viable native anadromous fish, estuarine fish, and aquatic species populations rearing in or migrating through the Bay-Delta estuary. Delta outflows that **reasonably contribute toward maintaining viable** native fish and aquatic species populations.”

SYRCL cautions that “maintenance” will only facilitate the continued collapse of the Bay-Delta ecosystem and will not facilitate the maintenance of current salmon populations let alone CDFW’s goal to “make all reasonable efforts to at least double natural production of anadromous fish in California’s Central Valley”¹⁷. While it may not have a place in this objective, there needs to be recognition and acknowledgement that the objectives of Delta outflow should include population growth of salmon. And that population growth requires additional inflow and outflow for the Bay-Delta. Simply put, natural production of anadromous and estuarine fish continues to decline – meaning population growth is negative. **A target that seeks to maintain that trend will inevitably fail.**

The Staff Report includes a new Delta inflow-based numeric objective that requires inflows to the Delta, including from the Sacramento/Delta tributaries and the San Joaquin River to be provided as outflow. It also adds a new fall numeric objective to maintain Delta outflows based on the 2019 Biological Opinion during the fall to protect sensitive native estuarine species.

The Staff Report states:

Maintain inflow conditions from the Sacramento River/Delta tributaries sufficient to support and maintain the natural production of viable native fish populations and to contribute to Delta outflows. Inflow conditions that reasonably contribute toward maintaining viable native 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, quality, and spatial extent of flows as they would naturally occur.

*Maintain inflows from the Sacramento/Delta tributaries at 55% of unimpaired flow, within an allowed adaptive range between 45 and 65% of unimpaired flow.*¹⁸

The numeric objective may be inconsistent with the new narrative objective because the 55% of unimpaired flow with an adaptive range of 45-65% may not be sufficient to support and maintain the natural production of viable native fish populations.

¹⁷ <https://www.fws.gov/project/anadromous-fish-restoration-program-lodi-fwo>

¹⁸ Staff Report, p. 5-17.

In sum, the current regulations in the Water Quality Control Plan have led to a collapse of the ecological health of the Bay Delta system and native fishery. The current Plan has failed to reasonably protect the viability or productivity of imperiled native species. It is essential that objectives are not the absolute minimum but support and maintain the natural production of viable fish populations.

II. Proposed VA Alternative

The Voluntary Agreements (VAs) were proposed by some Water Agencies and submitted to the Water Board during the writing of the Staff Report. It is encouraging that some water agencies have sought to make their own proposal for a set of voluntary agreements which could be implemented as part of the updated Bay-Delta Plan. The VAs are also commendable in that all additional water in the VAs is clearly defined as Delta outflows ensuring that the water is fulfilling the full environmental need. Unfortunately, as proposed, the VAs in total will fail to meet the narrative goals stated in the Staff Report. There are a number of general issues with the proposed VAs which leads SYRCL to believe that they will not be sufficient to protect California salmon and the health of the Delta ecosystem. We also address issues with the Yuba River specific VAs.

A. Inadequate Narrative Objective

In the Terms Sheet for the Voluntary Agreements dated March 29, 2022, in section 1.1.2.B the Parties proposed a different Narrative Viability Objective. We find a significant flaw in the proposed narrative language. Specifically, the proposed Narrative Viability Objective relies on the term “maintain” twice in the first sentence. Under “...current water quality conditions, including flow conditions in and from tributaries and into the Delta...”²¹ salmon populations have continued to decline, water quality has not improved in the Delta, species endemic to the Delta are no longer present, and the communities of the Delta which rely on those species and freshwater for their livelihoods and cultures continue to suffer.

Striving to “maintain” the current conditions will not address the on-going collapse of this ecosystem, let alone contribute to its recovery.

SYRCL believes that modifying the narrative so that the priority is *improvement* of conditions is crucial in setting the necessary expectations for updating the Bay-Delta Plan.

B. Reliance on State Water Purchases

The Water Agency proposed Voluntary Agreement relies on a reduction of water exports to the CVP and SWP as well as water purchases by the state from Water Agencies for the purposes of environmental flows. The proposed VAs includes permanent water purchases of 9,000 to 108,000 acre-feet of water depending on water-year type, 3,000 to 99,5000 acre-feet of water

which may be purchased at an unknown fixed price, and up to 45,000 acre-feet of water at the market price. It is significantly concerning that there is no language indicating how the state plans to pay for this water, and the economic and political conditions under which the water purchases are subject to change.

In the absence of the political will to reduce Central Valley Project and State Water Project exports and the de-prioritization of water purchases by the state, both of which are required by the proposed VAs, the total additional Delta outflow is between 87,000 acre-feet and 612,000 acre-feet. Roughly one-third of the environmental water is only available as water purchased by the state. Without the state as a signatory to the proposed VAs with a clear indication of their commitment to purchase water, the water purchases are nothing more than a hypothetical scenario. Table 1 shows the proposed VA contributions from each watershed in thousands of acre-feet and in the more biologically relevant cubic feet per second over the January through June period.

Table 1. Proposed VA Contributions to Delta Outflows. Acre-feet are taken from Table 1a of the Terms Sheet dated March 29, 2022. Conversion to CFS assumes 43,560 cubic feet in an acre-foot of water and a 6-month flow window as claimed in the signed Terms Sheet.

	Thousands of Acre-Feet					Six Month Average CFS				
	C (15%)	D (22%)	BN (17%)	AN (14%)	W (32%)	C (15%)	D (22%)	BN (17%)	AN (14%)	W (32%)
San Joaquin River basin										
minimum placeholder contributions	48	145	179	112	0	134	406	501	314	0
san Joaquin River basin portion gap		11	2	10		0	31	6	28	0
Friant	0	50	50	50	0	0	140	140	140	0
Sacramento River Basin										
Sacramento	2	102	100	100	0	6	286	280	280	0
Feather	0	60	60	60	0	0	168	168	168	0
Yuba	0	60	60	60	0	0	168	168	168	0
American	30	40	10	10	0	84	112	28	28	0
Mokelumne	0	10	20	45	0	0	28	56	126	0
Putah	7	6	6	6	0	20	17	17	17	0
<i>Tributary Contributions</i>	<i>87</i>	<i>484</i>	<i>487</i>	<i>453</i>	<i>0</i>	<i>244</i>	<i>1356</i>	<i>1364</i>	<i>1269</i>	<i>0</i>
CVP/SWP Export Reductions	0	125	125	175	0	0	350	350	490	0
PWA Water Purchase Program										
Fixed Price	3	63.5	84.5	99.5	27	8	178	237	279	76
Market price	0	45	45	45	0	0	126	126	126	0
Permanent State Water Purchases	65	108	9	52	123	182	303	25	146	345
<i>Total state purchases</i>	<i>68</i>	<i>216.5</i>	<i>138.5</i>	<i>196.5</i>	<i>150</i>	<i>190</i>	<i>606</i>	<i>388</i>	<i>550</i>	<i>420</i>
New Bay Delta Outflow above Baseline	155	826	751	825	150	434	2,312	2,102	2,309	420

C. Unresolved Critical Details

SYRCL appreciates that at this stage, a full reckoning of all components of the proposed VAs is not possible. Many details will require additional negotiations and planning and SYRCL is hopeful that through the voluntary implementation process other Yuba River watershed stakeholders and water agencies would be included in that process.

As it exists, the proposed VAs include important conditions crucial to the success of any plan which are not defined. Of specific concern is Table 1a, footnote 4, which discusses “off-ramps” subject to negotiations during Critical water-year types. The footnote does detail that water contributions will be considered met so long as the designated flow is met, on average, over the term of the VA. Without clarity on the term of the VA, which could be as little as eight years but may be extended indefinitely, the period over which this average would be calculated is unclear. Even more concerning is the fundamental premises of this kind of accounting for water deliveries. It imagines that if 0% of the obligated water is delivered for three years in a row and, in year four, 400% of the obligated water is delivered that is ecologically equivalent to 100% of the obligated water being delivered each year. This is a fundamental flaw in the logic of averaging water deliveries over multiple years. Averaging water deliveries over an undefined period of time creates an opportunity for water agencies to not meet water delivery requirements indefinitely with a promise that they will make up the average in the future.

D. Yuba River Specific Comments

SYRCL is committed to the collaborative process described in the voluntary implementation pathways in the Alternatives Analysis for the Yuba River that supports the health of the Yuba River and the Bay-Delta. We have worked closely with YWA on a variety of restoration, education, and forest health projects across the Yuba watershed with great success. We also have a working relationship with Nevada Irrigation District (NID) another water agency that predominantly relies on water from the Yuba and is not a signatory to the VAs. We believe that for voluntary implementation, or an updated Voluntary Agreement, if that language is preferential, to be effective, it must have clear, measurable environmental outcomes, be sufficiently enforceable such that the costs of non-compliance are greater than the costs of compliance¹⁹, and must be well supported by the best available science previously referenced above. We elaborate on our suggestions to find and implement a meaningful solution in Section V. SYRCL looks forward to contributing to meaningful opportunities to balance the environmentally necessary water and habitat with the varied anthropogenic water demands. It is clear, however, that the proposed Yuba VA will not meet the narrative VA goals or the narrative goals of the Staff Report.

The exact flows to be contributed by YWA in the Proposed VAs is unclear as different sources suggest different volumes of water. YWA’s VA fact sheet²⁰ calls for a contribution of 9,000 AF of guaranteed water and a supplemental contribution of 41,000 AF in certain year types:

“Yuba Water Agency’s contributions to the agreements include a **base contribution of 9,000** acre-feet in above-normal, below-normal and dry years, primarily from the reoperation of end-of-season storage at Yuba Water facilities. This amount represents Yuba Water’s proportionate share of the VA contribution from the Yuba Watershed. The proposal includes an

¹⁹ Becker, Rachel. *Rural ranchers face \$4,000 proposed fine for violating state drought orders*. CalMatters. (2022). <https://calmatters.org/environment/2022/11/california-ranchers-drought-fine/>

²⁰ <https://www.yubawater.org/DocumentCenter/View/4074/Agreements-to-Support-Healthy-Rivers-and-Landscapes-Fact-Sheet-PDF?bidId=>

additional contribution of up to 41,000 acre-feet in those same years, **compensated at \$290 per acre-foot**. During the eight-year term of this agreement, it is estimated the base and supplemental contributions would be provided in about half of those years.”

The Terms Sheet dated March 29, 2022²¹ also includes water contributions from each major tributary to the Bay-Delta. This document describes an additional 60,000 acre-feet of water in Dry, Below Normal, and Above Normal water years between January and June. Table 1a in Appendix 1 and reproduced in Table 1 indicates a Yuba River contribution of 60,000 acre-feet. It is unclear if that is inclusive of the 50,000 acre-feet listed in the YWA fact sheet²⁰, and if so the source of the 10,000 acre-feet difference. Additionally unclear, is how the 41,000 acre-feet of water optionally purchased by the state as indicated the YWA fact sheet²⁰ relates to the up to 216.5 thousand acre-feet purchased by the state in Table 1a²¹. Table 2 lists each information source, the stated duration of release, the total volume of water made available, and what that equates to in cubic feet per second which is the biologically relevant unit of measurement. Similar information for all tributaries is in Table 1. In parentheses following the volume of water in acre-feet is the source of that water; voluntary contribution, water purchased by the state, or an unspecified combination thereof. Reductions in exports to the CFP and SWP are included as voluntary reductions. For simplicity, only Dry water-year type is included in this table. For all other water-year types the volume and associated CFS will be smaller than those in this table.

Table 2. Yuba River specific VA water volumes and release duration discrepancies. Acre-feet of water was converted to the biologically relevant CFS based on the release duration described in the document.

Data Source		Release Duration	Acre Feet	Cubic feet per second for Release Duration
Yuba River Flows	YWA Fact Sheet ²⁰	2 months (unspecified)	9,000 (voluntary)	75.6
	YWA Fact Sheet ²⁰	2 months (unspecified)	41,000 (purchased)	344
	March 29 Terms Sheet ²¹	6 months (Jan – June)	60,000 (unspecified)	168
Bay-Delta Outflow	March 29 Terms Sheet ²¹	6 months (Jan – June)	609,000 (voluntary)	1,705
	March 29 Terms Sheet ²¹	6 months (Jan – June)	216,500 (purchased)	606

What is clear from this table focusing on the biologically relevant unit of measurement (CFS) is that the additional water during the crucial outmigration time period is well below what

²¹ <https://resources.ca.gov/-/media/CNRA-Website/Files/NewsRoom/Voluntary-Agreement-Package-March-29-2022.pdf>

the best available science tells us is necessary. This is especially true when not including the water which the state is presumed to purchase – an assumption not guaranteed by the state.

It is clear from recent science¹⁵ that habitat restoration alone is not sufficient to restore salmon populations. That does not mean that floodplain restoration is not an important part of population recovery. In the Yuba River it is commonly understood that floodplain inundation begins at approximately 5,000 cfs²². It is also well established that floodplain rearing habitat plays an important role in the growth, and therefore survival, of salmon^{23, 24}. It is therefore important that additional water releases are sufficient to meet the biologically specific goals of continuous floodplain inundation for 14-21 days and maintaining cool water temperatures.

The rim dam in the Yuba River is Englebright Dam with a combined outlet capacity between the two powerhouses (Narrows 1, FERC project P-1403; Narrows 2, FERC project P-2246) of just over 4,000 cfs. Therefore, the only mechanism by which floodplain inundating flows can occur is through induced spill at Englebright Dam, a practice which is uncontrollable. Given the structural operational limitations at Englebright Dam, it unclear how the proposed additional water will be able to support the biological objectives. An additional 75.6 cfs over an undefined two-month period is all that is guaranteed by the VA. This is not enough water to generate floodplain inundation, nor is it likely to be sufficient to maintain cool water temperatures depending on when it was released. Floodplain inundation is still not possible even if we assume the state purchases the maximum of 41,000 acre-feet, representing an additional approximately 420 cfs total cfs.

Further concern we have about the proposed Yuba VAs is the timing of the proposed flow. The Terms Sheet²¹ states a six-month window for releases between January and June, which is in alignment with outmigration timing for juvenile Chinook salmon. This equates to an addition 168 cfs in the Yuba River based on the additional 60,000 acre-feet, or 25 cfs based on 9,000 acre-feet, both over the six-month time period outlined in the Terms Sheet. The most current and best science recognizes that temporal window as the crucial to the survival of salmon. However, a history of FERC license-required pulses flow variance requests does not inspire confidence that additional water will be delivered. YWA has requested a waiver to the FERC Project No. 2246 Article 33(d) pulse flow requirement of 1,000 cfs from January 1-15 in 2004, 2007, 2008, 2009, 2011, 2013, 2015, 2016, 2021, and 2022²⁵. In each instance the temporary flow variance has been approved by FERC. This flow variance is equivalent to roughly 13,300 acre-feet of water, 4,300 acre-feet more than the 9,000 acre-feet of water promised as part of proposed VA. In total, an uncompensated 22,300 acre-feet of water would need to be released between January and June

²² Wyrick, J. R., and G. B. Pasternack. "Landforms of the lower Yuba River." *University of California, Davis* (2012).

²³ Takata, Lynn, Ted R. Sommer, J. Louise Conrad, and Brian M. Schreier. "Rearing and migration of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) in a large river floodplain." *Environmental Biology of Fishes* 100 (2017): 105-1120.

²⁴ Jeffres, Carson A., Jeff J. Opperman, and Peter B. Moyle. "Ephemeral floodplain habitats provide best growth conditions for juvenile Chinook salmon in a California river." *Environmental biology of fishes* 83 (2008): 449-458.

²⁵ Request for Pulse Flow Variation from January 15 2023. FERC Docket P-2246-000. [Accession 20220906-5169](#).

to meet both obligations. SYRCL appreciates that FERC flow requirements are a different legal requirement than the implementation of the VAs or other Alternatives. However, the precedent of not delivering legally required environmental flows in more than half the last twenty years raises real concerns about when, how, and if the additional flow proposed by the VAs would be released.

The second part of the Yuba River VA, and other VAs, is a proposal for habitat restoration²¹ (Appendix 2). As previously stated, habitat restoration is an important contribution to the survival of Chinook salmon but is not a replacement for more water during the spring outmigration period. In the Yuba, between project leads SYRCL and cbec eco engineering, we have completed 199 acres of floodplain habitat restoration, with 5 acres of spawning habitat scheduled to be constructed in the summer of 2024 and a 25-acre project permitted by the end of Q2 2024. YWA has made technical and financial contributions to these projects of between 10-25%. SYRCL appreciates YWA as a partner on these projects and looks forward to collaborating on future restoration projects. Further clarification is needed on section 12 (page 21) of the Terms Sheet. SYRCL seeks additional clarification as to under what conditions YWA may be able to seek approval of Early Implementation projects by the State Water Board, especially for those projects led and funded by other entities of which YWA was a partner.

III. Alternatives and CEQA Comments

The State Water Board's water quality control planning program is a certified regulatory program, exempt from specific CEQA requirements like preparing an Environmental Impact Report (EIR). In lieu of an EIR, a Substitute Environmental Document (SED) can be prepared if it adheres to CEQA's objectives and guidelines, providing the same level of environmental analysis and public participation as an EIR would. Here, a Draft Staff Report serves as the SED to meet CEQA requirements.

The standard for "Reasonable Protection" is to establish water quality objectives for the reasonable protection of fish and wildlife and beneficial uses. In the context of these updates to the plan, it is critical to understand that the standard is not one of incremental improvement. The standard is based on scientific evidence of what is needed to protect the fish and wildlife uses in the Sacramento Basin and Delta. The Board cannot ignore the long-term decline and the risk of extinction of many native species. The Board must also consider the cumulative impacts of the many stressors to fish and wildlife populations and their habitats, including the cumulative impacts of water diversions, invasive species, and habitat loss.

A. Project Description and Program of Implementation Need Revision

The Staff Report should be revised to include a clear project description and Program of Implementation to address CEQA requirements and ensure the public can assess the "whole of the action." The current report is insufficient as a Substitute Environmental Document (SED) due to its unclear project description and separation of the Alternatives from Program Implementation.

B. Low Flow Alternative Does Not Meet Plan Objectives

The Low Flow Alternative includes a numeric inflow objective that would range from 35-45% unimpaired flows. The Staff Report notes that this alternative “would be less effective at meeting the purpose and goals of the... update [to]... the Bay-Delta Plan, including providing reasonable protection of fish and wildlife beneficial uses.”²⁶

Given that Alternative 2 (as well as the No Project Alternative) will not protect beneficial uses, and meet plan objectives, these alternatives should not be considered and removed from further consideration.

C. Preferred Alternative Does Not Protect Fishery or Reasonably Protect Other Beneficial Uses

The preferred alternative (Proposed Plan Amendments) has an inflow objective that includes this numeric objective: “Maintain inflows from the Sacramento/Delta Tributaries at 55% of unimpaired flow, within an allowed adaptive range between 45 and 65% unimpaired flow.”²⁷ The starting point for the flow level is 55 percent, and “evaluations show that inflows in the 55% scenario (and corresponding outflow) would be expected to provide marked expected improvements in protection of fish and wildlife beneficial uses, including achievement of the flow thresholds associated with protection of various aquatic species...”²⁸

The preferred alternative uses the 2017 Scientific Basis Report to establish thresholds. However, as mentioned in our comments above, since the 2017 science report release, there is new information and science that link flows to successful outcomes and population increases for salmon. SYRCL recommends that the Board revise the Staff Report, particularly Section 3.4.5 “Flow Effects on Salmonids” to integrate the most recent scientific literature and modify the thresholds. The most recent peer-reviewed science should inform future updates to the Staff Report.

According to the CEQA Guidelines Section 15126.6(d), “every alternative is carefully examined to see if its environmental impacts would be less, the same, or more than the project’s impacts. Additionally, each alternative is evaluated to see if it would significantly achieve the project’s objectives.”

²⁶ Staff Report. p. 5-1

²⁷ Staff Report p. 5-17

²⁸ Staff Report p. 5-16

D. High Flow Alternative Needs More Analysis

The High Flow Alternative requires higher Delta inflows of 75% unimpaired which the Staff Report claims has greater benefits for fish and wildlife. This is the only alternative that does significantly achieve the numeric objectives contained in the plan. SYRCL recognizes and appreciates that this alternative comes with costs. The Report identifies two issues with the High Flow Alternative – mainly, the potential negative impacts of decreased carryover storage on water temperature and water supply. There are also issues related to revenue from power generation and delivery of water to some water users.

The Report states, “With respect to carryover storage in rim reservoirs (needed for cold water habitat), with higher instream flow requirements, it would be difficult to maintain storage levels while maintaining even greatly reduced levels of water supplies.... Because environmental impacts would be greater under the High Flow Alternative than the proposed Plan amendments, many of the potentially significant impacts are not likely to be mitigated to less-than-significant levels.... The beneficial environmental impacts under the High Flow Alternative would be limited due to significant challenges in maintaining suitable water temperatures for cold water aquatic species and carryover storage for environmental water supply purposes.”²⁸

The Board should use current modeling and scientific analysis from 2010 and 2017 to look at Staff’s issues with the High flow alternative with the objective of finding innovative solutions.

The Final Staff Report should include more analysis of the High Flow Alternative. The Low Flow and Plan alternatives allow for more flexibility in adjusting the flow releases based on the hydrologic and carryover storage conditions. The High Flow Alternative needs to add more flexibility in flows, especially carryover storage and Delta inflows. SYRCL recommends the Board revise the Alternative based on more analysis.

CEQA requires that the Report “...include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.”²⁹

The High Flow Alternative cannot be dismissed based on summary results. In addition, the Board cannot defer this analysis to the implementation stage, or the appropriate level of analysis will never be done.

E. The Voluntary Agreements are not a viable alternative because they do not meet the basic objectives of the Bay Delta Plan.

The VAs are not a viable alternative. In addition, comparatively speaking, the current VAs have significant environmental impacts to the Delta and the fisheries that are not

²⁹ CEQA Guidelines Section 15126.6 (14 CCR 15126.6[d])

substantially lessened by the proposed flows and habitat actions. The current VA (Alternative 6) should not be considered as proposed.

F. Not all watersheds are the same

Each major tributary in the Sacramento River basin has its own characteristics that need careful consideration, examination, and evaluation. These differences should be included in the overall framework of the Plan.

For example, water users and managers higher up in the watershed need different allocation rules since they affect Delta inflow and outflow less than water managers with rim dams. Upstream water managers deal with different issues in fish migration and water temperature control. This is especially true in the Yuba watershed, where there are distinct differences in watersheds and diversions. In the upper watershed areas, Nevada Irrigation District (NID) and Placer County Water Agency (PCWA) both divert water within and outside the Yuba River watershed at higher elevations. Downstream, YWA diverts and uses water at New Bullards Bar Dam and below Englebright Dam. In addition, the land mass areas of the upper watershed are far smaller than the downstream portion. The entire Yuba Watershed spans over 1,200 miles. NID's portion of the watershed covers approximately 70,000 acres. NID operates nine storage facilities storing 280,085 AF of water compared to YWA's New Bullards Bar Reservoir, which alone has a storage capacity of 969,000 AF.

Perhaps the most critical factor is that downstream of rim dams, spawning and rearing habitats require different flows. In this case, Englebright is a rim dam and the upstream limit for salmon and fish migration. The dam impacts downstream spawning and rearing habitat by changing sediment and flow regimes, impacting water temperatures and habitat. These are factors that must be considered as part of contributions to the health of the Bay-Delta.

Over the last 10 years, many of the flow requirements in the Yuba have been negotiated in new hydroelectric licenses. Unfortunately, the Bay-Delta process has taken some time to complete, and water agencies and stakeholders have been left uncertain of how unimpaired flows could impact water supply and availability. Upstream water agencies that have senior water rights, relatively smaller watersheds, water resources, that have completed relicensing processes now consider new water storage options in a pre-emptive and reactive strategy to protect their water supplies.

The Final Staff Report needs to account for these watershed differences and state clear rules including compliance points and responsibilities of water users upstream of rim dams.

IV. Tribal Beneficial Uses

Native American Tribes have inhabited the Sacramento Basin and Bay Delta for thousands of years. They have a deep connection to the water and natural resources. The updates to the plan

should provide explicit recognition and reasonable protection of tribal water rights and include Tribal Beneficial Uses (TBUs). In addition, meaningful tribal engagement and collaboration in the planning and implementation processes is paramount.

V. Conclusion

SYRCL holds a deep commitment to collaborative problem solving. We concur with the spirit of the VAs – that a negotiated agreement about how to balance the dire need to improve environmental health of the Bay-Delta and Sierra rivers has a greater likelihood of success if all parties including state agencies, water agencies, and environmental groups work together. We believe that for there to be success, VAs must be highly specific to a watershed. The Yuba River is unique in that there are multiple water agencies which rely on its water for water deliveries. The location of the water storage infrastructure plays a significant role in the ability of upstream and senior water rights holders to contribute to downstream flow requirements. Upstream environmental flows can also be recaptured by downstream water agencies and may not continue through those systems as environmental flows. Complexities such as these mean that a universally applied unimpaired flow requirement is unlikely to be successful due to an inability to comply and/or lengthy litigation. Meanwhile, environmental degradation continues. We encourage a more collaborative process where water agencies, the state agencies responsible for ensuring the protection of the environment for the public trust, and environmental groups work together to meet clear, measurable targets set by the Water Board downstream of rim dams where it is easier to ensure that water meant to protect the environment flows to the Golden Gate Bridge.

The reliance on VAs is not a lost cause. In their 2024 policy paper which uses the Bay-Delta watershed as its case study, Marcus et al.³⁰ present five principles they see as key guiding the appropriate and effective use of VAs:

The state must establish a strong regulatory foundation for VAs. VAs are a potential tool for implementing regulatory requirements. VAs cannot replace—and only have meaning in the context of—regulatory standards developed in accordance with federal and state law.

VAs must achieve comparable environmental outcomes to the outcomes default regulatory requirements are expected to produce. Outcomes expected from the default implementation pathway—not the pre-implementation status quo—are the baseline against which VA adequacy should be assessed.

VAs must articulate clear, specific biological goals and measures of success.

³⁰ Five Guiding Principles for Effective Voluntary Agreements. Berkeley Law, Center for Law, Energy, and the Environment. (2024)

VAs and actions taken under them must be well- supported by the best available scientific information.

VAs must include robust and transparent accountability mechanisms.

VAs do not have to represent a lack of regulatory oversight and enforcement. Should the Water Board choose to pursue a VA path rather than one of their alternatives, SYRCL strongly encourages them follow the above principles.

The current Water Quality Control Plan has failed to reasonably protect the viability or productivity of imperiled native species. Nearly every beneficial use the Board is obligated to protect is being degraded, and some may be permanently lost if large-scale changes aren't made expeditiously. We recognize that this is a challenging process and that a solution will necessitate compromise, meaning that not every party will get all that they want. Tough tradeoffs mean that it is unlikely that consensus agreements will be reached.

The summary analysis found in the Draft Staff Report is not the final word, but the starting point for the Board to develop a decision. The Board must take the next step and refine the alternatives based on further information and evaluation.

We welcome the opportunity to collaborate during this process. For coordination, clarification or discussion of any matters raised in this letter, please do not hesitate to contact our Executive Director, Aaron Zettler-Mann or Policy Manager, Traci Sheehan by email or phone (530-265-5961).

Sincerely,



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