



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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Sophie Maxwell, Chair
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94012
commission@sfwater.org
Via electronic mail

Re: Comments of California Sportfishing Protection Alliance on the February 5, 2021 Workshop

Dear Chairwoman Maxwell and members of the Commission:

I am writing in response to the workshop the San Francisco Public Utilities Commission (SFPUC or Commission) held on February 5, 2021 concerning the "Scientific Basis for the Proposed Tuolumne River Agreement." Along with many of my colleagues in non-governmental organizations that advocate for environmental and fishing interests and values, I greatly appreciate the series of workshops the Commission is holding to address the update of the Bay-Delta Plan and various alternatives regarding it. More specifically, thank you for the opportunity to share some thoughts about the February 5 workshop.

About 1:42 into the workshop, Chairwoman Maxwell asked staff and consultants this direct and fundamental question: "Could you please give me five reasons why with less water we have a better outcome?" I am going to focus my response to the workshop by answering this question and staff's response to it.

The short answer is: it uses less water. That's it. That is only one sense in which there is a "better outcome." Using less water is not better for the Tuolumne River, or for the fish in it, or the functions that Mr. Ritchie says he will support with his claimed "functional flows." Using less water is not the result of staff and the Districts' scientific analysis. It is the goal of that analysis.

In response to the question, Mr. Sears of SFPUC staff stated (at about 1:43) the reasons staff believes the proposed Tuolumne River Voluntary Agreement (TRVA) was superior to the adopted Bay-Delta Plan for the lower San Joaquin River tributaries:

The main thing in the modeling that helps provide increased production are the flows and non-flow measures and it helps with higher survival and addresses together with these

spring pulse flows especially in the dryer years and that survival relationships between flow and outmigration survival. So, with flow, pushing fish out, and fewer predators, in that timeframe, you get higher survival and you get better productivity.

This is spoken language, not written, and it rambles to a degree. I understand it to mean that, first, there are flow measures that improve outmigration survival. Second, there are non-flow measures, particularly reducing the number of fish that eat salmon, that lead to higher survival. So let's see what this means.

There is no flow advantage to the TRVA.

In terms of flows, the volumes available under the proposed TRVA are less than the volumes that would be available under the adopted Bay-Delta Plan. In addition, the adopted Bay-Delta Plan includes the opportunity for “adaptive implementation” of the available flow volume. Thus, there is no flow advantage in the timing and volume of the proposed TRVA flows as compared to the flows under the Bay-Delta Plan. Since there is no flow advantage to the TRVA, it stands to reason then that the contention is that the “non-flow” measures under the proposed TRVA tip the scales in comparison to the Bay-Delta Plan.

The TRVA gravel augmentation measure is misplaced in purpose and would provide about 10% of the need.

Part of the proposed TRVA's non-flow measures deal with gravel. There are two parts: gravel augmentation and gravel cleaning.

The February 5 staff presentation (Slide 60) only presents a small part of the picture regarding gravel augmentation. This is because it frames the need in terms of spawning gravel. It is true that gravel provides the habitat in which salmon and *O. mykiss* (steelhead and rainbow trout) spawn. But the big issue in the lower Tuolumne River is the deep holes (“special run pools”) in the river largely left over from dredging operations for gold and gravel mining. These holes are perfect summer habitat for bass: the “predators” that the TRVA wants to target through “reduction.” These holes are also gravel sinks where gravel placed in the river tends to end up when high flows move gravel downstream.

Condition 11 of the State Water Board's Water Quality Certification (Certification) for the Don Pedro and La Grange licensings requires augmentation of 564,000 cubic yards of coarse gravel in the first 15 years after license issuance to fill in holes in the lower Tuolumne River. Condition 11 also requires placement of 5400 cubic yards of (smaller) spawning sized gravel per year over the first 15 years (total of 81,000 cubic yards).

By contrast, the TRVA proposes 75,000 tons (not cubic yards) of spawning sized gravel over the first 10 years of the license (at 1.3 tons per cubic yard, this is about 57,000 cubic yards, or 5700 cubic yards per year), with a study at the end of 10 years.

In sum, the Certification proposes a long-term non-flow solution to reduce the habitat for bass by filling in the holes that harbor bass and that also trap the sediment. The TRVA's non-

flow gravel measure proposes to keep feeding the holes in the river with spawning gravel and doesn't address the predator habitat at all. While the annual spawning gravel amounts are roughly comparable, the TRVA is short by 564,000 cubic yards of coarse gravel for filling in holes (special run pools).

The TRVA gravel cleaning measure is goofy and will not survive permitting.

Slide 64 of the February 5 staff presentation describes the TRVA's proposed gravel cleaning program which would be "accomplished via a gravel ripper and pressure washer mounted on a backhoe." This means that someone would drive a backhoe through spawning riffles, digging up the gravel. Mounted on the same backhoe or a second one, someone would operate a pressure washer like those used to clean the sidewalks around City Hall in San Francisco, but likely bigger. It would be a big water gun shooting water into the river. This action would take place April or May after salmon had left the spawning riffles.

The ostensible purpose of this exercise would be to clean the spawning gravels of "fines," the fine sediment or silt that fills the spaces between the gravels. Having clear spaces through which water can flow through gravel is important for eggs and very small emergent fish. Cleaning of fines is a process that occurs naturally in rivers during high or relatively high flows. The flows in the Bay-Delta Plan would clean the gravels of fine sediment annually.

It is not hard to imagine that operating an industrial pressure washer in the river will make the river muddy (though "turbidity" has a nicer ring to it). The TRVA proposes that prior to digging and pressure washing, someone will survey for steelhead and trout redds (fish equivalent of nests, location of eggs and very small emergent fish called alevins) and not disturb them. Steelhead and trout eggs and alevins are likely to be in the gravel in April and in some cases in May. Such surveys notwithstanding, it is impossible to imagine that the National Marine Fisheries Service will issue a permit for an activity that proposes to make the river muddy anywhere upstream of where the redds of ESA-listed steelhead might be in the water.

The staff presentation describes this proposed action as "experimental." It would be more appropriately characterized as falling between a wish and a prayer.

The TRVA's ascribed benefits of predator reduction have no basis.

At about 2:40 of the February 5 workshop, Mr. Hume of Stillwater Sciences stated: "[T]he predator control measure is the biggest sort of bang for your buck, right." At about 2:34 of the workshop, Mr. Hume stated the assumption within the Districts' Salmon Population Model that a ten percent reduction in predatory fish would lead to a ten percent increase in the survival of juvenile salmon rearing and migrating through the lower Tuolumne River. As my colleagues with the Nature Conservancy, Baykeeper, National Resources Defense Council and Golden State Salmon Association point out in their February 18, 2021 response to the February 5 workshop, this assumption has no basis in fact.

Slide 92 of the staff presentation made a similar admission to that of Mr. Hume: "We agree the model response to predation control is assumed." However, slide 92 attempted to

dissimulate the importance of this admission by portraying it as a generic disagreement over model assumptions: “All models contain assumptions and generally reviewers can disagree about assumptions.” While models make assumptions about the inputs, *they don’t make assumptions that pre-determine the results*. The difference is making the results conditional on the inputs as opposed to making the results *a function* of the inputs. If one tells a model to show that predation control improves survival, then the model will show that predation control improves survival. For that, no model is necessary.

Slide 92 continues: “Stated assumptions about mortality rates and predator reductions were supported in the license application by non-native predator removal estimates.” Actually, “predator removal estimates” (the number of predatory fish one believes one can remove) don’t at all “support” assumptions about the relationship between the number of predatory fish removed and the ascribed benefit to the survival of salmon. As Mr. Hume stated at about 2:38: “We had to make some operational assumption, and that’s what we did...We don’t really know, and it’s an adaptive process.”

Slide 92 concludes: “A more typical model critique approach would have been to first discuss the basis for the assumption, not whether an assumption was made.” Well, Conservation Groups did that throughout the relicensing process. As early as our March 11, 2013 Comments on the Initial Study Report, my colleagues and I wrote:

[W]e disagree with several of the Districts’ “key findings” as to the relative significance of these factors on salmonids based on the synthesis conducted as Study W&AR-05. We are concerned that if these key findings are used to inform the modeling studies (W&AR-06 and W&AR-10), the models will not produce reliable results. ... [W]e anticipate that the models will single out predation as the primary stressor to juveniles of both species, and probably the single most important in-river stressor overall. The models are only as good as the assumptions and data on which they are built. If there are concerns about the inputs, there will likely be disputes about the outputs.

Moreover, as already stated, a “more typical” model would not posit as fact that which the model would purport to demonstrate.

When, during the workshop, Ms. Howard made a reference to the work of Michel et al. (2018, 2020) that showed the predator reduction had no effect on long-term salmon survival, Ms. Fuller (2:32) responded that “unit sizes” of predator removal over a half mile of river were too small. Ms. Fuller said removal over a “much larger reach” was needed, and agreed with Ms. Howard’s characterization that “intervention would be continual, expensive, year after year.” Ms. Fuller offered the observation: “There’s mechanisms to make it more doable, fishing derbies, changes in fishing regulations, there’s a lot of things that could be considered to reduce predator populations over a large area.”

In sum, the reliance on the Districts’ fish population models and predator control is founded on speculation, assumption and aspiration. The Districts, consultants, and SFPUC staff don’t know how to effectively reduce the number of bass or what difference any given level of reduction, should it even be achievable, would make.

There's a Delta downstream.

At about 2:37 of the workshop, Ms. Howard asked Mr. Hume about declining cohort replacement, or the number of salmon that return to the Tuolumne each year compared to previous years. Mr. Hume replied that this could not be evaluated with the Districts' fish population models. Mr. Hume said the cohort replacement level is going down, and that this was largely attributable to Delta conditions, in which survival was "zero percent or half a percent or whatever." This detachment of conditions in the Delta from in-river conditions is consistent with the SFPUC, the Districts, and FERC's long-term approach. It contrasts with the approach of the Bay-Delta Plan, which connects the river and the Delta by requiring flow that improves both.

Even more, the overall framework of the voluntary agreements appears to make no effort to reduce loss of Tuolumne River salmon and steelhead to the south Delta export facilities and associated mortality. Part of the reason slide 66 of the staff presentation concludes that there is a "size related survival advantage" to successful outmigration and return as adults is that three of the years shown were years in which the Vernalis Adaptive Management Plan (VAMP) was in effect. VAMP restricted Delta export pumping from April 15-May 15 of each year. That plan, though itself inadequate, ended about ten years ago.

In 2020, members of environmental and fishing groups worked with the SFPUC on a resolution regarding the Bay-Delta Plan and voluntary agreements. We asked SFPUC to include a request of the State Water Board to develop a "mechanism" to assure that increased flows from the Tuolumne River not become more water (and Tuolumne River fish) that were captured at the Delta pumps. Our language was edited down in Resolution 20-0138 from a "mechanism" to a still laudable but less incisive: "urges the State Water Board to ensure that any required SFPUC contributions to Delta outflow from the Tuolumne River be used for the protection and recovery of Delta fisheries and not to augment exports south of the Delta or offset obligations by others to meet water quality objectives."

The desire not to donate export water to the State Water Project and Central Valley Project is understandable. What we haven't seen from SFPUC, however, is any sense of ownership of an effort to reduce in-Delta mortality, not only through flow, but by pressuring the state and federal export projects to reduce exports in the critical late-winter and spring time periods. Everything we've seen of the broader voluntary agreement framework suggests that the goal is to maintain or increase existing export levels. Everything we've seen from the SFPUC and the Districts is that they would be more than satisfied with a stand-alone TRVA.

Conclusion

The purported benefits of the TRVA are founded on speculation, assumption and aspiration. The primary benefit is the assumption that use of less water is a better outcome. The SFPUC would be better served by acknowledging the scientific basis for the Bay-Delta Plan. In addition, SFPUC (and BAWSCA if it is willing) should work with environmental and fishing organizations and with resource agencies to establish a water budget that the SFPUC and BAWSCA can afford, including a series of measures to allow reasonable water management during droughts and dry year sequences.

Thank you for the opportunity to comment on the February 5, 2021 SFPUC workshop.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Chris Shutes", with a long horizontal flourish extending to the right.

Chris Shutes
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Water Rights Advocate
California Sportfishing Protection Alliance