

February 8, 2023

Via Electronic Submission

State Water Resources Control Board
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Re: Comments on Draft Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan

Submitted by Shingle Springs Band of Miwok Indians, Winnemem Wintu Tribe, Little Manila Rising, Restore the Delta, and Save California Salmon

INTRODUCTION

The Shingle Springs Band of Miwok Indians, Winnemem Wintu Tribe, Little Manila Rising, Restore the Delta, and Save California Salmon submit this comment to express concerns with the State Water Resources Control Board's ("Board") Draft Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan (the "Supplemental Report"). Our organizations and their members have a vested interest in the well-being of the Bay-Delta's waterways and the fisheries and other important riparian resources they sustain. For tribes in the Bay-Delta and its headwaters, this means protecting culture, religion, and ways of life that depend on healthy populations of native fish species and the ability to interact with clean, free-flowing waterways. Meanwhile, for members of Delta communities, it means having a healthy place to live, including one that provides safe, accessible recreation. These interests would be compromised by the Voluntary Agreement ("VA") proposal.

We recognize that updating and implementing water quality standards for the Bay-Delta to comply with the ameliorative objectives of the Clean Water Act and Porter-Cologne Act is a challenging undertaking. It will require significant sacrifices by industries whose heavy use of Bay-Delta waters is inconsistent with the public interest and proving increasingly unreasonable with growing drought and water scarcity. It is not surprising that large water users who profit from unsustainable water exports would endorse a proposal that preserves the status quo, nor that this proposal was developed through closed-door negotiations that excluded tribes and Delta communities directly impacted by low flows. But the Supplemental Report does not change the scientific consensus that restoring Delta fisheries and the health of the ecosystem will require bringing water back to the Delta, resulting in a real change to business as usual. If the negotiated

water quality objectives and implementation measures in the VAs are to be considered as a path forward for the Bay-Delta, they must be held to the light of the best available science, and the limitations and conclusions of this analysis must be clearly stated so that decision-makers can make a fully-informed choice.

As it stands, the Supplemental Report is deficient in at least four respects: First, the Board failed to meaningfully consult tribes (who were already excluded from negotiation of the VAs) in the process of evaluating the VA proposal. The Supplemental Report therefore fails to incorporate the Traditional Ecological Knowledge (“TEK”) of communities that sustainably stewarded Bay-Delta waterways for millennia, and fails to consider impacts of the VA proposal on tribes’ cultural resources, religion, and ways of life that are connected to the unique beneficial uses tribes make of Bay-Delta waterways. Second, the Supplemental Report understates the importance of instream flows to Delta fisheries, despite scientific consensus and the Board’s own conclusions that instream flows – and not physical habitat – are the limiting factor in their recovery. Third, the value of its conclusions is undercut by an excess of uncertainty, some of which is inherent in the modeling methodology, and some of which stems from the Board’s omission of important considerations like temperature and climate change. Fourth, the Supplemental Report does not tell the reader how the VA measures will bear on Harmful Algal Blooms (“HABs”), which create inhospitable conditions for fish and wildlife, as well as for Delta environmental justice communities and tribes.

Together, these deficiencies mask the Supplemental Report’s real conclusion: that any benefits of the VAs’ decision to trade instream flows for physical habitat restoration are uncertain and unlikely, while restoring instream flows is a well-documented way to provide for fish recovery and to ameliorate other damage to the ecosystem, such as HABs. We urge the Board to address these issues and create a more scientifically sound and transparent final report and substitute environmental document (“SED”) that will better serve informed decision-making by the Board and help to ensure that its update of the Bay-Delta Plan satisfies statutory requirements and serves the public interest. Finally, we remind the Board of its obligation to protect all beneficial uses and public trust resources in the Bay-Delta.

DISCUSSION

A. The Board must meaningfully include tribes in evaluation of the VAs and in the policymaking process for Bay-Delta water quality standards more broadly.

The Board has clear obligations under state law and its own internal policies to meaningfully consult tribes in evaluating policy proposals that may impact tribes and their unique relationship to waterways. Assembly Bill 52, for instance, enshrined in the California Environmental Quality Act (“CEQA”) the legal duty of public agencies to consult with tribes traditionally and culturally affiliated with the geographic area affected by a project early in the environmental review process, as well as agencies’ obligations to “avoid damaging effects to any tribal cultural resources” whenever feasible.¹ Even outside the CEQA process, Executive Order

¹ Pub. Res. Code §§ 21080.3.1(b), 21084.3; *see generally* Assem. Bill No. 52 (2014) chp. 532.

B-10-11 directs state agencies to engage in effective government-to-government consultation with tribes on any policy that may affect tribal communities, including by allowing representatives of tribal governments to provide meaningful input into policy development.² Likewise, the Board's own Tribal Consultation Policy directs staff to consult with tribes "through timely and meaningful consultation and collaboration on actions that may have an impact to tribal lands."³ And the Board's Anti-Racism Resolution further affirms the Board's "commitment to . . . seeking input and consultation on the Water Board's rules, regulations, policies, and programs to advance decisions and policies that better protect California's water resources."⁴

Each of these policies obligates the Board to meaningfully consult with tribes on the VAs and documents like the Supplemental Report evaluating their likely impacts. For one thing, as the undersigned organizations have previously explained,⁵ Assembly Bill 52 directs the Board to consult with tribes early in the process of creating SEDs like the one that the Board has promised will eventually be created for the Bay-Delta Plan updates. As the Supplemental Report is a step toward that SED, tribes should have been consulted in its creation. And as the VAs are a policy instrument that may have a clear "impact to tribal lands" in the Bay-Delta and its headwaters, as well as to Tribal Beneficial Uses and reserved water rights, the Board's own policies bound it to effectively consult with tribes on evaluation of this instrument.

No such consultation happened here. No tribe is a party to the VAs, nor was any tribe allowed to participate in their negotiation. Nor were tribes consulted in the evaluation of the VAs through the Supplemental Report. Instead, tribes were contacted just days before the Board's January 19, 2023 workshop, well after the Supplemental Report had been issued. Exclusion of tribes from consultation on the Supplemental Report exacerbates prior exclusion from the VA negotiations themselves.

In addition to disrespecting the sovereignty of tribal governments, the Board's failure to consult with tribes in this instance deprived the Supplemental Report of a critical source of information that should weigh significantly on the Board's evaluation of the Voluntary Agreement proposal. California tribes' wealth of knowledge of the Bay-Delta's ecology, built

² Executive Order B-10-11 (2011); *see also* Executive Order N-15-19 (2019) (reaffirming consultation principles outlined in Executive Order B-10-11).

³ Cal. State Water Res. Control Bd., *Tribal Consultation Policy* 5 (2019), https://www.waterboards.ca.gov/about_us/public_participation/tribal_affairs/docs/california_water_board_tribal_consultation_policy.pdf.

⁴ Cal. State Water Res. Control Bd., *Resolution No. 2021-0050: Condemning Racism, Xenophobia, Bigotry, and Racial Injustice and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-Racism* (2021), https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2021/rs2021_0050.pdf ("Anti-Racism Resolution").

⁵ *See* Little Manila Rising et al., *Petition for Rulemaking to Review and Revise Bay-Delta Water Quality Standards* at 46-50 (May 24, 2022).

through millennia of successful stewardship of its waterways, is not mentioned once in the Report.⁶ This is so even though the Board has affirmed the “value[]” it places on “tribes’ traditional ecological knowledge and historic experience managing California’s water resources since time immemorial.”⁷ Without incorporating this TEK and learnings informed by it, not to mention giving it the parity with other sources of information that it merits, the Supplemental Report is incomplete.

As the Board proceeds to create and evaluate its Bay-Delta Plan proposal, including through an eventual SED, it must honor its commitments and legal obligations by meaningfully consulting with tribes and incorporating TEK.

B. The Supplemental Report only reaffirms that flows are vital to achieving water quality objectives and cannot be traded for physical habitat restoration.

The Clean Water Act requires that water quality criteria be based on a sound scientific rationale.⁸ The Supplemental Report does not provide a scientific rationale, much less a sound one, for trading increased flows for non-flow habitat restoration as a means to achieve fish and wildlife objectives.

The Board and other regulatory agencies have repeatedly recognized that viability of native fish populations in the Bay-Delta primarily depends on increasing flows. In its 2017 Scientific Basis Report for Phase II of the Bay-Delta Plan update – to which this Report is a supplement – the Board stated that “flow is commonly regarded as a key driver or ‘master variable’ governing the environmental processes in riverine and estuarine systems such as the Bay-Delta and its watershed” and that “flow and physical habitat . . . are not interchangeable.”⁹ Moreover, the best available science shows that increased flows would address many factors that the Supplemental Report recognizes limit fish prevalence: temperatures, contamination, dissolved oxygen, and salinity, among others.¹⁰

In contrast to the agency’s certainty on the benefits of increasing flow to viability and abundance of native fish species, the Supplemental Report only speculates about the role of non-flow habitat restoration on its own. For instance, in contrast to the Report’s confident declaration that “there is a clear relationship between flow and abundance for many native fish

⁶ Cal. State Water Res. Control Bd., *Draft Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan* (2023) [hereinafter “Supplemental Report”].

⁷ Cal. State Water Res. Control Bd., *Anti-Racism Resolution* ¶ 7.

⁸ 40 C.F.R. § 131.11(a)(1).

⁹ Cal. State Water Res. Control Bd., *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) [hereinafter “2017 Scientific Basis Report”].

¹⁰ Supplemental Report at Table 2-1.

species,” the Report equivocates that “[r]estoration of tidal wetlands within the Delta is *hypothesized* to increase ecosystem productivity and provide increased food supply” and that habitat restoration may “*potentially* provide[] benefits” for abundance.¹¹ Likewise, the Supplemental Report unequivocally asserts that, like the 2017 Scientific Basis Report, “increased flow *is expected* to increase the abundance of several native species in the Delta,” and it recognizes that “the abundances of a number of native species . . . show *persistent positive relationships* with the volume of Delta outflow during the winter and spring.”¹² By contrast, it only mechanistically hypothesizes that wetland restoration – which under the VAs would be equivalent to only 1% of historic tidal wetlands – could boost fish growth and survival by increasing food availability, without making the link to viability and abundance.¹³ That is, whereas the Supplemental Report hypothesizes that habitat restoration *could* provide benefits, boosting instream flows is already proven to do so.

The Supplemental Report’s examination of limiting factors for fish recovery on Delta waterways also appears to contradict hypothetical benefits of non-flow habitat on its own for achieving fish and wildlife objectives. Specifically, the Report concludes that physical habitat is infrequently a limiting factor for salmon spawning and rearing, meaning that the non-flow habitat investments called for under the VAs would provide little to no benefit for these functions. On the Mokelumne and Yuba Rivers, spawning habitat is already well above that needed to meet the doubling goal, and on the American and Feather Rivers, the VAs would provide only marginal benefits.¹⁴ And the VAs would barely move the needle on rearing habitat on the American, Feather, and Sacramento Rivers, none of which would move more than 3% closer to the doubling goal requirement, nor on the Mokelumne River, which again already has more than enough rearing habitat to meet the doubling goal.¹⁵

Ultimately, the Supplemental Report does not provide scientific support for the assertion that improving physical habitat in the Delta without providing flow-based habitat will promote fish recovery. Science, including that recognized and relied on by the Board itself, cuts in the opposite direction. Indeed, the Board already grappled with the flow-for-habitat tradeoff in Phase I of the Bay-Delta Plan Update, and it came to precisely this conclusion. There, the Board stated that “there is no evidence of the efficacy of non-flow measures to protect fish and wildlife beneficial uses, the amount of water that would be saved through the non-flow measures, or how the non-flow measures would achieve the plan amendments’ goals and objectives Moreover, most non-flow measures require flow in order to be effective.”¹⁶ Despite much conjecture, the Supplemental Report does not establish otherwise.

¹¹ Supplemental Report at 6-24 to 6-25 (emphasis added).

¹² *Id.* at 6-19 (emphasis added).

¹³ *Id.* at 6-24 to 6-26.

¹⁴ *Id.* at ES-4 (Figure ES-1).

¹⁵ *Id.* at ES-5 (Figure ES-2).

¹⁶ Cal. State Water Res. Control Bd., *Master Response 5.2: Incorporation of Non-Flow Measures* (2018),

https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/2018_sed/docs/mr5.2.pdf.

C. Unusually pronounced uncertainties limit the usefulness of the Supplemental Report.

Major uncertainties, independent of those expected in any modeling exercise, limit the Report's utility. The Report should not hide the ball on its real conclusion that even after its extensive modeling and literature review, there are at least eight major areas of uncertainty that make its findings and conclusions unreliable and of little value for policy decisionmaking. While some degree of uncertainty is inevitable in predicting future outcomes, the Supplemental Report introduces even more by omitting variables and introducing interventions like physical habitat restoration that have no scientific basis. Together, these uncertainties prevent the Supplemental Report from providing a clear picture of whether and to what extent the VA proposal would achieve progress toward fish and wildlife objectives.

What the Report benignly labels "uncertainties" derive in many respects from wholesale omission of crucial inputs and analysis. For example, the Supplemental Report lacks such fundamental inputs as how, where, and when physical habitat restoration will be implemented.¹⁷ And the "connection between restored non-flow habitat and species abundance was not modeled, only evaluated qualitatively."¹⁸ Other important considerations are wholly ignored by the Supplemental Report's analysis. For example, the Board concedes that its baseline habitat findings were "not informed by water temperature," something it recognizes as "one of the crucial concerns for native aquatic species in the future."¹⁹ If habitat "is not all suitable" because of temperature or other factors, that would, according to the Board, "reduce the VA habitat contributions."²⁰ Assessing water temperature impacts is especially vital given that the Board already lists significant stretches of the Sacramento River and the Delta as impaired due to elevated water temperatures.²¹ The omission of water temperature renders the Supplemental Report inadequate because the Report lacks temperature projections needed to evaluate the waterways under consideration.

Additionally, the Supplemental Report's modeling does not fully account for climate change, which will continue to transform the fundamental parameters on which the models rely. The Supplemental Report acknowledges that "[c]urrent and future hydrologic conditions will likely be more extreme than the modeling periods used."²² Indeed, since the end of the modeling

¹⁷ Supplemental Report at ES-7, 7-2.

¹⁸ *Id.* at 7-2.

¹⁹ *Id.*; *Id.* at 2-23.

²⁰ *Id.* at 7-2.

²¹ Cal. State Water Res. Control Bd., *Final Revised Appendix A: Recommended 2020-2022 303(d) List of Impaired Waters* (2022),

https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html; Cal. State Water Res. Control Bd., *Final Staff Report: 2020-2022 Integrated Report for Clean Water Act Sections 303(d) and 305(b)* at 51 (2022),

https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_revised_final/2020-2022-integrated-report-final-staff-report.pdf.

²² Supplemental Report at 7-2.

period used in the Supplemental Report, California has already experienced more extreme drought and more extreme wet years, which the modeling would not accurately cover.²³ Given that further extremes are increasingly likely with climate change, the Report would already be out of date and inaccurate by the time the VAs could be approved.

Compounding uncertainty about benefits of the VA proposal, the Supplemental Report fails to provide a clear and consistent indication of how such benefits would be evaluated. First, it does not explain how decision makers would assess compliance with the proposed new narrative objective to “[m]aintain water quality conditions . . . sufficient to support and maintain the natural production of viable native fish populations.” The Report does not supply concrete metrics for viability. This would make it impossible to evaluate whether the VAs were successful when it came time to evaluate them. This issue is compounded by the fact that the VA Parties themselves – entities with a vested interest in showing the VAs are successful – are part of the VA Science Program that will evaluate them. Particularly in light of these conflicts, it is paramount that the Board publish explicit viability metrics that would allow for objective and independent evaluation of the VAs.

The Board should correct these shortcomings when it considers the VAs as an alternative in an eventual SED to provide a clearer picture of their expected benefits in achieving progress toward attainment of water quality objectives. A “monitoring program” after the fact would be of little use to fish already on the brink of extinction.

D. The Supplemental Report does not consider how the VA measures will affect Harmful Algal Blooms that impact fish and wildlife objectives, as well as a host of other beneficial uses.

The Board fails to consider how VA measures will impact HABs, even though HABs have a significant negative impact on fish and wildlife. The HAB crisis in the Bay-Delta has exploded in recent years, with 60 incidents reported in 2022, up from 46 in 2021, and 28 in 2020.²⁴ Once HABs form, they create dead zones that can kill fish and other animals.²⁵ Accordingly, a report that purports to evaluate a policy’s impact on fish should consider how it will impact HABs. Yet HABs are only mentioned once in the Supplemental Report. Where the Supplemental Report does mention HABs, it notes that increased flows would mitigate them, while climate change may facilitate their proliferation.²⁶ This cursory treatment is devoid of

²³ See Cal. Nat. Res. Agency, *Report to the Legislature on the 2012-2016 Drought* (2021), <https://drought.unl.edu/archive/assessments/CNRA-Drought-Report-final-March-2021.pdf> (noting that 2012-2015 was the driest four-year period on record, accompanied by record-high temperatures, while 2016-2017 featured record-wet conditions).

²⁴ Delta Stewardship Council, *Harmful Algal Blooms*, <https://viewperformance.deltacouncil.ca.gov/pm/harmful-algal-blooms> (last updated Jan. 18, 2023).

²⁵ Env’t Prot. Agency, *Harmful Algal Blooms*, <https://www.epa.gov/nutrientpollution/harmful-algal-blooms> (last updated Aug. 25, 2022).

²⁶ Supplemental Report at 2-23.

critical details including how vital flows are for avoiding HABs, in part by mitigating the factors that influence their formation such as residence time of water, light availability, turbidity, and nutrient concentrations.²⁷ As the EPA explains, alteration of water flow is a primary driver of HAB formation.²⁸ And other questions remain unanswered, such as whether the VAs' supposed increase in primary productivity will translate into even more HABs. The Board should be explicit about these shortcomings in the final Supplemental Report, and the eventual SED should provide a sound scientific account of how the VAs and other alternatives will affect HAB formation.

The silence on HABs may derive in part from the continuing lack of surface water quality criteria for HABs. Without a HAB standard for surface water – not just drinking water – there is no threshold to trigger a response from health officials, and the Board cannot adequately and consistently assess whether it is protecting beneficial uses from the dangerous effects of HABs. This includes not only the effects on fish and wildlife described above, but also effects on myriad other beneficial uses like contact and non-contact recreation and Tribal Beneficial Uses. The undersigned again urge the Board to correct this shortcoming by adopting HAB criteria for surface water that are sufficient to protect fish and wildlife and other beneficial uses.

CONCLUSION

The Supplemental Report does not provide a full and fair assessment of the VA proposal because the Board failed to consult with tribes, understated the importance of flows, omitted vital parameters from its analysis, and failed to address how the VAs would impact HABs.

While this Supplemental Report is limited in scope, we also remind the Board that it is legally obligated to ensure that water quality criteria protect the complete range of beneficial uses, including those related to fish recovery, others like recreation that are not currently being met, and still more existing beneficial uses of Bay-Delta waterways that the Board has so far declined to codify, despite having clear authority to do so – including Tribal Beneficial Uses.²⁹ The 1995 water quality standards that linger on for the Delta are falling far short of protecting a host of beneficial uses beyond fish and wildlife objectives, in violation of the Clean Water Act

²⁷ Mine Berg & Martha Sutula, *Factors Affecting Growth of Cyanobacteria with Special Emphasis on the Sacramento-San Joaquin Delta*, SCCWRP Technical Report 869 (2015); P.W. Lehman et al., *Long-term trends and causal factors associated with Microcystis abundance and toxicity in San Francisco Estuary and implications for climate change impacts*, 718 HYDROBIOLOGIA 141-158 (2013).

²⁸ Env't Prot. Agency, *Causes of CyanoHABs*, <https://www.epa.gov/cyanohabs/causes-cyanohabs> (last updated Aug. 1, 2022).

²⁹ 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.11(a)(1); Cal. State Water Res. Control Bd., *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* 4 (2006),

https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/wq_control_plans/2006wqcp/docs/2006_plan_final.pdf.

February 8, 2023

Page 9

and Porter-Cologne Act. The Board has a legal duty to update water quality criteria to correct these damaging shortcomings.

We urge the Board to address the issues outlined above to ensure that the VA assessment and the broader Bay-Delta Plan update reflect the best available science and comply with the Board's statutory obligations.

Respectfully submitted,



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