

Table 4-1. Responses to Comments

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269	1	Based on our reading of the Draft Staff Report (DSR), we understand the proposed Plan amendments (the Project) include an Inflow Objective described as a percentage of unimpaired flow with an adaptive range of 45% - 65 % and a default of 55%, and a Cold Water Fisheries Objective, and the Draft Staff Report. FPUD objects to the proposed Project.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
270	1	THE PROPOSED PLAN UPDATE AND SED VIOLATE THE RULE OF PRIORITY. The proposed Plan update violates the rules of water right priority by altogether failing to consider this issue. The priority system "has long been the central principle in California water law." (City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224, 1243; See also Civ. Code§ 1414.) "California operates under a 'dual' or hybrid system of water rights which recognizes both doctrines of riparian rights and appropriative rights." (United States v. State Water Resources Control Bd., supra, 182 Cal.App.3d 82, 101.) "[A]ppropriation rights are subordinate to riparian rights so that in times of shortage riparians are entitled to fulfill their needs before appropriators are entitled to any use of the water." (Id. at 101-102.) Between appropriators, "the rule of priority is 'first in time, first in right' [where] [t]he senior appropriator is entitled to fulfill his [or her] needs before a junior appropriator is entitled to use any water." (Id. at 102.) "Every effort... must be made to respect and enforce the rule of priority." (El Dorado Irr. Dist. v. State Water Resources Control Bd., (2006) 142 Cal.App.4th 937, 966.) The preservation of water right priority should be the "first concern" of the State Water Board in the exercise of its powers. (El Dorado, supra, 142 Cal.App.4th at 961, quoting Meridian, Ltd v. San Francisco (1939) 13 Cal.2d 424, 450.) The priority of different water rights on a stream must be considered in an evidentiary hearing before a diversion can be subjected to an unimpaired flow standard. (see Santa Barbara Channel Keeper v. City of San Buenaventura, supra, 19 Cal.App.5th 1176 at 1191-1192.) Consideration of water right priority, the bedrock of California's water right system, cannot be lawfully deferred until subsequent	The revised proposed Plan amendments specify that numeric inflow requirements for the Sacramento/Delta tributaries will be implemented in accordance with water right priorities. The State Water Board will develop an implementation methodology to determine when water is not available at water right holders' priorities of right. This methodology will be developed through a public process within one year of approval of the Plan amendments by OAL. Within two years of approval of the current Plan amendments by OAL, the State Water Board will adopt curtailment regulations consistent with the above that will identify specific curtailment procedures and requirements.

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		'implementation' phases of the Bay Delta Plan. A disruption of the water right priority system will have multiple, cascading impacts on the usage of water and real property, and must be evaluated in the Supplemental Environmental Document.	
270	2	The Unimpaired Flow Proposal Fails to Establish an Appropriate CEOA Project Description and CEOA Baseline Because it Ignores Water Right Priorities. A project description must be clear and accurate to allow informed comparisons. (County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 955.) The unimpaired flow approach set forth in the proposed Plan update does not adequately demonstrate or analyze how the unimpaired flow requirements will be implemented because it simply prohibits all diversions that conflict with the unimpaired flow requirements, and by doing so without accounting for the relative priorities of water rights which differ by type of water right and priority date. Basic questions such as which water right holders, in what locations, and on what tributaries will be required to forfeit or forego their water rights to satisfy unimpaired flow requirements have not been addressed. This falls well short of the requirement that the State Water Board make "[e]very effort... to respect and enforce the rule of priority." (El Dorado Irr. Dist. v. SWRCB (2006) 142 Cal.App.4th 937, 966.) The SED cannot adequately analyze environmental impacts from the proposed plan update without identifying and analyzing with specificity the water rights that would be adversely affected by the Plan. The proposed Plan update also unlawfully grants fishery interests a super-senior priority over all other competing beneficial uses, without balancing, and irrespective of water right priorities. Pursuant to the California Water Code, the State Water Board must balance different beneficial uses, and Water Code section 106 provides that irrigation is a preferred use of water in California, second only to domestic use. (Water Code § 106.) Public trust interests are not recognized by the water rights priority system, and no authority grants such interests 'super priority' over all other competing interests and uses.	The proposed Plan amendments, specifically the inflow and outflow provisions are proposed to be implemented consistent with water right priorities subject to certain exceptions for health and safety. Please see Common Response 1.2, Water Quality Control Planning Process, regarding the State Water Board authorities related to the water quality control planning process, water rights, and the consideration of other beneficial uses. When the 2010 Delta Flow Criteria Report identified a Delta outflow criteria of 75 percent unimpaired Delta outflow, fishery protection was the sole beneficial use. The report noted that there are many other important beneficial uses that these waters support such as municipal, industrial, agricultural, and other uses that must be considered when determining regulatory flow requirements. The proposed unimpaired flow requirement of 55 percent reflects that balancing of supplies for other beneficial uses of water. See Common Response 1.3, Revised Proposed Plan Amendments, regarding the revised proposed Plan amendments. See Common Response 7.20, Utilities and Service Systems, regarding Water Code section 106 and water for minimum health and safety needs. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the approach to the analysis, the adequacy of the project description, and the level and scope of the analysis.

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		Thus, the unimpaired flow standard set forth in the proposed plan update is inconsistent with California water law (by ignoring the rule of water right priority) and CEQA (by failing to define a Project that contemplates implementation of the Plan in accordance with legal requirements).	
270	3	THE PROPOSED PLAN IS INCONSISTENT WITH STATE WATER BOARD DECISIONS AND REGULATIONS The Unimpaired Flow standard proposed in the SED is inconsistent with multiple Decisions of the State Water Board Decisions authorizing various water storage projects across the state and State Water Board regulations limiting the Board's authority to amend such determinations after water right permits have issued. Nevada Irrigation District and South Feather Water and Power Agency have a number of storage reservoirs. Permits and Licenses have been issued. Places of Use have been ordered. No reservation was granted allowing the SWRCB to change those terms to move resources to the Sacramento Watershed or fish species use to a higher priority or a difference Place of Use without a hearing. By way of example Decision 869, which authorized water storage at Monticello Dam, identified designated beneficiaries and places of use for the waters impounded behind the dam: "[P]ublic agencies, on behalf of their landowners and other water users, shall, consistent with other terms of the permits, have the permanent right to the use of all water appropriated and beneficially used hereunder, which right, except where water is distributed to the general public by a private agency in charge of a public use, shall be appurtenant to the land to which said water shall be applied, subject to continued beneficial use and the right to change the point of diversion, place of use, and purpose of use ..." (Decision 869, In the Matter of applications I I 198, 11199,12578,and 12716 by the United States of America, Department of the Interior, Bureau of Reclamation, pg. 31). The waters impounded at Monticello Dam are appurtenant to the lands to which the beneficial use of the water is applied. Decision 869 does not contemplate a subsequent decision of the Board modifying this designated place and beneficial use of water, nor	All water rights are subject to the common law principle, codified in California Constitution, article X, section 2, that prohibits "waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water." What constitutes a waste is relative, based on competing needs, and the determination may change as conditions change. The State Water Board's broad regulatory authority allows it to control and condition water use, consistent with public interest, including the regulation of water quality and prevention of waste in a regulation. 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 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. Standard permit terms in California Code of Regulations, title 23, section 780 articulate the continuing authority of the Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste and unreasonable use. The term goes on to state that "continuing authority may be exercised by imposing specific requirements over and above those contained in the permit" and "no action will be taken pursuant to this paragraph unless" the Board makes specific findings after notice and opportunity for hearing. (Cal. Code Regs., tit. 23, § 780, subd. (a) [italics added].) Similarly, subdivision (b) states that the permit may be modified after notice and opportunity for hearing, if necessary to meet water quality objectives in water quality control plans, and "[n]o action will be taken pursuant to this paragraph unless" the board

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		address the Board's authority to revise Decision 869 via implementing the unimpaired flow standard, nor the consequences of a fundamental change in the Project, originally approved prior to the implementation of CEQA. Said another way, Decision 869 contemplated a specific "project description" for the Monticello Dam project, which would be radically altered under an unimpaired flow standard. No CEQA review whatsoever has been performed for this revised Project. Additionally, the Board's own regulations require that permittees must consent to the bypass or release of stored water in a manner inconsistent with the approved Project: California Code of Regulations, title 23, section 784, states in part: (b) Notwithstanding subsection (a) of this section, after a permit has been issued and construction has commenced or substantial financial commitment for construction has been undertaken by the permittee, the Board will not require a released or bypass of water authorized to be appropriated by such permit unless the permittee agrees to such bypass or release or unless the Board at the time the permit was issued expressly reserved jurisdiction to require such bypass or release. (c) Before requiring releases of water pursuant to subsection (a) of this section over the objection of the applicant or permittee, the Board will hold hearing and make findings with respect thereto (Cal. Code Regs., tit. 23, § 784.) The Proposed Plan does not address whether any beneficiary of any approved water storage project in the entire state has consented to releases or bypasses necessary to satisfy the unimpaired flow standard, nor any analysis of whether the Water Board Decisions authorizing said projects reserved to the Board the requisite authority to unilaterally impose such flows, in most cases, decades after the Board approved the Projects at issue. To our knowledge, the beneficiaries and holders of the rights to water and use of the storage capacity for the benefit of Nevada and Placer Counties, like Solano County and other storage right holders have not consented and will not consent to such releases. This being the case, the "project" of Nevada Irrigation District would be modified by the proposed unimpaired flow	makes certain findings after notice and opportunity for hearing. (Id., subd. (b) [italics added].) These standard permit terms and the conditions contained within apply to the permit terms themselves. If the Board were to reopen the permit pursuant to these permit conditions it would undoubtedly hold a hearing for the specific issues raised in the matter. But the standard permit terms and conditions cannot be read to constrain the Board's regulatory authority that exists independent of the permit terms and conditions, including the authority to adopt regulations. As explained in Section 5.2.3, Regulations and Adjudicative Proceedings, the State Water Board conducts both quasi-legislative and quasi-judicial administrative proceedings, and different rules apply depending on the type of action pending before the State Water Board. In the past, the State Water Board has conducted adjudicative water right hearings to implement the Bay-Delta Plan. In a quasi-adjudicative proceeding, the procedural rules are similar to a court in that testimony is submitted and subject to cross-examination and rebuttal, evidentiary motions may be made, and ex parte communications with the decision-maker are prohibited. This type of hearing is best suited for cases with a discreet set of issues and limited individual parties. Quasi-legislative proceedings, including hearings for the adoption or amendment of regulations, water quality control plans or state policy for water quality control, and hearings to gather information to assist the State Water Board in formulating policy for future action, are not adjudicative proceedings and are subject to different procedures. (See Cal. Code Regs., tit. 23, § 649 et. seq.) A rulemaking proceeding is most effective when a large number of parties will be subject to the regulation. The process can be time and resource intensive, but the procedures are less structured and better tailored for actions that require a comprehensive approach. The basin planning process is a rulemaking proceeding. Both types of proceedings provide adequate due process. The State Water Board possesses legal authority to adopt regulations declaring that a particular use of water under given circumstances is unreasonable without the requirement to conduct a hearing as to any individual water right. (Stanford Vina Ranch Irrigation Co. v. State (2020) 50 Cal.App.5th 976, 1004 [citing Light v. SWRC State Water Resources Control Bd.

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		standard, with none of the required project-specific environmental review having been performed.	(2014) 226 Cal.App.4th 1463, 1484-85] ["Stanford Vina"].) The State Water Board implements the Bay-Delta Plan objectives using its quasi-legislative or adjudicative authorities involving water rights and water quality. The State Water Board may implement the objectives by adopting regulations, conducting adjudicative proceedings, or both, that take into consideration the requirements of the public trust doctrine and the California Constitution, article X, section 2. The State Water Board will also continue, as necessary and appropriate, to use its Clean Water Act section 401 water quality certification authority, waste discharge requirements, and other water quality and water rights actions to implement objectives in this plan. While the Board may consider implementation procedures other than, or in addition to curtailment regulations, it is likely that the State Water Board will develop and adopt regulations necessary to implement portions of the plan updates, including regulations to administer the water right priority system with applicable Bay-Delta Plan requirements and commitments. In addition, both the Bay-Delta planning process and any subsequent regulation development provides notice and hearing. Note that the planning process does include general consideration of the factors mentioned in standard water right permit terms and conditions, including California Constitution Article 10, section 2, public interest and uses protected by the public trust.
270	4	THE PROPOSED PLAN UPDATE MISAPPLIES THE PORTER-COLOGNE ACT AND IN SO DOING VIOLATES CEQA The SED and the proposed unimpaired flow standard unlawfully focuses on additional instream flows for fishery purposes. The courts have held that this type of narrow approach is unlawful and a violation of the Porter-Cologne Act because, among other things, it fails to address all available water resources. (See United States v. State Water Resources Control Bd., (1986) 182 Cal.App.3d 82, 179 -180 [holding that the Board's "without project" standard was unlawful because it considered only the water use of the Delta parties and the customers served by the projects and ignored water use by upstream users].) The proposed Plan and SED advocate for the avoidance of significant	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board's consideration of beneficial uses during the water quality control planning process, State Water Board consideration of factors listed in Water Code section 13241, and a discussion of non-flow measures and the State Water Board's authority to impose such measures. The State Water Board has consistently acknowledged and incorporated flow and non-flow measures into Bay-Delta Plan provisions to address Delta aquatic ecosystem and tributary needs in all watersheds. Non-flow measures are reflected in every alternative presented in the Staff Report, as described further in Common Response 1.3, Revised Proposed Plan

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		adverse impacts to fish and wildlife beneficial uses, and the confiscation of water for instream fishery interests, without meaningful consideration of other beneficial uses, in violation of the Porter-Cologne Act. (Water Code, §§ 13000, 13241.) There is insufficient analysis in the SED of the impacts that the proposed Plan update will have on other beneficial uses of water such as agricultural and municipal uses, and/or how those impacts might be mitigated. The SED exclusively advocates additional flow measures to benefit fishery species. This advocacy is inconsistent with Water Code section 13241(c) which requires the State Water Board, in weighing a proposed water quality objective such as those at issue here, to consider the "water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." In the context of fishery flows, "all factors" necessarily encompasses non-flow measures such as predator control, flood plain management and improvement of spawning and rearing habitat. The SED and the proposed Plan update unlawfully omit non-flow measures and, instead, focus on mandatory instream flows in violation of section 13241 (c). The State Water Board has authority to include non-flow measures in the proposed Plan update. Indeed, it has often done so in the past water quality control plan updates. For example, the State Water Board has required fishery studies (D 1616), installation of physical barriers in the river (D 1641), groundwater studies (D 869), studies for mitigation of streamflow reductions and sediment buildup (D 1582), consultation with regulatory agencies to develop plans to reduce fish losses resulting from diversion of water, and to identify proposed sources of funding to implement non-flow measures and projects (D 1644). Altogether, the SED and the proposed Plan update violate the State Water Board's duty to weigh and balance competing beneficial uses and focuses only on unimpaired flow mandates to improve fishery conditions.	Amendments. See also Common Response 7.24, Alternatives Analysis. As further discussed in the 2023 draft Staff Report's Section 7.21, Habitat Restoration and Other Ecosystem Projects, the State Water Board acknowledges that the benefits of increased flow are further enhanced when implemented in concert with non-flow measures such as physical habitat restoration, control of invasive species, and other efforts. However, non-flow measures often depend on sufficient flow for successful implementation. For an in-depth examination of the benefits of flow and its role as a critical element of protection and restoration, see Chapter 3 of the 2023 draft Staff Report, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations.
270	5	The Project Description is Unlawfully Deficient Because it Fails to Describe the Entire Project.	The 2023 draft Staff Report identifies and analyzes reasonably foreseeable compliance measures and response actions arising from the Sacramento/Delta update to the Bay-Delta Plan. The

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		Tiering or leaving to later the impact of implementing the Plan is not legally permitted as it might be allowed in a land use General Plan circumstance. Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the Project and does not justify deferring such analysis to a later tier EIR or negative declaration. (CEQA Guidelines, § 15152, sub. (b); Stanislaus Natural Heritage Project v. County of Stanislaus (1996) [5th Dist.] 48 Cal.App.4th 182, 197-199.) The Guidelines are clear that deferral of consideration of the impacts of implementation in a CEQA/SED document may have the effect of preventing identification of the significant environmental effects of the plan sought to be approved. (CEQA Guidelines, § 15152, subd. (c).) The violation of the law that reasonably foreseeable impacts that are significant must be analyzed in the first tier is clear but ignored here: (A) decision to "tier" environmental review does not excuse a governmental entity from complying with CEQA's mandate to prepare, or cause to be prepared an environmental impact report on any project that may have a significant effect on the environment...to include a detailed statement setting forth "all significant effects on the environment of the proposed project" Pub. Resource Code 21100. (Stanislaus Natural Heritage Project v. County of Stanislaus (1996) [5th Dist.] 48 Cal.App.4th 182, 197.) A project description must accurately describe the "Project" and its effects. (County of Inyo v. City of Los Angeles (1977) 71 Cal.3rd 185, 199; San Joaquin Raptors/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 730.) As drafted, the CEQA/SED document does not allow the "Project" environmental impacts to be measured against alternatives and possible mitigation. This failure to consistently and coherently measure the impacts of the SWRCB Project relative to the baseline conditions and the absence of even an attempt to describe the impact of no or limited water service from water storage facilities impacted by the proposed unimpaired flow approach violates CEQA requirements. Leaving the problems created by your adopted Plan taking water away from existing users requires under CEQA/SFD and Porter Cologne how you would mitigate or reduce harm.	commenter is incorrect to suggest that the Staff Report defers the required disclosures and analysis. Water supply, including supplies from the Sacramento/Delta watershed, is evaluated extensively throughout the Staff Report. Chapter 6, Changes in Hydrology and Water Supply, is devoted entirely to describing the changes in hydrology and supply as a result of the proposed Plan amendments. For example, Table 6.4-1 details total annual average water supply to each region in the study area by type of use (agriculture, urban, and refuge). The following sections in Chapter 6 provide further detail on each of the regions and uses. Chapter 6 includes a detailed discussion of reservoir storage for major storage reservoirs in the Sacramento/Delta watershed, reservoirs in the upper watersheds, and reservoirs that receive Sacramento/Delta water supply. Reservoir effects are reflected in estimates of reduced Sacramento/Delta supply to agricultural and municipal use and well as hydropower. Chapter 6 also includes a discussion on the flexibility that water users have or could develop to continue to meet water supply needs with reductions of Sacramento/Delta surface water supplies, including other water management actions. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the approach to the analysis, the adequacy of the project description, and mitigation measures. See Common Response 1.2, Water Quality Control Planning Process, regarding the Porter-Cologne Water Quality Control Act and the Clean Water Act.

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270	6	THE DRAFT PLAN FAILS TO ADDRESS REQUIRED ELEMENTS, INCLUDING SATISFACTION OF THE STATE GOAL OF PROVIDING A DECENT HOME AND SUITABLE LIVING ENVIRONMENT. Water Code Section 13142 states: State Policy for water quality control shall consist of all or any of the following: *** The principles, guidelines, and objectives shall be consistent with the state goal of providing a decent home and suitable living environment for every Californian. For the first time in its history, the SWRCB is considering a "plan" that will reduce the water available for homes and residents, however, the proposed Plan does not address the implementation of those reductions or limitations. How such a plan could be consistent with Section 13142 requirements is not explained. The proposed Plan cannot be implemented only by a moratorium on new connections or building permits, but will require in addition rationing or water use reductions of approximately 20% to 30% in order to dispatch new amounts of unimpaired flows downstream in most areas. The SWRCB needs to describe and prescribe the details of its plan because the Board's proposed plan has not addressed those significant environmental impacts of any implementation strategy.	The environmental impacts are analyzed in the Staff Report. Please see Common Response 1.2, Water Quality Control Planning Process, for information on the applicability of Water Code section 13142 requirements.
270	7	IDLING AGRICULTURAL IRRIGATED ACRES TO ACHIEVE COMPLIANCE WITH A WATER QUALITY CONTROL PLAN REQUIRES SIMILAR MANDATORY DESCRIPTIONS OF THE PLAN AND THE MEANS OF FINANCING THE "PLAN". The SWRCB Draft Plan omits any description of the financing plan of removing significant quantities of surface water irrigation of agricultural lands across the state. Such a financing plan is required pursuant to Water Code section 13141, which mandates: However, prior to implementation of any agricultural water	Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), the State Water Board is required to consider several factors, including economic considerations, when establishing water quality objectives for the reasonable protection of beneficial uses (Wat. Code, § 13241). The need for economic analysis associated with State Water Board actions is also required by Water Code section 13141, which states: "prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan (Wat. Code, § 13141). Chapter 8, Economic Analysis and Other

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		quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan." (Emphasis added.) The SWRCB has included no such financing plan in the SED. While it is true that the financing of a program to reduce surface water irrigation or use of groundwater for those irrigated acres can await implementation of the plan, above Porter Cologne financial plan and CEQA/SED requirements requires that the environmental impacts of the SWRCB financing program be examined. SWRCB has omitted this detail from the proposed Plan. Likewise, the cumulative impacts of significantly reducing irrigable land within the within the State is not examined at all in this CEQA/SED, or even mentioned in the Draft Plan. Water Code section 13141 requires the financing plan of idling existing farming operations to be carefully organized and described to reduce cumulative and magnifying environmental impacts ... but the SWRCB's Draft Plan fails to include the "rest of the plan." (Citizens for Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553,564; Guidelines, § 15126.6, subd. (a).)	Considerations, analyzes the economic effects of changes in hydrology and water supply under the proposed Plan amendments on agricultural and municipal use, with further supplemental economic analyses in Chapter 9, Proposed Voluntary Agreements, and Chapter 13, Revised Proposed Plan Amendments. Financial assistance for agricultural water conservation is discussed in Section 8.4.5. Please see Common Response 1.2, Water Quality Control Planning Process, regarding Water Code sections 13141 and 13241. The Staff Report's economic analysis satisfies any economic considerations required under sections 13141 and 13241 of the Porter-Cologne Act, and under CEQA, to the extent that economic impacts could result in potentially significant impacts on the physical environment. Chapter 8, Sections 9.8, and 13.8, Economic Analysis and Other Considerations, already identifies the effects of the flow scenarios, including quantitative and qualitative assessments. The commenter does not identify any costs that are missing from the Chapter. The State Water Board used the best tools and information available to estimate economic effects, and it would be highly speculative to quantify the fisheries and other related beneficial economic effects of the project that are associated with aquatic ecosystem improvements. Additionally, see Section 7.4, Agriculture and Forest Resources, for discussions on fallowing, land idling, and conversion to nonagricultural uses. Also see Section 8.4, Agricultural Water Supply Economic Effects, for an analysis of potential economic effects from changes in water supply, including fallowing. For additional details on the Statewide Agricultural Production (SWAP) model used to analyze fallowing, see Appendix A3, Agricultural Economic Analysis: SWAP Methodology and Modeling Results. Section 7.23.1.3, Cumulative Impacts, identifies that there could be potentially significant adverse cumulative impacts related to conversion of farmland to nonagricultural use and identifies mitigation measures to address these impacts from changes in hydrology and water supply.

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			Section 8.4.5, Financial Assistance for Agricultural Water Conservation, provides information on financial assistance programs that support agricultural water conservation related efforts. Section 8.5.10, Potential Sources of Funding for Municipal Water Conservation and Alternative Water Supplies, summarizes potential sources of funding for municipal water supply and conservation. Please see Common Response 8.1, Economic Analysis and Other Considerations, for more information on potential funding sources for municipal water conservation and alternative water supplies.
270	8	THE DUTY UNDER PORTER COLOGNE TO HAVE A "PLAN" DOES NOT MEAN THAT THE BOARD CAN LIMIT THE PLAN TO ONE STANDARD OR DEVICE APPLICABLE TO ALL SUBWATERSHEDS FLOWING INTO THE SACRAMENTO RIVER, OR THAT ALL WATERSHEDS WITH DIFFERENT CONDITIONS AND DEMANDS CAN BE TREATED BY ONE PHRASE OR STANDARD AND MEET THE REQUIREMENTS OF A "PLAN". Water Code section 13000 requires that in considering and adopting a water quality control plan, the Board consider all competing demands for use of water. The case of United States v. State Water Resources Control Board (1986) 182 Cal.App.3rd 82 ("Racanelli") requires that the Board consider and balance all demands and uses of water. No particular environmental uses are entitled to preference or priority. The proposed Plan does not address or even consider non-flow measures such as fish hatcheries, limits on predators, and programs to remove predators, all of which would advance the stated project goals regarding fishery improvement and recovery. Without a reasonable analysis of the alternatives, the CEQA/SED is inadequate and counter to law. Further, the absence of discussion or consideration shows a failure to "balance" uses of water which is required by Porter Cologne and a basic requirement of reasonable and beneficial use of water under Constitution Article 10, Section 2. (In re Waters of Long Valley Creek Stream System (1979) 25 Cal.3rd 339, 354.) This reasonable range of alternatives are not considered, examined,	The State Water Board recognizes that ecosystem recovery in the Delta depends on more than just adequate flows. Chapter 4, Other Aquatic Ecosystem Stressors, is devoted entirely to discussing other ecosystem stressors and how they interact with flow and other stressors. The Plan amendments do consider and incorporate non-flow measures in a variety of ways. The program of implementation identifies actions that other entities should take to address other ecosystem stressors and provides a framework to incorporate both flow and complementary ecosystem projects such as physical habitat restoration into local cooperative solutions. Some complementary ecosystem projects also may serve as an implementation mechanism for the proposed cold water habitat objective. In addition, the VA pathway includes implementation of non-flow habitat restoration actions on a portion of the Sacramento/Delta tributaries for an initial eight years (with the possibility to extend the term). Some other complementary ecosystem actions are already incorporated into the Bay-Delta Plan program of implementation, such as provisions related to hatchery programs for special-status species and reducing illegal harvest. In addition, the Water Boards have existing regulatory programs that control discharges of wastes from wastewater treatment facilities, industrial facilities, urban areas, irrigated agricultural lands, and other sources of wastewater to the Bay-Delta and tributaries. These programs are expected to continue to improve water quality conditions in the Delta. Please see Common Response 1.2, Water Quality Control Planning Process, regarding the consideration of beneficial uses

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		or explained. (Citizens for Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553,564; Guidelines§ 15126.6(a).	and the California Constitution, Article X, section 2 and the consideration of non-flow measures. See also Common Response 7.24, Alternatives Analysis, regarding the range of feasible alternatives.
270	9	THE PROPOSED PLAN WILL DISRUPT WELL FOUNDED EXPECTATIONS REGARDING WATER SUPPLY. The Board members should understand the legal implications and organizational implications of adopting the same Water Quality Control Plan for each watershed in the form of release of unimpaired flows and carryover of reservoir quantities, including Putah Creek. The adoption of "goals and philosophies" instead of a water control plan is preferable because the adoption of "a plan" with these elements will allow litigation to stop all development of jobs and industries. The Porter Cologne adoption of a water quality plan means that no state or federal governmental action is permitted in conflict with that plan. Not just 401 certifications for federal projects may not be issued (Water Code Section 13160) but no California CEQA findings by a local agency can be made that new connections or different water quantities may be used when a formal adoption of a water quality control plan such as that proposed by the Board staff occurs. Water Code 13146 ("...in carrying out activities which affect water quality, shall comply with state policy for water quality control unless otherwise directed ... in which case they shall indicate to the state board in writing their authority for not comply with such policy."). If the Board members have a personal goal or opinion that too much water has been taken from environmental uses, adopt it as your philosophy or goal, but do not include such a broad and comprehensive policy in a Water Quality Control Plan without dealing with the plan to implement. The goal or longing of the proposed plan and CEQA/SED for unimpaired flows to pass reservoirs and diversion points and to reserve reservoir storage water for fish is better adopted by the Board as a goal only. To adopt it as a water quality control plan is to arm every opponent of every development project using water with a weapon to stop	Please see Common Response 3.1, Fish Protection, for a discussion of the flow benefit analyses. Please see Common Response 1.2, Water Quality Control Planning Process, regarding the State Water Board's water quality control planning authorities and duties pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act or Porter-Cologne) and the Clean Water Act. The State Water Board and Regional Water Quality Control Boards are charged with developing water quality control plans to protect the state's waters. (Wat. Code, §§ 13170, 13240.) Each water quality control plan consists of a designation of beneficial uses of the waters within a specified area, a set of water quality objectives to reasonably protect those beneficial uses, and a program of needed for achieving those water quality objectives. (Wat. Code, § 13050, subd. (j).) Adopting a nebulous, unenforceable set of "goals and philosophies" would not fulfill the State Water Board's legal obligations under Porter-Cologne and the Clean Water Act. Additionally, the Porter-Cologne Act does not require the exact text of a program of implementation to be made available in a Staff Report. Rather, the Staff Report is a synthesis of the State Water Board's modeling, analyses, and findings, which will ultimately inform the development of a program of implementation. The 2023 draft Staff Report included a detailed description of the proposed contents of the program of implementation in sufficient detail for the purposes of the analysis. As discussed in 2023 draft Staff Report Section 7.16, Population and Housing, activities that would have an impact on population and housing would be development or infrastructure projects that could induce substantial population growth in an area or

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		even consideration of such projects until the SWRCB has changed or considered changing its "plan" for that watershed. A group challenging every CEQA process for new or different development will be able to stop even the most beneficial and well thought out projects involving the use of water until the SWRCB has considered and adopted changes in its plan for that watershed. Attached is a public record requested of the City of Fairfield for the Anheuser Busch Brewery visible from Interstate 80 providing jobs to Californians and allowing safe housing for its suppliers and workers. Anheuser Busch would never contend that beer is more important than housing or production of food for human consumption. Solano Irrigation provides the raw water and the City of Fairfield provides the treatment and pressurization of the supplies to that plant. Understandably because of the lack of organization in developing new storage projects for water in California, Anheuser Busch was forced to place in its contract provisions a condition requiring no new connections to third parties if capacity to make deliveries was not available. (Contract attached. [No attachment provided by submitter]) 6.4 D ("If at any time... City shall not grant any new connections to any other persons or entities within such City until such supplies and capacity are available..." when an amendment was considered to permit future expansions of the plant in 1989. When neighbors object to the density or location of housing projects located in Fairfield or SID which requires water use in the future, what better weapon for those opponents than citing the SWRCB aspirational but adopted plan of 55% unimpaired flow which takes away already used capacity and supply of Fairfield and SID. Solano Irrigation District and the City of Fairfield do not dispute that the SWRCB, City government and others should decide on a watershed by watershed basis the best use of water but the SWRCB should not provide a trump card stopping all decision making regarding jobs, location of water use or housing by local agencies until the SWRCB has held hearings on a specific watershed by watershed and potentially retreated on its proposed adopted plan and considered modifying the Putah Creek plan in the future regarding limits on reservoir storage use and mandated unimpaired Plans. The "balancing process" must be undertaken in advance or the	activities that could result in displacement of substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. Changes in hydrology and changes in water supply would not result in activities that would affect population and housing. For more details on this analysis, please refer to Section 7.16 of the 2023 draft Staff Report. The State Water Board recognizes that providing instream flows for the environment necessarily results in less water being available for other uses. The State Water Board understands and acknowledges that reductions in Sacramento/Delta supplies for consumptive uses are difficult and a concern for many parties that rely on this water. Providing balanced protection of all beneficial uses of water is incredibly important and requires careful consideration, and the State Water Board is sensitive to water supply effects. See Common Response 6.3, Water Supply and Other Water Management Actions, for more discussion. See also Chapter 8 of the 2023 draft Staff Report, Economic Analysis and Other Considerations, for the State Water Board's consideration of economic factors pursuant to the Porter-Cologne Water Quality Control Act and the California Environmental Quality Act. See also Common Response 8.1, Economic Analysis and Other Considerations, for a discussion of potential regional economic effects related to the Plan amendments.

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		SWRCB will have to conduct all land use, housing and economic planning hearings after it has frozen all actions. If the SWRCB intends a moratorium on different water use by this "Plan", state that because that will be the effect and spare the Courts the burden of that end result.	
270	10	CONCLUSION The Proposed Plan is not consistent with the requirements of CEQA, or California Water law and substantial revisions are required, a CEQA/SED done which complies with the law and an explanation as to how Article 2, Section 10 requirements of reasonable water use can be shown to be met by simply taking the same percentage of water away from each watershed.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. To the extent that this comment summarizes other comments, please see the substantive responses to those comments.
271	1	The SED fails to properly analyze the baseline condition. "The California Environmental Quality Act (CEQA) requires government agencies to consider the environmental consequences of their actions before approving plans and policies or committing to a course of action on a project. This process is intended to: (1) inform government decision-makers and the public about the potential environmental effects of proposed activities; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable environmental damage by requiring changes in projects, either by the adoption of alternatives or imposition of mitigation measures; and (4) disclose to the public why a project was approved if that project has significant environmental impacts that cannot be mitigated to a less than significant level." [Footnote 1: CEQA IO I, The Governor's Office of Planning and Research, https://opr.ca.gov/ceqa/docs/20210809-CEQA_IOI.pdf] The Staff Draft report is an amalgamation of insufficient and inaccurate data gilded upon an erroneous representation of the existing laws and regulations governing our rivers and state's water distribution and supply network. This report is yet another attempt to avoid the harsh realities of our state's hydrology, plan accordingly, and follow the existing laws governing the distribution of water throughout our state.	The proposed project is not focused on the state and federal water projects alone. As described in Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, restoration of more natural flow functions is needed to address declines in native aquatic species, along with the integration of physical habitat restoration. Though various state and federal agencies have adopted requirements to protect the Bay-Delta ecosystem, a comprehensive regulatory strategy does not currently exist. The current requirements are minimal, and are focused on the Delta without considering the needs of the watershed or how those flows are provided. Specifically, a number of tributaries do not have requirements to protect fish and wildlife or have minimal requirements. During recent droughts, the current minimal objectives were not met and temperature management concerns were significant, frequently resulting in poor conditions for native fish and wildlife. The draft Staff Report evaluates alternatives that would provide a comprehensive minimum instream flow and cold water habitat provisions and distribute the responsibilities more broadly across the watershed in a way that adjusts to available supplies and provides for flexibility. Therefore, the analyses are necessarily broader than state and federal project operations. The draft Staff Report analyses changes and hydrology for all water diversions in the Sacramento/Delta watershed under various scenarios and potential changes in water supply for each region that could be affected by reduced Sacramento/Delta supply. The impacts to water supply are presented in Chapter 6,

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		A proper analysis would require the SWRCB and other project regulators to ascertain a "firm yield" of the State Water Project (SWP) and Central Valley Project (CVP), and the ability of the projects to meet and maintain water quality standards in the Delta throughout the year in a series of dry years equivalent to the drought of record that occurred in 1929-1934. This analysis should be performed using actual data observed in the historical record, and not projections based on averages over a 30- or 50-year period. Said analysis should be refined to consider alternatives or trade off of impacts to legal users of water, public trust resources and the projects' ability to comply with existing law and meet the currently required salinity standards outlined in D-1641, biological opinions and other controlling legal mandates. Such an analysis would be similar to that performed in The State Water Project: Final Delivery Capability Report 2021 (September 2022). On page 44 the analysis provides, "The results of modeling existing conditions under historical drought scenarios indicate that SWP Table A water deliveries during dry years can be estimated to range between yearly averages of 230 and 1,377 TAF." The ongoing ability of the projects to meet and maintain the current standards in the Delta and a realistic expectation of project yields under such conditions is critical to establish a baseline from which alternatives can be properly analyzed.	Changes in Hydrology and Water Supply, Chapter 7, Environmental Analysis, and Chapter 9, Proposed Voluntary Agreements, of the draft Staff Report. Please refer to Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding SacWAM scope, scale and application for a response to comments about the scale of analysis in the draft Staff Report and Common Response 4.2, Drought and Climate Change, regarding the multi-year drought analysis for a discussion about extended droughts and how they are analyzed in the draft Staff Report.
271	2	Notably the Department of Water Resources (DWR) chose to use CalSim 3 to perform its analysis in its Final Delivery Capability Report 2021. CDWA would suggest that the most up to date modeling be used in updating the Water Quality Control Plan as well. In addition, CDWA would suggest that some form of independent QA/QC or verification of data inputs be performed by an independent third body when used in SWRCB decision making. As a party in interest DWR should not be relied upon solely for data collection, provision, and verification.	SacWAM has been developed for the update of the Bay-Delta Plan incorporating the latest information and methods. SacWAM has been publicly peer reviewed. This peer review report is available on the State Water Board's SacWAM website.
271	3	Using observed history as a guide is critical to improving the function of our state's water infrastructure and the ecosystems that depend on these resources. It is undebatable that the public trust resources (e.g. fish & wildlife) that rely on our proper stewardship and management of our water have suffered greatly, not only during recent dry periods, but over the decades that the	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		SWP and CVP have been in operation. Many of the native anadromous and potamodromous fish species that migrate throughout the Delta watershed are endangered and in precipitous decline. This decline has continued despite the regulators' best efforts to curb it. In the remainder of these comments, we will describe some of the historic shortcomings of past patterns and practices that have contributed to this mismanagement and policy decisions on the horizon that should be considered in adopting and updating the Bay Delta Water Quality Control Plan.	
271	4	Maintenance of Delta water quality and the burden thereof has been properly adjudicated. Of particular relevance is the Appellate Court Decision in United States vs State Water Resources Control Board cited below. Eight cases against the SWRCB were coordinated. All major water interests were parties including the SWRCB, USBR, DWR, Federal Project contractors and State Water Project contractors. In United States vs State Water Resources Control Board 182 Cal.App.3d 82 (1986) at page 139, the Appellate Court provides: "In 1959, when the SWP was authorized, the Legislature enacted the Delta Protection Act.(§§ 12200-12220.) The Legislature recognized the unique water problems in the Delta, particularly 'salinity intrusion,' which mandates the need for such special legislation 'for the protection, conservation, development, control and use of the waters in the Delta for the public good.' (§ 12200.) The act prohibits project exports from the Delta of water necessary to provide water to which the Delta users are 'entitled' and water which is needed for salinity control and an adequate supply for Delta users.(§§ 12202, 12203, 12204.) But the crucial question left unanswered by the protective legislation is exactly what level of salinity control the projects must provide. As noted, the Board concluded that the projects are responsible only for maintaining that level of salinity which would exist in the Delta had the projects never been constructed, the so-called 'without project level. The board declared that if the Delta water users desire a higher level of protection (a greater amount of outflow), they can purchase such	As noted earlier in this comment letter, this particular comment purports to identify "some of the historic shortcomings of past patterns and practices that have contributed to this mismanagement and policy decisions on the horizon that should be considered in adopting and updating the Bay-Delta Water Quality Control Plan." Although somewhat unclear, the crux of the policy concerns appears to relate to the commenter's belief that Delta water users generally need not pay for enhanced water quality. The basis for this claim is also somewhat unclear but may be based on the commenter's mistaken belief that the protection of the Delta has priority over project contractors including exports from the Delta. The commenter appears to support this claim in citing to United States vs. State Water Resources Control Board (1986) 182 Cal.App. 82. The commenter begins with "In furtherance of the determination that protection of the Delta has priority over contractors including exports from the Delta" and follows with the concluding statement that "Thus both substantively and conceptually, the contractors cannot justify any reasonable expectation of a certain or guaranteed water supply for delivery." But this concluding statement is not provided because protection of the Delta has some kind of alleged priority over project contractors but because, as noted in the decision "the CVP's appropriated water rights are, by definition, conditional—subject to the continuing supervisory authority of the Board, the constitutional limitation of reasonable use, and the priorities of

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		'enhancement water' from the projects." (Emphasis added.) The Court did not agree with the SWRCB's position. At page 117, the Court concluded: "Whatever final conclusion is to be drawn from Antioch regarding the nature and extent of common law riparian rights to salinity control, existing constitutional and legislative authorities encompass the Board's obligation to protect the quality of the Delta waters from saltwater intrusion. As mentioned above, the water quality legislation unmistakably requires the Board to formulate water quality standards to provide salinity control to 'ensure the reasonable protection of beneficial uses {WC 13241}, a statutory classification earlier noted as wide ranging (WC 13050, subd. (f)). Though there can be no doubt concerning the Board's authority to take action to protect the consumptive uses (agricultural, industrial and municipal) in the Delta, its approach to that task was seriously flawed by equating its water quality planning function with protection of existing water rights." At page 141, the Court provided: "Thus, the Board's authority in setting water quality standards is not limited to the protection of water rights but extends to the protection of all beneficial uses from degradation of water quality, even if the resulting level of water quality exceeds that provided by water rights." At page 142, the Court provided: "That independent basis of authority vests jurisdiction in the Board to compel compliance with water quality standards insofar as the project's diversions and exports adversely affect water quality. Such authority, we think, includes the power to impose related costs on the projects." At page 128, the Court confirmed that providing salinity control in the Delta was also a major purpose of the projects: "Salinity control in the Delta was unquestionably contemplated	senior rights holders." (Id. at p. 147.) In addition, to the extent that the commenter believes that the Delta Protection Act provides an ongoing responsibility to guarantee that Delta users always have sufficient water of adequate quality, even if that requires, for example, the Projects to release stored Project water to support Delta diversions when natural and abandoned flows are inadequate to supply their demands, this argument is misplaced. Nothing in the Delta Protection Act entitles Delta users to Project water, or serves to exempt Delta users from regulatory requirements. It is true that consistent with county and watershed of origin protections, the Delta Protection Act does afford Delta users priority over the Projects' rights to divert natural and abandoned flows to support exports from the Delta watershed. But the Delta Protection Act does not mean that Delta users are entitled to water previously stored by the Projects in accordance with the priority system that is released for export from the Delta or to meet water quality objectives. As underscored in the State Water Resources Control Board Cases (2006) 136 Cal.App.4th 674, 771-772: Nothing in the Delta Protection Act purposes to grant any kind of water right to any particular party. The Delta Protection Act does preclude the diversion of water from the Delta that is necessary for salinity control or to provide an adequate water supply for users within the Delta; however it is for the Board to decide, in the exercise of its judgment, what level of salinity control should be provided and what is an adequate supply of water for users in the Delta. Thus, neither United States vs. State Water Resources Control Board nor the Delta Protection Act support the position that protection of the Delta has priority over project contractors including exports from the Delta. Furthermore, the Delta Protection Act does not create any new water right outside the purview of the Board's regulatory authority, nor does it provide users within the watershed with any right to stored water held within or released from Project reservoirs.

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		by state and federal authorities as one of the purposes to be fulfilled by the statewide water projects; ... " In furtherance of the determination that protection of the Delta has priority over project contractors including exports from the Delta, the Court at page148 provides: "Thus, both substantively and conceptually, the contractors cannot justify any reasonable expectation of a certain or guaranteed water supply for delivery." The trial court in the above case determined that there is no obligation on the part of the Delta water users to pay for the incidental benefit from the projects' provision of salinity control for other purposes including fish and wildlife, maintenance of quality at export pumps and meeting public trust needs. The payment obligation only arises from the release of project-developed truly surplus waters specifically for the enhancement of Delta water user supply. The court addressed the Delta water users' "inchoate right to 'recapture' water being exported by the state and federal projects" under the Watershed of Origin Statute and Delta Protection Act. The court generally concluded that perfection of the right to recapture water being exported would require a Delta user to obtain an appropriation permit and a contract to pay for the recaptured water that was "developed by the projects and that was released specifically for his benefit." Specific to the payment issues, the court provided that "Delta users need not pay for salinity control water even if they are incidentally benefited unless the water is released specifically for their benefit," "Delta water users need not pay for the enhanced water quality that results from water released by the projects to maintain adequate water quality at the export pumping stations," "Delta users need not pay for the enhanced water quality resulting from the release of abandoned water," and "Delta users need not pay for the enhanced water quality resulting from water released to preserve or enhance fish or wildlife resources."	

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271	5	The SED analysis is insufficient because it piecemeals the analysis of potential actions and resultant impacts. The Draft Staff report does a poor job of "inform[ing] government decision-makers and the public about the potential environmental effects of proposed activities" in the document itself. In fact, the murky presentation obscures the analysis and confuses the reader as to what is being contemplated, considered, or compared in terms of alternatives. The potential environmental effects of any proposed actions are not only difficult to identify but some are entirely absent from the document and supporting data. The SWRCB has a pattern and practice of partitioning projects and their resultant impacts from one another to avoid a cumulative analysis of the actions under CEQA.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the approach to the analysis. To the extent that this comment summarizes other comments, please see the substantive responses to those comments.
271	6	TUCP The SWRCB has a pattern and practice of approving Temporary Urgency Change Petitions to relieve the projects of their obligation of salinity control in the Delta. The granting of such petitions and the resultant damage and harm to other legal users of water and public trust resources from the further degradation of Delta water Quality and continued operation of the SWP and CVP pumping stations goes unaccounted for in any CEQA analysis, including this SED.	See Section 7.24.2, No Project Alternative (Alternative 1), of the 2023 draft Staff Report for a discussion of TUCPs and the likely future conditions assumed in the analysis of the No Project Alternative. See Common Response 1.3, Revised Proposed Plan Amendments, for a general discussion of concerns regarding TUCPs and Common Response 6.2, Baseline and No Project Alternative, regarding the treatment of TUCPs in baseline.
271	7	Temporary Transfers The SWRCB has a pattern and practice of approving temporary transfer under California Water Code §1725 in critical and dry years. The granting of such petitions and the resultant damage and harm to other legal users of water and public trust resources from the further degradation of Delta water Quality and continued operation of the SWP and CVP pumping stations goes unaccounted for in any CEQA analysis, including this SED.	Please see the response to comment 271-6.
271	8	Voluntary Agreements The Voluntary Agreements (VA) which account for significant portions of the actions being considered in the SED are not fully disclosed. From the document one can ascertain that the VAs involve the development of projects that provide flow	Please refer to Chapter 9, Proposed Voluntary Agreements, Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for the revised description of the VA Pathway. For groundwater analysis, please refer to Sections 9.7.12.2 and 13.7.12.2, Groundwater, for an updated analysis. Section 13.7.12.2, Groundwater, details the

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		augmentation, modified storage releases and non-flow actions such as floodplain inundation. Understandably the SED lacks any specific actions to be taken under the VAs because the VAs are still being negotiated and formulated. It remains to be seen if they will be a viable alternative to "generate hundreds of thousands of acre- feet of water dedicated for environmental purposes that will be adaptively managed to benefit native fish populations and habitats and protected for Delta outflow." (Page 4 of Appendix G1.) The SEO does mention throughout Appendix G1 that a source of the additional flows will be fallowing and groundwater substitution. As acknowledged on page 1 of Section 7.12.2: "Groundwater and surface waterbodies are connected physically in the hydrologic cycle; changes in either surface water or groundwater quantity affect the other." The description of VAs offered in the SEO provides no quantification or conditions upon which groundwater substitutions will be effectuated, nor is there any attempt to analyze impacts to surface flow, and, thus, other legal users of water or Public Trust resources, including groundwater dependent ecosystems.	changes in groundwater levels that could occur from responses to decreased Sacramento/Delta surface water supply.
271	9	The SED analysis fails to include an analysis of the cumulative impacts of past, current, and probable future projects. "(h)(l) When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (CEQA Guidelines, § 15064, subd. (h)(l).)	Section 7.23, Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes, of the 2023 draft Staff Report addresses cumulative impacts of past, present, and reasonably foreseeable probable future projects. Please refer to Common Response 7.23, Cumulative Impact Analysis, for responses to comments related to the 2023 draft Staff Report's consideration and analysis of cumulative impacts associated with other past, present, and reasonably foreseeable probable future projects.
271	10	Sites Reservoir The Sites Reservoir project is mentioned and briefly described in 7.23.1 of the SED; however, beyond the mere mention and description, there is no substantive analysis or description of any	Sites Reservoir is discussed in Section 7.23.1.2, Cumulative Project List, of the 2023 draft Staff Report and potentially significant cumulative impacts are identified in the cumulative impact analysis that follows. Please refer to Common Response 7.23, Cumulative Impact Analysis, for responses to comments

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		specific analysis that was performed in conjunction with this SED. A final EIR/EIS was released for the Sites Reservoir Project in November of 2023.	related to the consideration and analysis of cumulative impacts associated with Sites Reservoir. In addition, impacts of new or modified reservoirs and points of diversions are discussed and evaluated as a reasonably foreseeable response action to reduced Sacramento/Delta water supply in Section 7.22, New or Modified Facilities.
271	11	Delta Conveyance Project The Delta Conveyance Project is mentioned and briefly described in 7.23.1 of the SED; however, beyond the mere mention and description, there is no substantive analysis or description of any specific analysis that was performed in conjunction with this SED. A Draft EIR for the Delta Conveyance Project was released on July 27, 2022. DWR certified the EIR on December 21, 2023.	The Delta Conveyance Project is discussed in Section 7.23.1.2, Cumulative Project List, of the 2023 draft Staff Report and potentially significant cumulative impacts are identified in the cumulative impact analysis that follows. Please refer to Common Response 7.23, Cumulative Impact Analysis, for responses to comments related to the consideration and analysis of cumulative impacts associated with the Delta Conveyance Project.
271	12	San Luis Reservoir The operations of San Luis Reservoir and any proposed changes to the operation of the reservoir were also not included in the cumulative impacts analysis in the SED. Any implementation plan must include San Luis Reservoir as a source of flows to meet Delta water quality standards. Releases from San Luis Reservoir can be made to meet and maintain Delta water quality standards through direct releases or through "recirculation." The Delta-Mendota Canal Recirculation Feasibility Study demonstrated the viability of the latter. [Footnote 2: https://www.usbr.gov/mp/dmcrecirc/docs/final/index.html]. Releases from San Luis Reservoir can supplement the projects' upstream storage releases to ensure the projects fulfill their duties to maintain Delta water quality under the Delta Protection Act of 1959 (Wat. Code, § 12200 et seq.) and pursuant to D-1641 and any potential voluntary agreements.	Section 7.23, Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes, of the 2023 draft Staff Report addresses cumulative impacts of past, present, and reasonably foreseeable probable future projects, including new and modified reservoirs. Please refer to Common Response 7.23, Cumulative Impact Analysis, for responses to comments related to the consideration and analysis of cumulative impacts associated with other past, present, and reasonably foreseeable probable future projects. Table 7.23-1 in Section 7.23.1.2, Cumulative Project List, has been revised to include the proposed B.F. Sisk Dam Raise and Reservoir Expansion Project. Section 7.24.2.1, Changes in Hydrology, of the 2023 draft Staff Report and Section 13.7.21.1, Cumulative Impact Analysis, of the 2025 partially recirculated draft Staff Report also discuss the B.F. Sisk Dam Raise and Reservoir Expansion Project. Staff Report cumulative impact determinations were not changed as a result of this revision. Existing San Luis Reservoir operations are represented in SacWAM and therefore reflected in all modeling scenarios including baseline and alternatives evaluated in the Staff Report. While not entirely clear from the comment, it appears that the Delta water quality requirements referred to in this comment address the southern Delta salinity requirements which were part of the 2018 Lower San Joaquin River/Southern Delta Bay-

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			Delta Plan Update and are outside the scope of the Sacramento/Delta Plan update.
272	1	My drinking water comes from the Mokelumne River. It's always on my mind that every drop of water I use is one drop less for the river and the fish. So low-water plantings, low-flow toilets, catching warm-up water from the shower, conserving and reusing water wherever possible are a way of life. I support the work of the staff in formulating the proposed Plan amendments contained in the Sacramento/Delta Draft Staff Report. But in this process serious science-based analysis continues to be sidetracked by politics, including by Governor Newsom. The "Voluntary Agreements" offer difficult-to-enforce promises, questionable results. VAs are a delaying tactic and a distraction from the clear unequivocal flow objectives that are needed to protect the imperiled Sacramento/Bay-Delta ecosystem and endangered fish species. We don't have eight years to tinker around with alternative measures. The Voluntary Agreement alternatives should be dropped. The ecosystems need guaranteed water and, especially, cold water.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
272	2	It's sad to hear that the Mokelumne was the shining star in salmon recovery this year, with just about 11,000 fish returning to spawn. Rivers in the Sacramento watershed used to see millions of fish coming back! The fishing season was canceled this year and may be again next year. Rearing habitat for young fish requires freshwater flows to create the necessary flooding. Problematic toxic algae blooms in the Delta are increasing. The salinity and temperature issues responsible for these problems can't be solved with habitat improvements.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
272	3	I would strongly support 75% of unimpaired flows, which the science calls for, but 55% appears to be the minimum necessary to sustain riparian and Bay-Delta ecosystems and the many different uses that I most value: fisheries, Tribal uses, recreational uses, and ecosystem health. Our Public Trust resources must be explicitly protected for all of California's people and life forms in this Sacramento/Delta WQCP Update.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. Also see Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses and public trust.

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273	1	As the largest contractor for supplies from the State Water Project (SWP), Metropolitan has a vested interest in a sustainable and resilient Bay-Delta. Over the last few decades, Metropolitan has made investments and fostered partnerships in the Delta to advance critical science and restoration efforts that address the multiple stressors impacting the Delta environment. As such, Metropolitan has been an active and interested participant in this Bay-Delta Plan review and update over many years, providing technical input and information at every opportunity throughout the process. Metropolitan supported Governor Newsom and his administration during the development of the Healthy Rivers and Landscapes Agreements (previously referred to as Voluntary Agreements) (herein "Agreements"), which included the signing of the March 29, 2022, Memorandum of Understanding Advancing a Term Sheet for the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan and Other Related Actions (MOU and Term Sheet). More recently, in May 2022, Metropolitan's Board of Directors expressed support for developing the Agreements as an alternative in the Bay-Delta Plan update.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
273	2	The Agreements are an environmentally superior alternative, providing environmental benefits that include 500,000 to 700,000 acre-feet of flow over baseline in dry, below normal, and above normal water years, providing the best protection of all beneficial uses of water and without any significant adverse environmental impacts. The Agreements provide for an inclusive governance program, a modern, shared science program, and an integration of flow and non-flow measures, all of which would be supported by reliable funding and result in a robust Bay-Delta Plan that support fish viability and doubling of salmon populations. For these reasons, the Water Board should adopt the Healthy Rivers and Landscapes Alternative.	Please see Common Response 7.24, Alternatives Analysis, for information on the environmentally superior alternative.
273	3	Metropolitan is providing technical and legal comments in Attachment A [ATT 1] to this letter. These comments are offered in recognition of the Water Board staff's hard work and to support the Water Board's decision-making function. Metropolitan's comments focus on the effect that the loss of 446,000 acre-feet of water on average, and 667,000 acre-feet of water in dry years, would have in Metropolitan's service area if	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		the proposed Plan amendment was adopted, as well as similar effects if any of the Unimpaired Hydrograph Alternatives (Alternative 2-5), or if any of the modulars were adopted. As we explain in detail in Attachment A, SWP supplies are vital to our service area because: • SWP-dependent areas in Metropolitan’s service area provide water to 6.9 million people who have limited access to alternative supplies. • Metropolitan’s reservoirs are only replenished with SWP supplies because the Delta is free from quagga mussels. Colorado River supplies have quagga mussels and state law prohibits us from storing water from sources with quagga mussels. • Metropolitan’s groundwater recharge projects and recycled water projects in its service area rely heavily on SWP supplies because only SWP supplies satisfy the Water Board salinity standards.	
273	4	Metropolitan and its members have already spent over a billion dollars on water conservation, local water recycling, and local groundwater recovery, resulting in a savings of nearly 7.9 million-acre- feet of water. SWP supplies are central to Metropolitan’s water supply portfolio and its ability to pursue local projects. Since the Draft Staff Report does not recognize the importance of SWP supplies, the Draft Staff Report underestimates the water supply impact of the proposed Plan amendment and all Unimpaired Hydrograph Alternatives.	Commenter incorrectly asserts that the 2023 draft Staff Report does not fully recognize the importance of the State Water Project (SWP) supplies and therefore underestimates water supply impacts. State Water Board staff developed SacWAM to assess the potential effects of revisions to instream flow and other requirements in the Bay-Delta watershed. The model fully incorporates supplies from and operations of the SWP. The SWP is described in detail throughout Chapter 2, Hydrology and Water Supply (see Section 2.8.7, Southern California, with respect to MWD); Chapter 6, Changes in Hydrology and Water Supply (see Section 6.6.2.7, Southern California, with respect to the Southern California region); and throughout Chapter 7, Environmental Analysis. SacWAM is currently one of the most advanced representations of the Sacramento watershed; the model includes 69 reservoirs, 131 demand nodes, and complex operations of the SWP and CVP. SacWAM development incorporated updates to upper watershed hydrology and operations, and CVP and SWP operations based on updates related to development of the CalSim 3 model by

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			DWR, Reclamation, and their consultants in 2019. Since 2019, additional SacWAM updates have occurred to reflect changes to regulations that affect reservoir operations, streamflow requirements, and Delta operations, and refining model logic to support simulation of the proposed Voluntary Agreements. SacWAM results are intended to be used in a comparative analysis, which allows for assessing the changes in CVP/SWP (referred to collectively as the Projects) and local system operations and resulting incremental effects between two scenarios.
273	5	As Metropolitan's comments explain, contrary to the Draft Staff Report's assumptions regarding mitigation, Metropolitan cannot easily find alternative sources of supply. The Draft Staff Report should not assume that the region Metropolitan serves can absorb the economic impacts associated with the proposed Plan amendment and the other Unimpaired Hydrograph Alternatives. In fact, the potential economic impacts to Metropolitan's service area would be greater than estimated, as the Draft Staff Report under-estimates the cost of local projects. The Draft Staff Report must acknowledge that the Water Board has responsibility to mitigate significant impacts. If the Water Board were to move forward with the proposed Plan amendment or any of the Unimpaired Hydrograph Alternatives, it would need to adopt mitigation, such as providing funding for the development of new local supplies.	The environmental analyses presented in Chapter 7, Environmental Analysis, and Chapter 9, Proposed Voluntary Agreements, of the 2023 draft Staff Report identify mitigation measures to avoid or reduce potentially significant adverse environmental impacts. Some mitigation activities are within the State Water Board's jurisdiction. However, other mitigation measures are largely within the jurisdiction and control of other agencies or depend on how water users respond to the project. Accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied fully to mitigate potentially significant impacts. Therefore, unless and until the mitigation is fully implemented, the impacts remain potentially significant. Please see Common Response 7.1, General CEQA and Approach to the Analysis, for additional discussion related to mitigation measures. The analysis of potential municipal water supply economic effects presented in the 2023 draft Staff Report is based on the best available information, including information from UWMPs. As provided in Metropolitan's UWMP, Metropolitan Water District has access to several water supply sources and continues to plan for alternate sources of supply. The Staff Report provides information about Metropolitan's water supply portfolio in several sections. For example, Section 7.20, Utilities and Service Systems (see p. 7.20-16 and pp. 7.20-43 to 7.20-44 in the 2023 draft Staff Report), discusses Metropolitan's water supply sources and identifies that Metropolitan has a large portfolio of reserve supplies and storage. This includes multiple agreements with other water providers for exchanges or purchases of water.

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			Additionally, the cost to Metropolitan of acquiring additional replacement water, should it choose to do so, is incorporated into the analysis of municipal water supply economic effects presented in Section 8.5, Municipal Water Supply Economic Effects, of the 2023 draft Staff Report (see pp. 8-100 to 8-101). In estimating the cost of local projects, the Staff Report's analysis considered water supply costs from the literature, including one (Porse et al. 2018) from Metropolitan's Los Angeles service area. The analysis of municipal water supply economic effects is based on the best available information, and Appendix D, Supplemental Municipal Supply Analysis Information, of the 2023 draft Staff Report incorporates these costs appropriately. While the State Water Board is not required to provide funding for the development of new local supplies, Section 8.5.10, Potential Sources of Funding for Municipal Water Conservation, in the 2023 draft Staff Report discusses that a variety of programs are available to provide funding for water conservation efforts in California. Please also refer to Common Response 8.1, Economic Analysis and Other Considerations, for further discussion of potential funding sources for municipal water conservation and alternative water supplies. Also see Common Response 8.1 for discussion on water rates.
273	6	[ATT 1:] Attachment 1 Technical and Legal Comments The public release of the Draft Staff Report in Support of Potential Sacramento/Delta Updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Draft Staff Report) is an important milestone in the process to update the Water Quality Control Plan (Bay-Delta Plan). The Metropolitan Water District of Southern California (Metropolitan) [Footnote 1: Metropolitan operates as a voluntary cooperative of 26 member agencies, which also are public agencies themselves. Its members are 12 special districts and 14 municipalities, all of which provide water at wholesale to	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		their own member agencies and/or retail customers for municipal, domestic, agricultural, and industrial use. Metropolitan's member agencies, or their own member agencies, in turn, serve approximately 19 million people- almost half of California's population-throughout the southern California region in the counties of Ventura, Los Angeles, Riverside, San Bernardino, Orange, and San Diego.] appreciates this opportunity to comment on the Draft Staff Report.	
273	7	[ATT 1:] The Healthy Rivers and Landscapes Agreements are an Environmentally Superior Alternative. The Draft Staff Report concludes, at page 7.24-53, that the Agreements "could be viewed as the environmentally superior alternative...." Indeed, the analyses in the Draft Staff Report support only that conclusion. The alternative that presents the Agreements is environmentally superior, in the context of CEQA because, "in many instances, the VAs would have no impact or less-than-significant impacts where the proposed Plan amendments would have potentially significant impacts". (SED, p. 7.24-52.) The Draft Staff Report acknowledges that the benefits of the proposed Plan amendments and other unimpaired flow-based alternatives would be limited due to challenges in maintaining suitable water temperatures for cold water aquatic species and carryover storage for environmental and water supply purposes. (Id.) The Draft Staff Report also acknowledges the benefits of the Agreements, stating that although new outflows are lower as compared to some of the other alternatives, "The proposed VAs also include physical habitat restoration that is expected to contribute toward the goal of improving conditions for native fish and wildlife." (SED, p. 7.24-53.) The Water Board acknowledges the importance of parallel investments in flow and physical habitat restoration. (SED, p. 3-134.) Accordingly, Metropolitan urges the Water Board to find that the Agreements are the Environmental Superior Alternative, providing environmental benefits without environmental impacts, while also providing the best protection of all beneficial uses of water.	Please see Common Response 7.24, Alternatives Analysis, for information on the environmentally superior alternative and Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses.
273	8	[ATT 1:] The Healthy Rivers and Landscapes Agreements resolve important implementation issues.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		The Agreements are sufficiently detailed and fully explain implementation, addressing concerns about the constraints the Agreements may have of the ability of the State Water Resources Control Board ("State Water Board") to implement the Bay-Delta Plan if the Agreements fail to produce the expected benefits. That concern was raised many years ago in the early stages of development of the Agreements. And, that concern has been addressed. Incorporated into the proposal are provisions that would provide for a thoughtful, structured process to ensure reasonable protection of beneficial uses, initiated with sufficient time to allow the State Water Board to act. The provisions would: 1. Require the State Water Board to initiate a review process two years prior to the Agreements possibly expiring. (March 29, 2022, Term Sheet for Voluntary Agreements, p. 8.) 2. Establish explicit criteria the State Water Board would apply when conducting that review. (March 29, 2022, Term Sheet for Voluntary Agreements, p. 10.) 3. Require the State Water Board to proceed through its process in a transparent and scientifically sound manner. (March 29, 2022, Term Sheet for Voluntary Agreements, p. 8 (discussing a notice and public workshop), p. 9 (requiring consideration of all comments and issuance of a draft proposal), p. 10 (requiring hearings and independent science review).)	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
273	9	[ATT 1:] The proposal addresses another concern; the potential for the Agreements to not cover all of those who should be responsible for implementing the Bay-Delta Plan. The Agreements recognize that, if the State Water Board accepts the Agreements, it will include in the Bay-Delta Plan's program of implementation a parallel regulatory pathway for implementation. As explained in the March 29, 2022, Term Sheet for Voluntary Agreements: This pathway will apply to tributaries, or persons or entities, not covered by [an Agreement]. In this pathway, the State Water Board will use its legal authorities and public processes to establish conditions to require flows and other measures by persons or entities not covered by [an Agreement] to provide	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		reasonable protection of beneficial uses associated with the Narrative Salmon Objective and Narrative Viability Objective. (March 29, 2022, Term Sheet for Voluntary Agreements, p. 3). Through years of collaborative development, the Agreements have reached a point where they are immediately implementable and enforceable. The Agreements offer the State Water Board an approach for the Bay-Delta Plan that would be transformative for the health of the Bay-Delta estuary and for water management in California.	
273	10	[ATT 1:] Unimpaired Hydrograph Alternatives (Alternatives 2-5) Would Have Significant and Unmitigated Impacts on Metropolitan. Our comments focus on Alternatives 2-5 (Unimpaired Hydrograph Alternatives) as those are the only alternatives that were modeled and described, albeit not fully. As explained in comments by others, including the State Water Contractors, it should be acknowledged that additional environmental review would be required before any of the Unimpaired Hydrograph Alternatives or any of the modulars, as presented, could be lawfully considered by the Water Board. This is different than the Healthy Rivers and Landscapes Agreements, which could be immediately implemented without further environmental review by the Water Board.	Alternatives 2 through 5 were described in Section 7.2, Description of Alternatives, and were analyzed in Section 7.24, Alternatives Analysis of the Staff Report. Alternatives 6 and 6a were described and analyzed in Chapter 9, Proposed Voluntary Agreements. Please see Common Response 7.24, Alternatives Analysis, for more information on the description and analysis of alternatives.
273	11	[ATT 1:] The Draft Staff Report does not fully disclose the impact that the reduction in SWP water supplies would have in Metropolitan's service area. As modeled in the Draft Staff Report, southern California municipal supplies, which is predominantly Metropolitan's SWP supplies,[Footnote 2: Metropolitan has a long-term contract with the Department of Water Resources that gives Metropolitan participation rights in the SWP, meaning Metropolitan has the right to use the SWP conveyance system and to a contracted water amount pursuant to an annual allocation based on availability. Metropolitan's SWP allocation not only varies depending on water conditions in the Sierra Nevada range and Delta watershed, but also based on environmental conditions in the Sacramento-San Joaquin River Delta, which can restrict SWP	The draft Staff Report adequately discloses and analyzes water supply impacts and this comment is consistent with the environmental analysis. Section 6.4.9, Sacramento/Delta Supply to Southern California of Chapter 6, Changes in Hydrology and Water Supply, describes the changes to water supply to Southern California. Note that model results are presented as worst case scenarios that do not utilize flexibility in the Plan for adaptive implementation and local cooperative solutions. Provisions for adaptive implementation of the numeric inflow requirements are provided to optimize flows to benefit native fish and wildlife while also minimizing water supply impacts, and for the numeric inflow requirements to be implemented in a coordinated fashion with the cold water habitat and inflow-based Delta outflow requirements. The State Water Board also plans to develop appropriate provisions to address human health and safety

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		diversions from the south Delta, thus reducing Metropolitan's water supplies.] would be reduced by 446,000 acre-feet a year on average and in dry years by 667,000 acre-feet under the Water Board's Staff's proposed Plan alternative. (Draft Staff Report, p. 7.20-42, Table 7.20-21, 55% Unimpaired Flow Alternative.) This reduction in supply, as well as the reductions associated with the other alternatives, except for the Agreements, would have significant impacts on Metropolitan's service area.	needs and other possible reasons for short-term and long-term exceptions to curtailments to allow continued diversions for minimum human health and safe water supplies where alternate supplies are not available. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments.
273	12	[ATT 1:] Impacts to the SWP-Dependent Areas There are areas of Metropolitan's service area where the only source of Metropolitan supply is from the SWP.[Footnote 3: Six impacted agencies include Calleguas Municipal Water District, Inland empire Utilities Agency, Las Virgenes Municipal Water District, the City of Los Angeles, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District (SWP-dependent agencies).] There are six SWP-dependent agencies- with a combined population of nearly 6.9 million people- that have limited connection to Metropolitan's existing infrastructure, storage, and supplies and therefore rely heavily on the SWP. Metropolitan and the SWP-dependent areas took significant steps to continue to provide SWP supplies to these areas during the recent droughts, taking actions that included expanding conveyance access and mandatory water supply cuts to customers. There is limited ability to take additional extraordinary steps to address the substantial shortages that would result from adoption of the Unimpaired Hydrograph Alternatives.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
273	13	[ATT 1:] Impacts to stored water supplies Diamond Valley Lake, Metropolitan's largest surface water reservoir and source of dry-year supply and emergency water supplies, is only replenished with SWP supplies. This is because in 2007 the invasive Quagga mussel was discovered in the Colorado river, Metropolitan's other major source of imported water supply. Quagga muscles are a significant management concern for drinking water suppliers because they damage equipment and clog water intake pipes and screens. Further, California Fish and Game Code section 2301(a) prohibits	SacWAM does not model storage reservoirs operated by Metropolitan Water District of Southern California such as Castaic, Perris, Skinner, and Diamond Valley as evaluation of impacts to such facilities are outside the scope of the Staff Report.

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		knowingly infesting a body of water with quagga mussels. Therefore, the only imported water supplies that are currently used to fill Metropolitan's reservoirs are from the SWP.	
273	14	[ATT 1:] The Draft Staff Report does not fully disclose the impact to Metropolitan's groundwater supplies. The Draft Staff Report states that the anticipated impact to Metropolitan's groundwater storage and recovery projects resulting from lost SWP supplies would be mitigated through use of surplus surface supplies, increased use of recycled water, sustainable water transfers and water conservation. (Draft Staff Report, p. 7.12.2-50.) This proposed mitigation is flawed, and the discussion rather circular, as supplies that are no longer available as a result of the adoption of the proposed action are to be used to mitigate the proposed action. SWP supplies, recycled water, and stormwater are the major sources of active groundwater recharge in Metropolitan's service area. Colorado River supplies are often too saline and present a risk of Quagga mussel infestation and consequently cannot be used as a source for groundwater recharge in most basins. In our region, salinity requirements for water that can be used for groundwater recharge are defined by Regional Water Quality Control Board Groundwater Basin Plans [Footnote 4: See e.g., https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/; https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/; https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/] and Salt and Nutrient Management Plans [Footnote 5: See e.g., https://www.waterboards.ca.gov/losangeles/water_issues/programs/salt_and_nutrient_management/#completed]. Similarly, the production, distribution, and use of recycled water are limited by salinity standards which are set forth by the State Board's Uniform Statewide Recycling Criteria, Water Reclamation Requirements, and the National Pollutant Discharge	Due to the size, extent and complexity of Sacramento/Delta water supply uses, the Staff Report does not provide region-specific or individualized environmental impact analyses. In addition, the analysis for groundwater impacts is presented qualitatively and not quantitatively since any quantitative analysis would need to have an excessive number of speculative assumptions. Enhancing flows for fish and wildlife will be challenging, but Sustainable Groundwater Management Act (SGMA) compliance cannot occur at the expense of reasonably protecting surface water beneficial uses. In addition, local public agencies have been on notice since 2012 regarding the State Water Board's intention to update the Bay-Delta Plan to provide increased instream flows for the protection of fish and wildlife beneficial uses in the Sacramento River watershed and Delta. Such notification should have informed groundwater sustainability agency (GSA) groundwater planning efforts and management assumptions regarding the amount of surface water supplies, in excess of environmental needs, that may be available from State Water Project supplies and for SGMA implementation. The potential change in hydrology allows for developing a more efficient conjunctive use management and integrated planning of our state's high-demand water resource. Metropolitan Water District's 2020 Water Shortage Contingency Plan (WSCP) states that "Metropolitan has invested extensively in a diverse portfolio of supply sources and system resiliency to prepare for a wide range of possible challenging conditions" (Metropolitan Water District of Southern California 2021). In addressing discrepancies with demand and supply, Metropolitan states their "first response to any gap between core supplies and demand is to make optimal use of its supply augmentation options consisting of draws from flexible supply programs and storage reserves listed in Table A.4-6." Metropolitan's resiliency during water shortages is evident from Table A.4-6 of its WSCP and is also reflected in the Staff Report's Municipal Supply Analysis. Table D-7 of the Municipal Supply Analysis shows the expected surplus or shortage from Sacramento/Delta supplies

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		Elimination System. Our SWP supplies meet the water quality requirements for groundwater recharge and recycling, while other sources of supply do not, and therefore our SWP supplies are vital to our region. Metropolitan will not be able to implement the proposed mitigation because we need SWP supplies, otherwise we will not have water to recycle. We certainly will not have “surplus surface supplies” if we lose approximately half-million acre-feet of SWP supply, and we have already explained why it is unreasonable to simply assume that additional water supply could be made up with water transfers.	for urban water suppliers on the projected water demand and supply for a 5th Consecutive Dry Year in 2030 was estimated for southern California. Most of the water suppliers and districts listed in Table D-7 either meet anticipated demand in consecutive dry years or show a surplus. Most are member agencies for Metropolitan or are served by Metropolitan. While these estimates do not provide an absolute answer in determining whether an urban water supplier in southern California will thrive, they do provide some insight on the resiliency of urban water suppliers in southern California. In addition, although Metropolitan focuses exclusively on SWP supplies as water to recycle, it is worth noting that Metropolitan’s member agencies are located at or near the Pacific Ocean. Section 2.8.7, Southern California, recognizes that while seawater desalination currently meets a small portion of the region’s water demand, more projects are in the planning stages. Metropolitan itself is recognizing the potential for its member agencies to diversify their water portfolios with emerging desal technologies that could be less energy intensive and environmentally harmful and partnered with Las Virgenes Municipal Water District on one such pilot project (ENR 2026). As mentioned in Section 7.12.2, Groundwater, the mitigation measures for groundwater supplies are largely within the jurisdiction and control of other agencies and will depend on how water users respond to changes in hydrology. The mitigation measure of diversifying water portfolios includes the sustainable use of groundwater, water recycling, water transfers, and water conservation and efficiency upgrades. While water conservation does not generate new water, it can extend the utility of existing supplies and therefore is considered another source of supply. Water conservation measures, such as increased efficiency for municipal uses or conversion of irrigated landscapes to vegetation that requires less water, can reduce groundwater pumping. Desalination of accessible water (such as marine or saline groundwater) is another strategy that can provide an alternate source for water. The State Water Board cannot guarantee that mitigation measures always will be adopted or applied in a manner that fully mitigates the impact, therefore the impacts to groundwater as discussed in Section

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			7.12.2, Groundwater, remain potentially significant. For more discussion on the groundwater mitigation measures and how the Sacramento/Delta update to the Bay Delta plan aligns with implementation of Sustainable Groundwater Management Act, please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act. Please also see Common Response 6.3, Water Supply and Other Water Management Actions, for more discussion on water supply impacts and water transfer.
273	15	[ATT 1:] The Draft Staff Report does not fully disclose the impact to housing. Water supply impacts could result in impacts to housing and a displacement of people if existing and new water supplies are insufficient to comply with state affordable housing laws, including our Regional Housing Needs Allocation. The Draft Staff Report dismisses impacts to the regional housing supply, including to affordable housing, without any analysis, simply assuming that replacement water can be found because our region is already involved in the development of water supplies. This assumption is flawed, as we have explained above. We are developing water supplies to address current needs and a reduction of approximately half a million acre-feet only exacerbates the problem and increases the need.	Changes in water supply include reduced Sacramento/Delta water supply for municipal uses in export areas. Most municipalities, including MWD, have or are developing alternate water supplies to supplement reduced Sacramento/Delta supplies and ensure adequate water for their communities. Changes in water supply include replacement groundwater pumping, as well as use of other water management actions such as groundwater storage and recovery, water transfers, increased use of recycled water, and water conservation. The 2023 Staff Report acknowledges that in some locations, replacement supply may be difficult. A variety of factors may influence new development or population growth, including (1) economic conditions such as job growth within California and outside of California, income growth, changing demographics, mortgage interest rates, and available housing stock and developable land; and (2) factors affecting demand for housing, including location environmental attributes, affordability, proximity to job centers, adopted land use plans and growth management policies, and the availability of adequate infrastructure. While the 2023 draft Staff Report states that economic conditions are generally the primary factor, water supply is an important public service that supports urban development and affects the growth potential of a community. Lack of a reliable water supply could constrain future development. Conversely, improving reliability of water supplies serving an area could make that area more likely to develop in the future.

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			As discussed in Section 7.20, Utilities and Service Systems, some communities may be vulnerable, particularly in dry years, if they lack sufficient water supplies to meet demand. This would be true for municipal users that rely primarily on one water source that could be reduced and that do not have access or funding to develop or utilize alternate supplies. It's important to note that the program of implementation contains various flexibilities that can help minimize water supply impacts. Failure to consider the flexibilities provided can result in overstating the actual changes in supply that would result from plan implementation. In addition, the revised proposed Plan amendments include water supply adjustments for existing water right holders at the outset of plan implementation to reduce water supply impacts and allow more water to be stored in reservoirs. Plan provisions will allow the State Water Board to develop and implement qualified exceptions to curtailments associated with Bay-Delta Plan implementation for human health and safety needs. Finally, the revised proposed Plan amendments provide for a VA pathway for an eight-year term with the possibility of extension that reduces the required flow contributions. Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion on the factors to be considered in establishing water quality objectives, including the need for developing housing.
273	16	[ATT 1:] The Draft Staff Report assumes without substantial evidence that significant impacts to Metropolitan's service area can be mitigated. The Draft Staff Report's proposed mitigation improperly relies on the impacted regions to mitigate the effects of its action. Throughout the Draft Staff Report, the reported impacts are left up to the affected local party to mitigate with limited discussion of feasibility or possibility, while summarily rejecting any Water Board responsibility for mitigation saying that mitigation is beyond the Water Board's authority. For example, the Draft Staff Report calculates the cost to replace Southern California's reduced water supply at over half a billion dollars annually,	Section 7.20, Utilities and Service Systems, considers municipal supply, including whether and how communities that rely in whole or in part on Sacramento/Delta supply would be able to meet municipal demand using other water management actions in response to changes in supply. Section 7.20, Utilities and Service Systems, acknowledges that agencies that rely solely or almost solely on Sacramento/Delta water and have limited water supply portfolios, and agencies that already have demand that outpaces supply could experience impacts with reductions in the Sacramento/Delta supply. Section 7.20, Utilities and Service Systems, identifies mitigation measures that can avoid or reduce impacts on municipal

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		pointing to the region's strong economic output to absorb financial impacts. (Draft Staff Report, p. 8-101, Table 8.5-8, 55% Unimpaired Hydrograph Alternative.) The Draft Staff Report cannot simply reject all responsibility to mitigate and assume there will be no impacts. The Draft Staff Report must consider the severe water affordability challenges that would be imposed on individual ratepayers, having the most significant impact on southern California's many disadvantaged communities. At the same time, the Draft Staff Report's calculated cost to replace southern California's reduced water supply is flawed, significantly underestimating the true costs that would be paid by southern California's ratepayers, including disadvantaged communities. The under estimation is pervasive, but some examples include: • The Draft Staff Report's estimated cost for recycled water from a large-scale plant is \$1,600 - \$2,000 per acre-foot (AF) is unrealistically low. (Draft Staff Report, p. 8-95.) By comparison, Metropolitan's Pure Water Southern California project, if developed, is projected to cost \$8.1 billion in escalated dollars with an annual average production yield of 118,000 AF at full buildout (Phases 1 and 2) with an annual O&M cost for Phase 1 of \$228 million per year.[Footnote 6: November 2023 Pure Water Southern California Program Cost Update available at https://www.mwdh2o.com/media/jupblcl5/pwsrcrc-3b-presentation.pdf.] The 2023 estimated unit cost of water from Pure Water Southern California project is between \$2,820 - \$3,624 AF. The costs would even be higher without the significant state and federal funding that Metropolitan has received for this project. • The Draft Staff Report's upper and lower bound estimates related to the costs of water conservation activities in Metropolitan's service area are incorrect. Water conservation is not free. The Draft Staff Report's lower bound estimate "assumes no economic costs to the municipal provider" for water conservation. (Draft Staff Report, p. 8-95) Metropolitan has spent \$900 million dollars since 1990 [Footnote 7: https://www.mwdh2o.com/media/3vah4zvt/2023-annual-achievement-report-final-metropolitan-water-district.pdf] on conservation messaging, water fixture replacement, and turf	suppliers that could occur as a result of the proposed Plan amendments. Many identified potentially significant environmental impacts could be reduced to less-than-significant levels with mitigation incorporated; however, due to the large scope of the project and wide range of possible response actions, sufficient information is not available to conclude with certainty that the mitigation measures will reduce all impacts to less-than-significant levels in all circumstances. Some mitigation activities are within the State Water Board's jurisdiction. However, other mitigation measures are largely within the jurisdiction and control of other agencies or depend on how water users respond to the project. Accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied fully to mitigate potentially significant impacts. Therefore, unless and until the mitigation is fully implemented, the impacts remain potentially significant. The Staff Report uses a reasonable and conservative approach to evaluating the municipal water supply economic effects of the flow scenarios that is detailed in Section 8.5, Municipal Water Supply Economic Effects, and is summarized in Common Response 8.1, Economic Analysis and Other Considerations. Please refer to Common Response 8.1, Economic Analysis and Other Considerations, for information on replacement water supply costs, including costs for recycled water, used in the analysis of municipal water supply economic effects. The environmental and economic analyses presented in the Staff Report do not assume that municipal water suppliers will adopt any specific strategies in response to the Sacramento/Delta update to the Bay-Delta Plan. The Staff Report's analysis of municipal water supply economic effects provides both lower bound and upper bound costs estimates. The costs are estimated as a range representing the extent to which municipal providers may rely on demand management measures and use reserve supplies, if available, versus the cost of acquiring additional water supplies to fully replace the reduction in the Sacramento/Delta water supply. A water provider's actual cost most likely would fall between the lower and upper bound. The upper bound cost estimates represents a conservative estimate because the analysis assumes that demand management

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		removal, which is how Metropolitan has achieved significant water conservation in its service area over the last several decades. If the Draft Staff Report is going to estimate a “no cost” conservation option, it should also estimate the quantity of conservation that could be achieved with “no cost”, which will likely be minimal. • The Draft Staff Report’s mitigation for reduced water supplies relies heavily on water transfers, without acknowledging it is unlikely that those supplies would be available because the historically available transfer water would be consumed by the new regulation. Even assuming some transfer water would be available, the Draft Staff Report’s water cost estimate is unreasonably low. The Draft Staff Report estimates a \$750 per AF cost for southern California water transfers, which is unrealistic. (Draft Staff Report, p. 8-35) By comparison, at the end of 2022, south of Delta water transfers approached \$2,000 per AF.	measures (e.g., water conservation) would not be implemented to maximize the use of existing water supplies. As discussed in Section 6.6.1.2, Water Transfers, it is difficult to predict with certainty how reduced Sacramento/Delta surface water supplies will affect water transfers. With new instream flow and cold water habitat requirements, overall supplies of water from the Sacramento/Delta will be reduced. This may result in less water available for transfer. At the same time, it could incentivize transfers as the value of transfer water increases, leading to transfers from lower value temporary crops to higher value municipal uses and permanent crops. Forecasting future water prices is complex, requiring knowledge and information regarding supply alternatives, future demand and market conditions, and behavior of willing sellers and buyers in response to market conditions. There is no economic model available that estimates how the water transfer market will respond to long-term to the change in water supply. The analyses in Chapter 8, Economic Analysis and Other Considerations, assume that there could be greater demand pressure in the water transfer market such that future prices may be higher than recent historical trends. For the purposes of the municipal water supply economic effects analysis presented in Section 8.5, Municipal Water Supply Economic Effects, future transfer prices are assumed to be \$750 per AF for transfers to the Southern California region. These assumed water transfer prices used in the Staff Report were higher than historical averages for all water year types, which is an appropriate and conservative assumption for the analysis. The analysis provided in the Staff Report is appropriately detailed for the scope of the project. The information provided by the commenter does not necessitate changes to the municipal water supply economic analysis. Please see Common Response 6.3, Water Supply and Other Water Management Actions, for a discussion about other water management actions, and Common Response 8.1, Economic Analysis and Other Considerations, for additional discussion on the feasibility and costs of water transfers as an alternate supply source under the flow scenarios.

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			Also see Common Response 8.1, Economic Analysis and Other Considerations, for discussion on municipal water rates, and for discussion of potential sources of funding for municipal water conservation and alternative water supplies.
273	17	[ATT 1:] Our region could not absorb the economic impacts associated with efforts to replace the water that would be lost under the Unimpaired Hydrograph Alternatives. The water supply investments that could be lost are significant. The Draft Staff Report fails to acknowledge that Metropolitan and its members have already taken significant actions to support existing water supplies, investments that are jeopardized by the Unimpaired Hydrograph Alternatives. Metropolitan and its member agencies have been leaders in water conservation for decades. Metropolitan has invested \$1.6 billion in conservation, local water recycling, and local groundwater recovery, resulting in the cumulative savings of nearly 7.9 million-acre-feet [Footnote 8: https://www.mwdh2o.com/media/3vah4zvt/2023-annual-achievement-report-final-metropolitan-water-district.pdf]. Metropolitan also invested more than \$3.1 billion in increasing storage and conveyance capacity through construction of Diamond Valley Lake and the Inland Feeder to capture SWP supply when available for later use in dry years. In addition to Metropolitan's investments, its member agencies, local water agencies and communities in Metropolitan's service area have also made strategic and forward-looking investments in recycling, stormwater capture and reuse, surface water and groundwater storage, and seawater desalination.	Please see response to comment 273-16 regarding water replacement costs, supplies and feasibility of implementation. Reducing reliance on the Delta is state policy, along with an associated mandate for improving regional self-reliance (Wat. Code, § 85021). The Staff Report acknowledges that many water users have made significant investments to diversify their water supply portfolios. The Plan amendments could lead to further diversification beyond that which has occurred due to existing or potential factors impacting water availability and use. In response to reductions in surface water supplies attributable to the proposed Plan amendments, water users may further expand and modify their water portfolios by implementing groundwater storage and recovery projects, water transfers, water recycling, or water conservation measures. The other water management actions described in Section 6.6, Other Water Management Actions, are consistent with many of the actions described in the Water Resilience Portfolio developed by state agencies in response to Governor Newsom's Executive Order N-10-19. The Water Resilience Portfolio identifies over 100 recommended actions to maintain and diversify California's water supplies, protect and enhance natural ecosystems, build connections, and be prepared. The Plan amendments were developed to improve flow and water quality conditions over a large geographic area, and particularly for fish and wildlife beneficial uses in the Sacramento River watershed, Delta eastside tributaries, and Delta regions (Sacramento/Delta). The State Water Board recognizes that providing instream flows for the environment necessarily results in less water available for other uses. Providing balanced protection of all beneficial uses of water is incredibly important and requires careful consideration, and the State Water Board is sensitive to supply impacts. Please see Common Response 6.3, Water Supply and Other Water

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			Management Actions, for responses to comments and discussion of other water management actions.
273	18	[ATT 1:] The ways in which these investments could be impacted is, for example, that we would not be able to use our reservoirs fully, since the principal export supply that can be used to fill them is from the SWP and it would be greatly reduced. We are investing heavily in the Pure Water Southern California project, but SWP supplies will continue to be an important source of recycled water. We are investing in groundwater recharge, but we need SWP supplies to recharge our groundwater. We have already invested heavily in water conservation. We cannot merely conserve our way out. The Draft Staff Report must acknowledge that the Water Board has a responsibility to mitigate significant impacts. If the Water Board were to move forward with any of the Unimpaired Hydrograph Alternatives, it would need to adopt mitigation, such as seeking funding for the development of new local supplies.	Please see the response to comment 273-11. Please also see Common Response 8.1, Economic Analysis and Other Considerations, regarding funding sources for municipalities to develop alternative water supply projects and Common Response 7.1, General CEQA and Approach to the Analysis, regarding the feasibility of the mitigation measures and the role of the State Water Resources Control Board.
274	1	NSJWCD is directly interested in the subject of the staff report because the recommended actions will impact both the Mokelumne River fishery and NSJWCD's ability to divert surface water for groundwater sustainability in the overdrafted Eastern San Joaquin subbasin. NSJWCD has a right to divert surface water from the Mokelumne River for irrigation and groundwater recharge (Permit 10477). NSJWCD coordinates its operation on the river with other Mokelumne stakeholders including Woodbridge Irrigation District and East Bay Municipal Utility District. Permit 10477 allows NSJWCD to directly divert, divert to underground storage or seasonally store water in Camanche Reservoir between December 1 and July 1. Permit 10477 is relatively small and junior in priority. The maximum use under the right is 20,000 afa and water is generally only available under the right in normal to wet years. NSJWCD relies on the ability to divert water over the six-month diversion period to utilize the right using its diversion facilities, which have limited capacities. Notably, water reliability under Permit 10477 declined substantially after Decision 1641 and implementation of the Joint Settlement Agreement (JSA) on the Mokelumne River,	The draft Staff Report acknowledges that the proposed Plan amendments would increase streamflows in some areas, which could reduce Sacramento-Delta supplies to other areas including reduced opportunities for managed groundwater recharge. As explained in Section 6.1, Introduction, in many areas, Sacramento/Delta supplies have been used to alleviate already declining groundwater levels. Groundwater storage and recovery can be an effective approach in long-term water supply planning, so long as it does not impair surface water beneficial uses. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		which required the dedication of significantly more flow to fish. The proposed unimpaired flow alternative in the Staff Report would further diminish the reliability of Permit 10477 as well as threaten the carryover storage in Camanche and the cold water pool. With the unimpaired flow alternative, water would be available to NSJWCD in more limited windows of time in only the wettest of years. NSJWCD has worked with other Mokelumne stakeholders on a Voluntary Agreement (VA) alternative that will improve fishery and Delta outflow conditions, while protecting the other beneficial uses of the water supply (including the local economy, irrigated agriculture and the Mokelumne River fishery). NSJWCD's overarching comment on the Staff Report is that it does not correctly analyze the benefits or impacts of the proposed unimpaired flow alternative or the voluntary agreement alternative. As a result, it masks the adverse water supply impacts of the unimpaired flow alternative and creates a misleading comparative analysis of the unimpaired flows alternative and the voluntary agreement alternative for the Mokelumne.	
274	2	If the unimpaired flow alternative is selected, less surface water will be available to NSJWCD under Permit 10477, which in turn, means that NSJWCD will have less water to deliver for inlieu or direct groundwater recharge. This will make SGMA compliance harder for NSJWCD. Ironically, the Staff Report identifies implementation of SGMA as a mitigation measure for this impact (page 1-37, MM-GW-b). This is illogical. Using surface water to reduce groundwater dependence is a means of achieving SGMA implementation. If the identified significant impact is that there will be less surface water available so groundwater pumping will increase and groundwater recharge will decrease, "implementing SGMA" is not a real mitigation measure. Rather, to achieve SGMA's sustainability goals with less surface water available for recharge, GSAs such as NSJWCD will have to implement pumping restrictions, leading to fallowing of productive land. The Staff Report does not identify or analyze this impact.	Mitigating the impacts from depletion of groundwater supplies are discussed in Ch. 7.12.2 Groundwater: 7.12.2.4 Mitigation Measures. While implementation of SGMA is identified as a mitigation measure, SGMA requires measurable actions and planning to achieve groundwater sustainability for each basin. A Groundwater Sustainability Plan (GSP) or equivalent groundwater management document must include multiple actions and specific details to reach sustainable groundwater levels by 2040. Groundwater Sustainability Agencies (GSAs) have the authority to manage and set sustainability goals to meet these requirements. The proposed flow objectives do not encourage or require increased groundwater pumping; however, the Staff Report acknowledges that the historical response to reductions in Sacramento/Delta water supply availability is for water users with access to groundwater to rely more heavily on groundwater which, in turn, may cause potentially significant impacts to groundwater or, in the alternative, if those users cannot or do not

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			rely upon additional groundwater, that there may be potentially significant impacts to agriculture, as discussed in Section 7.12.2, Groundwater, and Section 7.4, Agriculture and Forest Resources. Possible groundwater impact mitigation measures (MM-GW-b 1 through 7) are outlined in Section 7.12.2.4 and Section 7.4.4, each titled Mitigation Measures. While the State Water Board can ensure implementation of measures within its authority, other mitigation actions largely fall under the jurisdiction of other agencies or depend on water user responses to changes in hydrology or supply. Accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied to fully mitigate potential agricultural impacts. Until mitigation is fully implemented, these impacts remain potentially significant. SGMA provides a framework—or “toolbox”—of authorities for GSAs to sustainably manage groundwater basins, including the ability to limit groundwater extractions, measure extraction volumes, acquire water rights, construct facilities, and import surface water (Wat. Code §§ 10726.2, 10726.4). Limiting groundwater extractions is one tool, but SGMA does not mandate the use of any specific tool or fee structure. Instead, SGMA requires GSAs to manage groundwater sustainably for long-term reliability and multiple benefits through the development and implementation of GSPs (Wat. Code § 113). The Staff Report also recognizes that implementation of SGMA could reduce available water supplies, which would be a cumulative impact. Please see Section 7.23.1.2 Cumulative Project List of the 2023 draft Staff Report for more discussion on the Sustainable Groundwater Management Act (SGMA). For impacts on agriculture as a result of reduced surface water supplies, please see Section 7.4 Agriculture and Forest Resources, and Section 7.4.2.5 Water Supply and Irrigation. Please also see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for more information regarding groundwater management.
274	3	MM-GW-b (page 1-37) also lists water transfers and increased groundwater recharge as ways to mitigate for increased groundwater pumping and reduced groundwater recharge	The Staff Report acknowledges that adjusting to changes in water supply will be challenging; However, updating and implementing the Bay-Delta Plan for the reasonable protection

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		caused by the proposed alternative. These are not realistic or feasible alternatives. NSJWCD does not have the ability to physically access surface water from a different river by transfer, and under the unimpaired flow alternative, the senior water rights on the river (EBMUD) would have significant supply reductions. There is not another available water source for transfers. Further, while it is theoretically possible to divert more “flood flows” from the Mokelumne River in the very wettest years for recharge, to offset the reductions in all other years, it is not economically feasible to do so given the significant flow rate of such diversions and the fact that the places that can take that water are limited in the wettest months of the wettest of years. By way example, diverting 40 cfs for 180 days a year for 7 out of 10 years provides 24,948 af of surface water for groundwater recharge. To accomplish that same amount of recharge in 30 days in 2 out of 10 years (the very wettest years) would require a diversion rate of 210 cfs! NSJWCD’s pump stations have diversion capacities in the 40 cfs range. NSJWCD would need to construct a five-fold increase in diversion capacity and find locations that can take 210 cfs of water in very short time frames. This is not a feasible mitigation measure. The Staff Report needs to be honest about the impacts of the unimpaired flow alternative – there will be serious adverse impacts to groundwater basins, including the Eastern San Joaquin subbasin, that are unlikely to be mitigated without substantial economic harm.	of native fish and wildlife is necessary due to declines of several native aquatic species since the Bay-Delta Plan was last comprehensively updated (2023 draft Staff Report Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, pp. 5-3, 5-7 and 5-8). As mentioned in Section 7.12.2, Groundwater, the groundwater mitigation measures for groundwater impacts are largely within the jurisdiction and control of other public agencies or depend on how water users respond to changes in water supply. The State Water Board cannot guarantee that the mitigation measures always will be adopted or applied in a manner that fully mitigates the impact. Therefore, unless and until the mitigation is fully implemented, the impact remains potentially significant. The Groundwater Sustainability Plan (GSP) for the high-priority Eastern San Joaquin groundwater basin, prepared by the commenter, North San Joaquin Water Conservation District (NSJWCD) and the 13 other GSAs for the subbasin, should address adverse impacts to groundwater as part of the Sustainable Groundwater Management Act (SGMA) implementation. The GSP should have considered limitations in the local coordinated effort to reach sustainability, such as NSJWCD’s limit to divert no more than 40 cfs at any one pumping facility from December 1st- July 1st. Public agencies have been on notice since 2012 of the State Water Board’s intention to update the Bay-Delta Plan for the Sacramento/Delta. Such notifications should have informed groundwater sustainability agencies’ planning efforts and management assumptions regarding the amount of surface water supplies, in excess of environmental needs, that may be available during the development of the GSP and for GSP implementation. Please see Common Response 6.3, Water Supply and Other Water Management Actions, for more discussion on water supply impacts and water transfers. Please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for a discussion on the Sacramento/Delta Bay Delta Plan update overlap with the implementation of the Sustainable Groundwater Management Act (SGMA). Please also see Common Response 8.1, Economic Analysis and Other Considerations, for more discussion on the pricing and availability of water transfers

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			as well as regional economic effects from the Bay-Delta Plan update.
274	4	NSJWCD supports the Voluntary Agreement alternative because, when properly evaluated, it provides comparable (or arguably more) benefits to fish and wildlife beneficial uses, while avoiding significant adverse impacts to other beneficial uses, including groundwater resources in NSJWCD and the Mokelumne in stream fishery.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
274	5	Rather than repeating, NSJWCD incorporates the detailed comments of East Bay Municipal Utility District (EBMUD Comments, submitted January 18, 2024, hereinafter 'EBMUD Comments') on the following key points: The Staff Report does not correctly describe the Mokelumne Voluntary Agreement. See EBMUD Comments, section XII, pages 54-56.	Please refer to Comment Letter 311 to review responses to the comments from EBMUD.
274	6	Rather than repeating, NSJWCD incorporates the detailed comments of East Bay Municipal Utility District (EBMUD Comments, submitted January 18, 2024, hereinafter 'EBMUD Comments') on the following key points: The modeling used to assess the operational impacts of the alternatives in the Staff Report does not correctly represent the Mokelumne River and is not the best available science for analysis of operational alternatives for the Mokelumne. See EBMUD Comments, section XIII, pages 56 and Exhibit B.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding SacWAM's scope, scale and application. To the extent that this comment incorporates comments made by another commenter, please see the substantive responses to those comments.
274	7	Rather than repeating, NSJWCD incorporates the detailed comments of East Bay Municipal Utility District (EBMUD Comments, submitted January 18, 2024, hereinafter 'EBMUD Comments') on the following key points: The Staff Report's reliance on its prior Scientific Basis report is flawed. The Scientific Basis Report did not utilize the best available data regarding fishery and habitat conditions for the Mokelumne River. See EBMUD Comments, Exhibits C and D.	The 2017 Scientific Basis Report has undergone independent peer review. Please see Common Response 3.1, Fish Protection, for information on the scientific basis reports and the use of best available science.
274	8	Rather than repeating, NSJWCD incorporates the detailed comments of East Bay Municipal Utility District (EBMUD Comments, submitted January 18, 2024, hereinafter 'EBMUD Comments') on the following key points:	The reason for including carryover storage targets is to prevent the reductions in carryover storage that the commenter suggests will occur as a result of the proposed Plan amendments. The cold water habitat objective is part of the project, so depletion of

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		The Staff Report does not correctly assess the adverse impact on carryover storage and cold water pool for the Mokelumne. See EBMUD Comments, Exhibits A and D. This is one of NSJWCD's most significant concerns with the unimpaired flow alternative. EBMUD currently carefully manages storage in Pardee and Camanche to meet downstream prior rights, JSA required flows, temperature and Fall pulse flows for fish, and its own demands. As a result, the Mokelumne fishery is in good condition and meeting habitat and population goals. The unimpaired flow alternative will reduce carryover storage and adversely impact temperature, threatening the Mokelumne River fishery.	reservoir storage for water supply purposes at the expense of cold water habitat is not permitted. To the extent that this comment letter raises similar issues or the same issues raised by East Bay Municipal Utility District, please refer to letter 311 to review responses to that letter. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments. The proposed Plan amendments remain part of the project as the regulatory pathway; however, the regulatory pathway includes new water supply adjustments at the outset of Plan implementation that lower flow requirements under certain conditions to reduce water supply impacts and allow more water to be stored in reservoirs.
275	1	I'm a fourth generation Californian and a lifelong environmental steward. I am alarmed and deeply concerned about the Bay-Delta, and the state of its waterways. I have testified three times before the Water Board to speak out for what is at stake and to speak up for future generations. I have been following the Bay Delta Plan for years, and the science is clear-unimpaired higher flows are needed to prevent ecological collapse. This is not hyperbole, it is based on legitimate science and reflected in the painful to hear testimonies from the many scientists, fishermen, ranchers, Native Americans and others who work closely with the land of the Bay-Delta Watershed. I am writing to urge the Water Board to reject the Voluntary Agreements. The Voluntary Agreements are destined to fail to protect our fragile and ailing Bay-Delta ecosystem (toxic algae blooms are getting worse and 6 species of fish are listed as threatened or endangered.) The Voluntary Agreements are based on a minimalist approach-simply doing the bare minimum to prevent species from going extinct. The big picture, our primary goal should be to focus on ensuring that we can have a robust aquatic ecosystem that can survive the increasing climate extremes. A healthy ecosystem is one that is restoring its threatened populations versus just preventing them from going extinct.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project and Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses and public trust.

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		The Voluntary Agreements are a give-away of Public Trust water and public funding to water agencies that are legally obligated to keep fish populations in good condition, but have failed to do so. The Voluntary Agreements are so flawed that the few NGO's that were involved early on in the process dropped out. Not a single conservation, fishing, tribal or environmental justice group supports the Voluntary Agreements. I urge you to listen to your hearts and to reflect on the immense impact that your vote will have on future generations as you make this legacy vote. We are counting on you to do the right thing.	
276	1	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.	The Staff Report acknowledges the trade-off between instream flows and carryover storage in Section 3.14.3, Cold Water Storage, of the 2023 draft Staff Report. The impacts to hydropower and agriculture are evaluated in 2023 draft Staff Report Sections 7.8, Energy, and 7.4, Agriculture and Forest Resources, respectively.

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276	2	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) [Footnote 1: https://yubariver.org/projects/upper-rose-bar-enhancement-project/], Hammon Bar Project (5 acres, floodplain) [Footnote 2: https://yubariver.org/posts/hammon-bar-a-restoration-success-story/], the Long Bar Project (42 acres, floodplain) [Footnote 3: https://yubariver.org/projects/lower-long-bar-restoration-project/], and the Upper Long Bar Project (25 acres, floodplain) [Footnote 4: https://yubariver.org/projects/upper-long-bar-restoration-project/]. SYRCL is a partner on the Hallwood Restoration Project (157 acres) [Footnote 5: https://www.hallwoodproject.org/] 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	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		been included in three technical meetings related to the proposed Nature Like Fishway at Daguerre Point Dam. We play an active role in these 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.	
276	3	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) [Footnote 6: Staff Report, p. 1-19].	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. See also Common Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board's authorities and duties pursuant to the Porter-Cologne Water Quality Control Act, Clean Water Act, and the Public Trust Doctrine.

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		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 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" [Footnote 7: Staff Report, p. 5-7].	
276	4	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.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		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.	
276	5	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. 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	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		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.	
276	6	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) [Footnote 8: 2017 Scientific Basis Report 201710-bdphaseII-sciencereport.pdf (ca.gov)]. 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 2019 [Footnote 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] 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. [Footnote 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.] found that mean annual flow had the	Please see Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, and Chapter 4, Other Aquatic Ecosystem Stressors, of the Staff Report for a discussion of the benefits of flow and non-flow measures and Common Response 3.1, Fish Protection, regarding the use of the best available science.

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		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. [Footnote 11: Sturrock, Anna M., et al. "Unnatural selection of salmon life histories in a modified riverscape." <i>Global Change Biology</i> 26.3 (2020): 1235-1247. https://doi.org/10.1111/gcb.14896] found that lower flows delay juvenile outmigration timing and survival. The Board, in section 3.4.5.3 [Footnote 12: Staff Report, Section 3.4.5.3 pg 3-43], 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 an opportunity for population growth of those species. A 2021 by Cyril et al. [Footnote 13: Michel, Cyril J., et al. "Nonlinear survival of imperiled fish informs managed flows in a highly modified river." <i>Ecosphere</i> 12.5 (2021): e03498. https://doi.org/10.1002/ecs2.3498] 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	

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		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 study [Footnote 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] 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 populations [Footnote 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]. 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.	
276	7	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	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		during the critical January-June period, exacerbating the stress on native fish populations. Unfortunately, most of the current Delta outflow is unregulated and unprotected, further threatening the region's ecological balance and fishery resources. 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.” [Footnote 16: Staff Report, p. 9-199]. 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 [Exhibit 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.	
276	8	[Exhibit 1: Figure 7.24-1, SacWAM Modeled D-1641–Required Delta Outflow and Existing Average Unprotected Delta Outflow (January–June) by Water Year Type, from the 2023 Draft Staff Report]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
276	9	Delta Outflow Objective Should be more Than Maintenance 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	The existing salmon protection objective, which is not proposed for modification in this update, includes population growth for salmon since the objective is a doubling of natural production of Chinook salmon from the average production of 1967–1991. Please see Common Response 1.2, Water Quality Control

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		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” [Footnote 17: https://www.fws.gov/project/anadromous-fish-restoration-program-lodi-fwo]. 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.	Planning Process, for discussion on reasonable protection of fish and wildlife.
276	10	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.	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the State Water Board’s authority as it relates to the consideration and balancing of beneficial use and the reasonable protection of fish and wildlife. As described in Section 7.1.3, Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan, of the Staff Report, the underlying fundamental purpose of the project is for the reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta. Please also see Staff Report Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for information on the water quality objectives for fish and wildlife. Additionally, see Common Response 3.1, Fish Protection, and Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, of the Staff Report for information on the benefits of the unimpaired flow scenarios.

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		Maintain inflows from the Sacramento/Delta tributaries at 55% of unimpaired flow, within an allowed adaptive range between 45 and 65% of unimpaired flow [Footnote 18: Staff Report, p. 5-17]. 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. 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.	
276	11	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	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the reasonable protection of fish and wildlife beneficial uses.
276	12	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	The proposed new narrative fish viability objective is additional to the current objectives, including the salmon doubling objective. The term “maintain” in a water quality objective does not negate the need to improve fisheries conditions. Water quality objectives often describe the necessary condition of the water body to protect beneficial uses. It should not be read to

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		sentence. Under “...current water quality conditions, including flow conditions in and from tributaries and into the Delta...”²¹²¹ 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.	define the baseline condition as the commenter appears to suggest.
276	13	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.	The VA parties are required to meet their commitments in order to maintain implementation of the VA pathway. Please refer to Common Response 1.3, Revised Proposed Plan Amendments, for more information on the enforceability of the VAs.
276	14	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 [Exhibit 2] shows the proposed VA contributions from each watershed in thousands of acre-feet and in the more	Please see the response to comment 276-13.

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		biologically relevant cubic feet per second over the January through June period.	
276	15	[Exhibit 2: Table titled Table 1. Proposed VA Contributions to Delta Outflows. Acre-feet are taken from Table 1a of the Terms Sheet dated March 29, 2022]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
276	16	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 “offramps” 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.	The VA parties do not intend to extend the VAs beyond 15 years. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the provisions included in the regulatory pathway and VA pathway.
276	17	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	Please see Common Response 1.2, Water Quality Control Planning Process, for information on reasonable protection of fish and wildlife beneficial uses, and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including enforceability. The volume of water expected

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		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 compliance [Footnote 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/], 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 sheet [Footnote 20: https://www.yubawater.org/DocumentCenter/View/4074/Agreements-to-Support-Healthy-Rivers-and-Landscapes-Fact-Sheet-PDF?bidId=] 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 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	to result from the Yuba River VA was presented in Section 9.5.3.5, Yuba River, of the 2023 draft Staff Report.

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		contributions would be provided in about half of those years.” The Terms Sheet dated March 29, 2022 [Footnote 21: https://resources.ca.gov/-/media/CNRA-Website/Files/NewsRoom/Voluntary-Agreement-Package-March-29-2022.pdf] 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 [Exhibit 2] 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 sheet [See Footnote 20], 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 sheet [See Footnote 20] relates to the up to 216.5 thousand acre-feet purchased by the state in Table 1a [See Footnote 21]. Table 2 [Exhibit 3] 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. What is clear from this table [Exhibit 3] focusing on the biologically relevant unit of measurement (CFS) is that the additional water during the crucial outmigration time period is well below what 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.	
276	18	[Exhibit 3: Table titled Table 2. Yuba River specific VA water volumes and release duration discrepancies]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of

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			the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
276	19	It is clear from recent science [See Footnote 15] 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 cfs [Footnote 22: Wyrick, J. R., and G. B. Pasternack. "Landforms of the lower Yuba River." University of California, Davis (2012)]. It is also well established that floodplain rearing habitat plays an important role in the growth, and therefore survival, of salmon [Footnote 23: Takata, Lynn, Ted R. Sommer, J. Louise Conrad, and Brian M. Schreier. "Rearing and migration of juvenile Chinook salmon (<i>Oncorhynchus tshawytscha</i>) in a large river floodplain." <i>Environmental Biology of Fishes</i> 100 (2017): 105-1120] [Footnote 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." <i>Environmental biology of fishes</i> 83 (2008): 449-458]. 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.	The volume of water expected to result from the Yuba River VA was presented in Section 9.5.3.5, Yuba River, of the 2023 draft Staff Report and the benefits expected to result from the VAs, including floodplain inundation, were presented in the Scientific Basis Report Supplement (Appendix G2). Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on habitat accounting requirements.

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		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 additional 168 cfs in the Yuba River based on the additional 60,000 acre-feet, or 25 cfs based on 9,000 acrefeet, 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 2022 [Footnote 25: Request for Pulse Flow Variation from January 15 2023. FERC Docket P-2246-000. Accession 20220906-5169]. 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 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	

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		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.	
276	20	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.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. To the extent that this comment summarizes other comments, please see the substantive responses to those comments.
276	21	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	The 2023 draft Staff Report included a sufficiently detailed description of the project and alternatives for the purpose of the CEQA analysis. Please see Common Response 1.3, Revised Proposed Plan Amendments, for responses to comments about the program of implementation and Common Response 7.1, General CEQA and Approach to the Analysis, for more information on the CEQA analysis.

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		description and separation of the Alternatives from Program Implementation.	
276	22	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.” [Footnote 26: Staff Report. P. 5-1] 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.	The quoted statement from the Staff Report does not state that the Low Flow Alternative would not achieve the purpose and goals of the project and does not state that it would not provide reasonable protection of beneficial uses. Please see Section 7.24.3.6, Achievement of Project Purpose and Goals of the Low Flow Alternative (Alternative 2), of the 2023 draft Staff Report. Also see Common Response 1.2, Water Quality Control Planning Process, on the consideration of beneficial uses.
276	23	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.” [Footnote 27: Staff Report p. 5-17]. 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...”[Footnote 28: Staff Report p. 5-16]. 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. Voluntary implementation of the preferred alternative could be a	Please see Common Response 3.1, Fish Protection, on use of best available science and updated flow thresholds. The intent of the provision referenced by the commenter on page 5-20 of the 2023 draft Staff Report is to avoid the situation the commenter describes in which releases for flood control purposes, hydropower, or other uncontrolled flows could be used to decrease the total volume of water provided within a water year below what would have resulted from meeting the applicable unimpaired flow percentage on a 7-day running average. It would not prevent all water released for power generation from counting toward the required percent of unimpaired flow. See Common Response 1.3, Revised Proposed Plan Amendments, for more information on flow shaping. Local cooperative solutions (previously referred to as voluntary implementation plans) could be tailored to the circumstances of individual tributaries, provided they meet the requirements outlined in the revised proposed Plan amendments. See Common Response 1.3, Revised Proposed Plan Amendments, for more information on the local cooperative solutions.

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		viable middle pathway between the Preferred Alternative and the VA alternative. Provided it meets the standards outlined in the Conclusion. SYRCL questions the benefits of not allowing unimpaired flow credit from hydropower releases as contributing to unimpaired flow percentage with a 7-day average [Footnote 29: Staff Report p. 5-20]. Not allowing flood flows or other uncontrolled releases occurring within a 7-day rolling average resulting in a decrease in unimpaired flow the remaining days makes intuitive sense. As previously described, at Englebright Dam the only mechanisms for release are through power generation or uncontrolled spill and by not allowing hydropower generating releases to contribute to the 7-day rolling average the Board effectively removes the ability of YWA, as operator of the rim dam, to meet the proposed requirements. Allowing within-watershed adaptability within the voluntary implementation pathway will be crucial to ensure it is possible to restore the health of the Bay- Delta and salmon.	
276	24	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	As described in Section 6.2.2, Unimpaired Flow Scenario Assumptions, of the 2023 draft Staff Report, carryover storage was modeled alongside the inflow requirements for all flow scenarios, including the high flow. All flow scenarios, including the High Flow Alternative, were modeled and analyzed in Chapter 6, Changes in Hydrology and Water Supply, Chapter 7, Environmental Analysis, and Chapter 8, Economic Analysis and Other Considerations, of the 2023 draft Staff Report. In addition, the High Flow Alternative was adequately analyzed in Section 7.24, Alternatives Analysis, of the 2023 draft Staff Report. Please see Common Response 7.24, Alternatives Analysis, for more information on the analysis of alternatives and Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, for information on the scope of the water temperature analysis and constraints that would result from the combination of carryover storage and higher flow requirements.

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		maintaining suitable water temperatures for cold water aquatic species and carryover storage for environmental water supply purposes.” [See Footnote 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.” [Footnote 30: CEQA Guidelines Section 15126.6 (14 CCR 15126.6[d])]. 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.	
276	25	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 substantially lessened by the proposed flows and habitat actions. The current VA (Alternative 6) should not be considered as proposed.	Chapter 9, Proposed Voluntary Agreements, of the 2023 draft Staff Report analyzed the impacts of the Voluntary Agreements. Please see Section 9.7.23, Ability to Achieve Project Purpose and Goals, of the Staff Report for a discussion of the ability of the VAs to achieve the project purpose and goals and Common Response 7.24, Alternatives Analysis, for a discussion of the alternatives.
276	26	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	Compliance locations were identified in Section 5.4.2.4, Implementation, of the 2023 draft Staff Report. In addition, this section identifies that the inflow objective would be implemented on tributaries in the order of water right priority. Thus, the relative responsibilities of water right holders on the same tributary would be dependent on the relative priorities of their water rights, except where specific exceptions apply. In addition, the revised proposed Plan amendments identify compliance locations as well as the ability to change compliance

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		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.	locations as needed. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the regulatory pathway implementation of the inflow objective and the implementation methodology.
276	27	Tribal Beneficial Uses	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to

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		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.	Tribal Beneficial Uses, tribal reserved water rights, and tribal outreach and engagement. Please see Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses.
276	28	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.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
276	29	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. [Footnote 31: Five Guiding Principles for Effective Voluntary	Please see Common Response 1.1, General Comments, and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		Agreements. Berkeley Law, Center for Law, Energy, and the Environment (2024)] 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 preimplementation status quo—are the baseline against which VA adequacy should be assessed. VAs must articulate clear, specific biological goals and measures of success. 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 to follow the above principles.	
276	30	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. 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. Ensuring that options for water to meet multiple beneficial uses like hydropower and environmental (see section III.c.) will be crucial to finding a compromise solution that all parties – especially those that cannot speak for themselves – can live with.	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board’s consideration of beneficial uses during the water quality control planning process. Please see Common Response 7.24, Alternatives Analysis, for a discussion of the adequacy of the range of alternatives analyzed by the State Water Board.

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		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.	
277	1	Friends of the River (FOR) has been working to protect and restore California's rivers for more than 50 years. Rivers and watersheds are the source of freshwater for all terrestrial life and human needs, and are critical to successful adaptation to climate change. 21st century water management solutions must be equitable, timely, practical, and nature-based. Friends of the River has a long history of working on the rivers included in the Phase II Update to the Bay- Delta Plan (non-exhaustive): On the upper Sacramento, FOR was instrumental in achieving Wild and Scenic Act protections for the McCloud River, and has led efforts to prevent the illegal Shasta Dam raise, which would be in violation of that Wild and Scenic protection. As far back as 2005, FOR was the first to highlight dam safety and facility competence issues with the Oroville Dam spillway on the Feather River, asking FERC to confront these problems as part of the relicensing of Oroville Dam. [Footnote 2: Motion to Intervene of Friends of the River, Sierra Club, South Yuba River Citizens League in the Matter of a New Major License for the Oroville Facilities. 17 Oct. 2005. https://www.friendsoftheriver.org/wp-content/uploads/2016/01/Oroville-Dam-joint-intervention-1.pdf] On the Yuba and Bear Rivers, FOR has participated in dam relicensings, litigated over fish passage issues, and has worked to oppose the proposed Centennial dam. On the American River, FOR worked to designate the Lower American River as Wild and Scenic, was instrumental in defeating the Auburn Dam, and was a founding member and remains a senior member of the Water Forum. These rivers meet in the Delta, where they then flow to sea. The Bay-Delta Water Quality Control Plan Update is a critical tool to protect California's rivers and the myriad ecosystems and communities they support. Adequate water quality standards in the Delta can protect and restore beneficial uses upstream. Friends of the River et al. thanks the State Water Resources Control Board (SWRCB or Board) for consideration of our comments on the Draft Staff Report.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. Please see Common Response 1.2, Water Quality Control Planning Process , for more discussion on the reasonable protection of fish and wildlife .

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		Introduction The Bay-Delta ecosystem is in crisis. This is a fact that the Board has acknowledged in its Staff Report, “since the Bay-Delta Plan was last updated and implemented, populations of native aquatic species in the Bay-Delta watershed have shown significant signs of decline due to a combination of factors, including hydrologic modifications, non-flow physical habitat degradation, water quality impairments, and climate change.” [Footnote 3: Staff Report, p. 1-9.] It is also plainly evidenced by the fact that several endangered species are on the brink of blinking out, Central Valley Chinook salmon fisheries have crashed, toxic algae blooms are proliferating, and the fact that many families in the Central Valley still do not have access to clean and reliable drinking water. California rivers are in crisis. Nearly every major river feeding the Bay-Delta watershed is severed by a rim dam, blocking once abundant salmon from their historic cold water habitats. The second-largest river in the state runs dry more often than not, despite a settlement agreement to re-wet the river. In recent years, and rather under the radar, the Merced River has run dry on several occasions – most recently for a period of four months. [Footnote 4: Zhong, Raymond. “They Abducted a River in California. And It Wasn’t Even a Crime.” The New York Times, 18 Jan. 2024, www.nytimes.com/2024/01/18/climate/california-merced-river-dry.html.] Flow in rivers is treated as a luxury rather than what it is: the lifeblood of rivers, the Bay-Delta ecosystem, and the myriad cultural and historic beneficial uses they support.	
277	2	California communities are in crisis. The salmon fishing industry, which can support upwards of 23,000 jobs when salmon populations are healthy [Footnote 5: See the written comments of Baykeeper et al. on the Draft Staff Report.], had to shut down in 2023 due to abysmal population estimates. That this was only the third complete closure in state history reflects the dire circumstance for salmon and the families that rely on them for their livelihoods. Tribes, which need salmon as an ancestral food source and for indigenous cultural practices, are unable to access	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		salmon. Disadvantaged communities face drinking water insecurity and environmental health concerns.	
277	3	California leadership often suffers from the mindset that one more engineered feat will reverse course. However, chronic over-allocation, over-diversion, and unsustainable and unreasonable use are the cause of these crises. More dams and diversions cannot cure this. The solution is rather simple: rivers need water. Communities need water. And, people need healthy rivers. Flow of water from source to sea is the uniting principle, and the Bay-Delta ecosystem is both the nexus of California's freshwater system and the keystone indicator of overall system health.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
277	4	The Board has an incredible opportunity to establish flow and other standards to protect the Bay-Delta and the rivers that nourish it. Such protections could reverse the loss of unique endemic species, cultural heritage, and entire ways of life. Urgent and ambitious action at scale is need to reverse the many trends of decline. The Draft Staff Report states, "The underlying fundamental purpose of the project is to establish water quality objectives, a program of implementation, and monitoring and special study measures for the reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta." [Footnote 6: Staff Report, p. 7.1-5 (emphasis added).]	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
277	5	Legal Framework In the Executive Summary, the Board summarizes several of its legal authorities and responsibilities related to the Staff Report and the update of the Bay-Delta Water Quality Control Plan. In general, the Board uses CEQA and the Porter Cologne Water Quality Control Act as the primary legal framework for this process. Friends of the River et al. requests that the Board prioritize its additional responsibilities and authorities under the federal Clean Water Act, the public trust doctrine, and the Delta Reform Act, discussed in more detail below. CEQA The Staff Report describes the Board's responsibilities under the California Environmental Quality Act (CEQA) as well as how the	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. To the extent that this comment summarizes other comments, please see the substantive responses to those comments. Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the project description and approach to the analysis.

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		Staff Report claims to fulfill those responsibilities: The State Water Board adopts water quality control plans as part of a certified regulatory program under the California Environmental Quality Act (CEQA). (Pub. Resources Code, § 21080.5, subd. (b)(2); Cal. Code Regs., tit. 23, § 3775 et seq.) Certified regulatory programs are exempt from CEQA's requirements for preparing an environmental impact report, negative declaration, and/or initial study. (Pub. Resources Code, § 21080.5; Cal. Code Regs., tit. 14, § 15251, subd. (g).) Accordingly, the State Water Board may prepare a substitute environmental document (SED) that meets the requirements of CEQA. (Cal. Code Regs., tit. 14, § 15252, subd. (a).) This entire Staff Report can be considered the SED that fulfills the requirements of CEQA and the State Water Board's CEQA regulations (Cal. Code Regs., tit. 23, § 3775 et seq.) to analyze the environmental effects of the proposed regulatory activity. The majority of the environmental analyses and conclusions are presented in Chapters 7 and 9. The draft Staff Report will inform the State Water Board's consideration of the Sacramento/Delta updates to the Bay-Delta Plan described within this document. [Footnote 7: Staff Report, p. 1-6.] A Substitute Environmental Document (SED) may be prepared in lieu of an environmental impact report (EIR) if the SED complies with CEQA goals and policies. As with an EIR, an SED must include a stable and finite project description, adequately analyze all reasonably foreseeable adverse environmental impacts (including cumulative impacts), analyze a reasonable suite of alternatives, and analyze reasonably foreseeable compliance and mitigation measures to reduce a project's significant impacts. As written, the Staff Report is deficient and does not qualify as a SED because the project description is unclear, and the document unlawfully piecemeals the project by not including a Program of Implementation. Thus, the public cannot ascertain all potential benefits and potential impacts of the proposed project nor assess the "whole of the action." Discussed further in Section III below. The Staff Report should be revised and recirculated to	

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		include a stable project description and Program of Implementation. CEQA issues are discussed in greater detail below.	
277	6	Porter-Cologne Water Quality Control Act The Staff Report describes the Board's responsibilities under the Porter Cologne Water Quality Control Act as well as how the Staff Report claims to fulfill those responsibilities: "...the State Water Board's amendments to the Bay-Delta Plan must be prepared in accordance with applicable water quality planning provisions of the Porter-Cologne Act, Water Code Section 13000 et seq., and other applicable laws. Section 13241 of the Porter- Cologne Act identifies certain factors that must be evaluated when establishing water quality objectives. These factors include: (1) past, present, and probable future beneficial uses of water; (2) environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto; (3) water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area; (4) economic considerations; (5) the need for developing housing within the region; and (6) the need to develop and use recycled water. This draft Staff Report discusses these factors with respect to the Sacramento/Delta updates to the Bay-Delta Plan, including the proposed objectives under the proposed Plan amendments, proposed VAs, and other project alternatives. The factors are an inherent part of the analyses presented for decision makers to understand the impacts not only on the environment but also on other beneficial uses, economics, and other important considerations like the human right to water. [Footnote 8: Staff Report, p.1-6.] In addition, this section of code provides an important standard of review for this update to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan), "Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance..." [Footnote 9: Water Code § 13241.] (Emphasis added). Thus, this Staff report must conduct	Please see Common Response 1.2, Water Quality Control Planning Process, regarding the State Water Board's authorities and duties pursuant to the Porter Cologne Water Quality Control Act, as well as a discussion of the State Water Board's consideration of beneficial uses and the factors listed in Water Code section 13241 during the water quality control planning process. See also final Staff Report Section 13.6.2, Water Code Section 13241 Analysis, for the State Water Board's evaluation of the factors required under Water Code section 13241, including past, present, and probable future beneficial uses of water in the area covered by the Plan.

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		analyses that inform an outcome that achieves reasonable protection of past, present, and probable future beneficial uses of water.	
277	7	Further, in its update to the Bay-Delta Plan, the Board has a duty to comply with the reasonable use doctrine, enshrined in Article X § 2 of the California Constitution and § 275 of the California Water Code. In U.S. v. SWRCB, the court strengthened the reasonable use doctrine and advanced the concept that in developing water quality standards, the Board should focus on protection of water uses, not rights, and labeled the reasonable use doctrine a “cardinal principle of California’s water law.” [Footnote 10: U.S. v SWRCB, 182 Cal. App. 3d (1986).] In SWRCB the court directed the Board to balance demands on water, from a watershed perspective, by determining which demands constitute reasonable use. [Footnote 11: Id.] This authority is further clarified by the courts in Light v. SWRCB, where the court found that the Board, “has the ultimate authority to allocate water in a manner inconsistent with the rule of priority, when doing so is necessary to prevent the unreasonable use of water.” [Footnote 12: Light v. State Water Resources Control Board (2014) 226 Cal.App.4th 1463 [173 Cal.Rptr.3d 200]] The reasonable use doctrine is a foundational legal principle in the update to the Bay- Delta Plan and thus should be reflected in the legal framework in the Executive Summary.	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board’s authority to prevent waste and unreasonable use under Article X, Section 2 of the California Constitution.
277	8	Federal Clean Water Act The Staff Report describes the relationship between the Federal Clean Water Act and the Porter Cologne Water Quality Control act: “The Porter-Cologne Act is California’s comprehensive water quality control statute, which implements portions of the federal Clean Water Act. The primary purpose of the federal Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters (Clean Water Act § 101(a).) Water quality objectives are established to ensure the reasonable protection of beneficial uses and the prevention of nuisance, in consideration of various factors, including past, present, and probable future beneficial uses of water (Wat. Code,	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board’s consideration of beneficial uses during the water quality control planning process and a discussion of the State Water Board’s role in administering the Clean Water Act in California. Please see Common Response 3.1, Fish Protection, for a discussion of the State Water Board’s use of best available science, including the approach to updating the scientific literature, and the State Water Board’s approach to analyzing the effects of flow on species abundance and life cycle models.

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		§ 13241.)” [Footnote 13: Staff Report, p. 1-19 (emphasis added).] In doing so, it describes the Board intends to meet its Clean Water Act responsibilities through this update to the Bay-Delta Plan – by establishing water quality objectives for the “reasonable protection of beneficial uses.” However, the Board must also fulfill its responsibilities under § 131.11 of the Clean Water Act, which requires that water quality criteria be based on science, and protect the most sensitive beneficial use: “§ 131.11 Criteria. (a) Inclusion of pollutants: (1) States must adopt those water quality criteria that protect the designated use. 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.” [Footnote 14: 40 C.F.R. § 131.11(a)(1).] Thus, the Board has an affirmative duty to develop water quality criteria based on the best available science that supports the most sensitive use. This is a critical legal standard for a successful Bay-Delta Plan and thus should be reflected in the legal framework in the Executive Summary.	
277	9	Public Trust Doctrine The concept of public trust comes from an ancient doctrine which declared that access to air, water, and sea (things which are common to mankind) is a legal right. California courts have long affirmed the public trust, calling it “an affirmation of the duty of the state to protect the people’s common heritage of streams, lakes, marshlands and tidelands.” [Footnote 15: National Audubon Society v. Superior Court, 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346 available at: https://www.monobasinresearch.org/legal/83nassupct.html] In California, the public trust doctrine has been recognized as protective of additional trust resources, including navigable surface waters, non-navigable tributaries of those waters,	At the time the 2023 draft Staff Report was released for public comment, an explicit public trust analysis was not included, as the rulemaking process for the Sacramento/Delta update to the Bay-Delta Plan was still at a preliminary stage with numerous options being evaluated for potential inclusion in the plan update. Now that the State Water Board has identified a precise set of revised proposed Plan amendments as the proposed project, as part of the process to revise the 2023 draft Staff Report in response to input from the public, the State Water Board has added a section summarizing the State Water Board’s public trust evaluation for the proposed amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Watershed. Please refer to final Staff Report Section 13.6.1, Public Trust Analysis, for the

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		aquatic resources, and to birds and other wildlife. Indeed, the Board acknowledges its public trust responsibilities in the Staff Report: “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 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.” [Footnote 16: Staff Report, p. 5-7.] Unfortunately, this reference to the Board’s public trust responsibility is buried in Chapter 5. Public trust is a foundational legal principle of the Bay-Delta Plan and thus should be analyzed as part of the legal framework in the Executive Summary. The Board has a duty to manage water as a public trust resource for the benefit of the people of the State. However, it failed to analyze the full range of public trust resources in the project area, and thus failed to conduct a defensible balancing of public trust resources and the existing consumptive uses of water. For further discussion of the Board’s public trust responsibilities, please refer to the comments of CSPA et al., Section B, incorporated herein. [Footnote 17: We adopt by reference the written comments of CSPA et al. on the Draft Staff Report.]	State Water Board’s public trust analysis of the revised proposed Plan amendments. Please also see Common Response 1.2, Water Quality Control Planning Process, regarding the State Water Board’s consideration of the Public Trust Doctrine when formulating or amending water quality control plans.
277	10	Delta Reform Act The Delta Reform Act explicitly applies both the reasonable use and public trust doctrine to the Delta, asserting, “The longstanding constitutional principle of reasonable use and the public trust doctrine shall be the foundation of state water management policy and are particularly important and applicable to the Delta.” [Footnote 18: CA Water Code § 85023.]	Please see Common Response 1.1, General Comments, regarding consistency with other laws, policies, and agreements, including the Bay-Delta Plan and the Delta Reform Act.

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		The Delta Reform Act also provides that, “The policy of the State of California is to reduce reliance on the Delta in meeting California’s future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.” [Footnote 19: CA Water Code § 85021 (emphasis added).] The Bay-Delta Plan has the potential to establish safeguards that advance the legislated goal of the Delta Reform Act to reduce reliance on the Delta. Failure to establish such safeguards could maintain or increase reliance on the Delta to meet water supply needs. This is a critical consideration in the update to the Bay-Delta Plan and the Staff Report must evaluate the ability of the Plan to achieve that goal.	
277	11	The Board should revise the Executive Summary of the Staff Report to clarify and expand upon the legal framework and basis for the document. While the Board evaluated its responsibilities and authorities under CEQA and the Porter Cologne Water Quality Control Act, additional information should be added to the Executive Summary to clarify the legal framework of the Staff Report and Plan update. Additional legal doctrines that should be included (non-limiting) are the federal Clean Water Act § 131.11, the public trust doctrine, waste and unreasonable use doctrine, and the Delta Reform Act. These additions should either be (1) included in narrative format with the other descriptions of pertinent laws on Staff Report page 1-6, or (2) the Board should create a new subsection of the Executive Summary devoted to legal criteria and standards of review for the entire Staff Report and Plan update.	Please see the responses to comments 277-5 through 277-10.

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277	12	CEQA Issues The Staff Report must be revised and recirculated to provide a stable and finite project description and to clarify the project purpose. As noted above, an SED must comply with CEQA goals and policies, which requires the inclusion of a stable and finite project description. However, the Draft Staff Report does not contain a stable and finite project description. The Executive Summary states, “The draft Staff Report includes an alternative that is referred to as the proposed Plan amendments that is based on the State Water Board’s 2018 Framework for a possible Sacramento/Delta Update to the Bay-Delta Plan (2018 Framework) (^SWRCB 2018) that was identified prior to the VAS proposal.” [Footnote 20: Staff Report, p. 1-2 (emphasis added).] Although the phrase “proposed Plan amendments” is frequently used throughout the Staff Report, no clear statement is made in the Executive Summary that indicates to the public that the proposed project is indeed these amendments. [Footnote 21: For the purpose of these comments, FOR et al. assume the proposed project is the Proposed Plan Amendments, and refers to them as such.] The document thus forces the public to either make inferences, or to engage in a treasure hunt to locate a clear definition of the proposed project. CEQA requires a clear explanation of the nature and scope of the proposed project, otherwise it “is fundamentally inadequate and misleading.” [Footnote 22: Communities for a Better Environment v. City of Richmond, 184 Cal.App.4th 70, 84-85 (2010).] A clear project definition is critically needed for the public to evaluate if the proposed project will achieve the project purpose.	The 2023 draft Staff Report describes the proposed Plan amendments in adequate detail for the purposes of the analysis. Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis provides a basic project description, including a description of the project purpose and goals, and refers to Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, for a detailed description and discussion of the proposed Plan amendments. Please refer to Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the project description and approach to the analysis. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments. The proposed Plan amendments remain part of the project as the regulatory pathway; however, the regulatory pathway includes new water supply adjustments at the outset of Plan implementation that lower flow requirements under certain conditions to reduce water supply impacts and allow more water to be stored in reservoirs. The revised proposed Plan amendments also provide for a VA pathway for an 8-year term with the possibility of extension that reduces the required flow contributions for VA water rights.
277	13	Further, the project definition is critically deficient because it does not include a Program of Implementation (POI). [Footnote 23: Staff Report, p. 5-1.] The staff report states that, “specific changes to the Bay-Delta Plan, specifically the program of implementation, have not been developed yet.” [Footnote 24: Staff Report p. 1-2.] However, these specific changes are precisely what the public needs to understand the full nature and scope of the proposed project. The absence of such “subverts full consideration of the actual impacts of the Proposed Project.”	The 2023 draft Staff Report described what would be contained in the program of implementation in sufficient detail for the purposes of the analysis such that the draft text for specific changes to the Bay-Delta Plan was not necessary. However, drafts of the Bay-Delta Plan were subsequently released for public review and comment in October 2024, July 2025, and December 2025. Please see Common Response 1.3, Revised Proposed Plan Amendments, for responses to comments about the program of implementation and Common Response 7.1, General CEQA and

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		[Footnote 25: Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist., 48 Cal. 4th 310 (2010).] Further, CEQA defines a project as the "whole of an action," that could result in direct or reasonably foreseeable indirect changes in the environment. [Footnote 26: Cal.Code Regs., tit. 14, § 15378(a).] Thus, the POI is a necessary component of a lawful "project description" and must be included for evaluation by the public. For further discussion of the need for a program of implementation, please refer to the written comments of Baykeeper et al., incorporated herein. [Footnote 27: We adopt by reference the comments of Baykeeper et al. on the Draft Staff Report (hereinafter, Baykeeper et al.).]	Approach to the Analysis, for more information on the CEQA analysis.
277	14	In addition, the Staff Report does not contain a clear project purpose. One mention of "purpose" in the Executive Summary is general, and refers to the purpose of the Staff Report rather than the purpose of the proposed project. In describing sections of the Staff Report, it states, "Chapter 1, Executive Summary, explains the Staff Report purpose and organization, and provides a summary of its major findings. Other chapters of the draft Staff Report inform the environmental analyses and contain additional details on specific topics." [Footnote 28: Staff Report p. 1-5.] This is the first mention of project purpose in the Staff Report, but does not constitute a clear project purpose. A section in the Executive Summary is dedicated to project purpose (1.3.1 Purpose and Need for Bay-Delta Update), but that section reads as a problem statement rather than a project purpose. A clear statement of purpose, however, can be found in the document – but such statement of purpose is buried in Chapter 5. It states, "The underlying fundamental purpose of the project is to establish water quality objectives, a program of implementation, and monitoring and special study measures for the reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta." [Footnote 29: Staff Report p. 7.1-5 (emphasis added).]	The project purpose was described in adequate detail for the purposes of the analysis in Section 1.1, Introduction, and Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, of the 2023 draft Staff Report and, for the revised proposed Plan amendments, in Chapter 13, Revised Proposed Plan Amendments. Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the project description and the program of implementation.

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		This clear definition of project purpose is needed in the Executive Summary of the Staff Report. It is typical of a CEQA document to clearly state in the executive summary the project purpose and description. This information is needed by the public to evaluate the document itself, the proposed project, and if the proposed project will meet its objectives. The Board should revise the Executive Summary of the Staff Report to include a new section(s) to clearly define the proposed project and project purpose. In addition, the Board should revise and recirculate the Staff Report to include a program of implementation.	
277	15	Economic Analysis Economic analysis in the Staff Report must include an analysis of the costs associated with ongoing endangered and listed species management. Chapter 8 of the Staff Report, Economic Analysis and Other Considerations, devotes a considerable amount of analysis and discussion to agricultural water supply economic effects (51 pages), municipal water supply economic effects (11 pages), but devotes markedly less to commercial and recreational fisheries (1 page), recreation (2 pages), ecosystem services (2 pages), wildlife refuges (0.5 pages), and habitat restoration/ecosystem projects (4 pages). Notably, the Staff Report does not undertake any novel analyses of these latter subjects. Chapter 8 appears to answer the question “what would be the projected revenue losses in the agricultural sector under varying unimpaired flow scenarios?” without giving serious consideration to the externalities associated with consumptive water use. The lack of economic analyses related to natural resources has biased the document, presenting results as a dichotomy between flow and agriculture. This is a false dichotomy and additional analyses must be completed for the public to truly ascertain costs and benefits of flow alternatives the Bay-Delta Plan update. Endangered species management is essential to protect biodiversity, prevent extinctions, and preserve our natural heritage for future generations. However, it is widely known that	The economic effects of the proposed Plan amendments are sufficiently evaluated in Chapter 8, Economic Analysis and Other Considerations, of the Staff Report. The analysis considers the effects of changes to existing economic conditions. Those existing conditions include the costs and expenditures of existing regulatory regimes such as ongoing endangered and listed species management. While the flow scenarios and subsequent ecosystem improvements would benefit special-status fish species, it would be highly speculative to identify potential changes to federal and state endangered and listed species management efforts and program budgets. Even following implementation of the Sacramento/Delta update to the Bay-Delta Plan, ongoing endangered and listed species management remains foreseeable. Section 8.6.1, Recreational and Commercial Fisheries, in the 2023 draft Staff Report (Section 8.6.2, Commercial Fisheries, and Section 8.6.3, Recreational Fishing, in the final Staff Report) addresses potential economic effects concerning commercial and recreational sport fisheries, with an emphasis on Chinook salmon. Section 13.8.4, Fisheries Economic Effects, provides supplemental economic information relevant to recreational and commercial fisheries and discusses fisheries economic effects under the revised proposed Plan amendments. In addition, in response to comments received on the economic analysis presented in the Staff Report, Chapter 8, Economic Analysis and Other Considerations, has been updated to include a new Section 8.6, Fisheries Economic Analysis, that addresses potential

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		endangered species management is a costly undertaking for our federal and state governments. Recent analysis has found that of the roughly \$1.2 billion spent per year on endangered and threatened species, nearly half goes toward the recovery of West Coast salmon and steelhead. [Footnote 30: “Most Funding for Endangered Species Only Benefits a Few Creatures. Thousands of Others Are Left in Limbo.” CBS News, www.cbsnews.com/news/endangered-species-funding-goes-to-a-small-number-of-creatures-leaving-others-in-limbo/. Accessed 19 Jan. 2024.] Further, the cost of managing federally listed species in California is significant. During fiscal years 2015 and 2016 alone, the federal government spent nearly \$100 million managing only five listed Delta species (Table 1 [Exhibit 1]). This estimate is necessarily conservative because it includes only identifiable expenditures. Further, expenditures for the California Department of Fish and Wildlife’s Biodiversity Conservation Program [Footnote 31: The Biodiversity Conservation Program description is as follows, “This program encourages the preservation, conservation, maintenance, and restoration of wildlife resources, including the Ecosystem Restoration Program, under the jurisdiction and influence of the state. Activities involve the conservation, protection and management of fish, wildlife, native plants, and habitat to ensure maintenance of biologically sustainable populations of those species.” https://ebudget.ca.gov/budget/2023-24EN/#/ProgramDescriptions/3600/0], which supports its endangered species tasks, were \$366,119, \$815,174, and \$493,958 in fiscal years ending 2022, 2023, and 2024, respectively. Endangered species costs are an undefined portion of these expenditures, but nonetheless they are demonstrative of the scale of resources devoted to biodiversity conservation in California. State and federal costs associated with endangered species management is a financial burden for taxpayers and society at large, who are collectively responsible for the externalities associated with water allocation decisions in California. For this reason, among others, this is an issue of national significance. Endangered species crises in California and the Bay-Delta in	economic benefits from implementation of the flow scenarios and subsequent aquatic ecosystem improvements and benefits for native fish species. This new section provides additional context and information concerning beneficial fisheries and ecosystem economic effects, including possible savings associated with endangered species management, but does not change the conclusions of the Staff Report’s economic analysis.

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		particular are at risk of becoming worse due to climate change, water management, and other anthropogenic factors. This is because the Bay-Delta is a biodiversity hotspot, especially relative to the rest of the nation (Figure 1 [Exhibit 2]). Additionally, some Bay-Delta species of significance have pending ESA and CESA listing decisions, including the Bay-Delta population of white sturgeon (CESA, ESA), [Footnote 32: “Alliance of Sportfishing and Environmental Groups Petition California and Feds to Protect SF Bay White Sturgeon.” San Francisco Baykeeper, 30 Nov. 2023, https://baykeeper.org/press_release/environmental-fishing-and-community-organizations-petition-california-and-feds-protect#:~:text=Today%2C%20San%20Francisco%20Baykeeper%2C%20California,the%20California%20Endangered%20Species%20Act.] and the longfin smelt (ESA). [Footnote 33: “Baykeeper Puts Federal Agency on Notice: Will Sue to Uphold Endangered Species Act.” San Francisco Baykeeper, 11 Oct. 2023, https://baykeeper.org/press_release/baykeeper-puts-federal-agency-notice-will-sue-uphold-endangered-species-act#:~:text=The%20agency's%20proposal%20to%20list,monitoring%20first%20started%20in%201967.] These listings could increase the cost of endangered species management in the Bay-Delta watershed. It is also important to note that state and federal expenditures are but one of many costs associated with endangered species management. Thus, Chapter 8 should also answer the question, “what are the costs of continued endangered species crises and management for species that rely on the Bay-Delta?” An appropriately broad analysis would focus only on listed species in the Bay-Delta watershed (and impacted by the Plan update) and would include the following components [Footnote 35: This list should not be taken to be limiting, but rather a starting point for an acceptable economic analysis of the costs of listed species management in the Bay-Delta watershed.]: 1. Expenditures by state and federal governments [Footnote 36: Including, but not limited to, both ESA and CESA permitting actions, consultation, mitigation, habitat management, land acquisition, and more.];	

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		2. Hatchery operation costs associated with listed species; 3. Potential or reasonably foreseeable physical improvements for listed species management [Footnote 37: Including, but not limited to, fish passage facilities at dams, habitat restoration including floodplain restoration, or other physical improvements relevant to the Bay-Delta Plan.]; 4. Cost of academic research to inform management of listed species (non-publicly funded); 5. Litigation costs for ESA and CESA litigation, both public and private; 6. Financial resources expended by 501(c)(3) non-profit organizations in their work to protect listed species; 7. Private investments in the protection of listed species; 8. Analysis of historic and current costs of listed species management, including cumulative cost-per-species to date; 9. Analysis of costs of listed species management under the No Project Alternative; and 10. Analysis of how costs of listed species management are expected to vary across flow alternatives. The findings of these analyses should be presented as graphs and tables similar to those presented in Chapter 8, and where relevant, should be presented as cost savings by reducing the burden of listed species management. The above analyses would help the public better understand the potential costs associated with failing to resolve the Bay-Delta endangered species crisis, how those costs vary across different flow alternatives, and how the Plan update could help reduce them.	
277	16	[Exhibit 1: Table titled Table 1. Reported federal expenditures for fiscal years 2015 and 2016 for ESA listed species using the Bay-Delta]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of

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			the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	17	[Exhibit 2: Graphic titled Figure 1. California's Amazing Natural Wealth: California is a hotspot of biodiversity]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	18	The Economic Analysis grossly underestimates the value of California's commercial salmon fishery and fails to adequately analyze other natural resources. Friends of the River et al. appreciates the considerable amount of effort that went into preparing Chapter 8 of the staff report. Below we identify issues with the existing analysis and make recommendations for additional analysis. 8.6.1 Recreational and Commercial Fisheries - The Staff Report estimates of the value of the commercial fishing industry relies on an inappropriate period (2018-2022) [Footnote 38: Staff Report, p. 8-104.] and should instead use a historic period with healthy salmon runs. Other economic estimates value the California salmon fishing industry to be as high as \$1.4 billion [Footnote 39: See Baykeeper et al.] -- greater than 20x more than the estimate included in the Staff Report. The Staff Report itself notes historically high catch as recently as 1988, stating, "Excluding the near full closure of the ocean salmon fishery from 2008 through 2009, California commercial Chinook salmon catch between 1976 and 2022 varied from approximately 14.4 million pounds (dressed weight) in 1988 to a low of 228 thousand pounds in 2010." - The Board notes that recent salmon fishery closures have resulted in economic losses estimated at \$45 million. [Footnote 40: Staff Report, p. 8-105.] However, the Board should conduct an additional analysis of total value the California fishing industry has lost over time due to poor ecological conditions caused by excessive water diversions, presented in 2024 dollars. - The Board should conduct an analysis of the full economic value of salmon fishing related jobs off the water.	Please see the response to Comment 277-15. In addition, the geographic scope of the economic analysis presented in the 2023 draft Staff Report is adequate under the Porter-Cologne Water Quality Control Act. Please see Common Response 1.2, Water Quality Control Planning Process, for further discussion on consideration of factors under Water Code section 13241.

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		- The Board should conduct an analysis of the historic value (time period: before the decline of the Bay-Delta ecosystem) of all commercially significant fisheries in the Bay- Delta, including starry flounder, California bay shrimp, longfin smelt, delta smelt, salmon, steelhead and others, presented as 2024 dollars. - The current PFMC estimates of California salmon fishery value should be treated as a minimum value bookend. The Board should conduct an additional analysis to determine the maximum value bookend by estimating what the value of the commercial salmon fishery would be assuming 100% unimpaired flows and significant habitat restoration. This analysis should also be completed for other species of commercial significance in the Bay-Delta. - The Board should conduct additional economic analyses that considers commercial fishery impacts to Oregon. - Commercial Fisheries are a significant industry in California and thus this analysis should be given its own section, rather than being included under “8.6 Other Economic Effects.” 8.6.3 Ecosystem Services - This section gives only general conclusions without any attempt at quantification or analysis, essentially dismissing the value of ecosystem services. [Footnote 41: Staff Report, p. 8-108.] The Board should conduct an analysis of ecosystem services that would be improved or degraded by the Plan update.	
277	19	The Staff Report economic analyses demonstrate that reductions in irrigated agriculture revenues as a result of higher flow requirements are reasonable and manageable. Friends of the River et al. appreciates the Statewide Agricultural Production (SWAP) model analyses of changes in crop values by [sub-watershed], and percent unimpaired flow. These model results are incredibly important to understand the potential scale of impact that changes to the Bay-Delta Plan could have on irrigated agriculture. The model estimates that under a 75%	The Staff Report uses a reasonable and conservative approach to evaluating the potential agricultural economic effects of the flow scenarios. The economic analysis presented in Section 8.4, Agricultural Water Supply Economic Effects, considers two groundwater pumping conditions as “bookends” providing a range of effects, one that assumes maximum replacement of surface water with available groundwater, and the other with no replacement. These bookends provide a reasonable representation of the range of

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		unimpaired flow scenario, in the San Joaquin Valley, in a dry year, with no replacement groundwater pumping, change in crop revenue from existing would only be -4.6% (Table 2). [Footnote 42: Staff Report, Table 8.4-11.] Under the same conditions in the Sacramento Valley, change in crop revenue would be -9.8% (Table 2 [Exhibit 3]) [Footnote 43: Staff Report, Table 8.4-6.] (see also Staff Report Tables 8.4-9, 8.4-11, 8.4-4, and 8.4-6, presented in Appendix A [Attachment 1]). These values represent a modeled worst case scenario for irrigated agriculture revenue. That is, a dry year, with a 75% unimpaired flow requirement, and no replacement groundwater pumping. The model criteria “no replacement groundwater pumping” is a bookend that assumes groundwater would not be available to replace reductions in surface water beyond current use. [Footnote 44: Staff Report, p. 8-40.] Reduced irrigated agriculture revenues of 4.6% and 9.8%, which are worst case scenarios, are manageable and reasonable. Further, actual change in crop revenue of irrigated agriculture is likely to be less negative than the reported values of -4.6% and -9.8% for several reasons. First, regarding bookends, the Staff Report notes, “...the analysis captures the breadth of likely responses, which would be somewhere in between—meaning that water users likely would increase groundwater pumping to replace some amount of the reduced surface water supplies, but not at volumes sufficient to replace all of the reduced surface water supplies.” [Footnote 45: Id.] (Emphasis added). This implies that the actual reduction in revenue, and thus the worst case scenario impact to irrigated agriculture would be even less than the modeled outputs discussed above. Second, the Proposed Plan Amendments would include a 55% unimpaired flow requirement, with an adaptive range between 45%-65%. The SWAP model results for 55% unimpaired flow for the Sacramento River are -2.5% in an “Average” year and -4.7% in a “Dry” year; for the San Joaquin they are -1.2% and -1.9% respectively. [Footnote 46: See Staff Report Tables 8.4-9, 8.4-11, 8.4-4, and 8.4-6, presented in Appendix A.] Again, these are incredibly manageable changes in crop revenue as we transition	groundwater pumping levels that could occur as a result of reduction in surface water supply. As stated in Section 8.4, Agricultural Water Supply Economic Effects, the most likely outcome would fall between these bookends. Furthermore, as discussed in Section 8.4, Agricultural Water Supply Economic Effects, the SWAP model is not intended to capture the full set of water management actions that farmers may pursue in response to reduced water supplies. The SWAP model results should be considered an indicator of the change in crop acreage and agricultural economic effects that could occur under the proposed Plan amendments and other flow scenarios, but the actual outcome of revenue reduction may vary to some degree from the model results. Please see Common Response 8.1, Economic Analysis and Other Considerations, for additional discussion on the SWAP model and other water management actions.

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		to a Bay-Delta Plan that fully protects the most sensitive fish and wildlife beneficial uses. These numbers indicate that any further delay in that process is unreasonable and not justified. Friends of the River et al. acknowledge that, like any model, there are limitations to the SWAP model, including that it is intended to be a point-in-time comparison, it has limitations on complexities of groundwater modeling, its baseline, and that it does not capture some additional water management actions that irrigated agriculture could take to alleviate the impact of reduced water supplies. [Footnote 47: Staff Report, p. 8-41.] In comparison, one strength of the SWAP model is that it optimizes crop production by adjusting the crop mix, water sources and quantities used, and other inputs. Considering both the pros and cons of the SWAP model, FOR et al. find these results to be incredibly encouraging as we work toward a Bay-Delta Plan that protects all beneficial uses.	
277	20	[Exhibit 3: Table titled Table 2. Change in crop revenue from existing, assuming no replacement groundwater pumping]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	21	Alternatives The Preferred Alternative is unlikely to protect beneficial uses and is not supported by the best available science. The preferred alternative, or “Proposed Plan Amendments” [Footnote 48: Staff Report, p. 5-1.] include the addition of Plan objectives for inflows, cold water habitat, Delta outflows, Suisun Marsh, and interior Delta flows. The inflow objective 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.” [Footnote 49: Staff Report, p. 5-17.] The Staff Report also states that the proposed starting point for the flow level is 55%, and that “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...”	Please see Common Response 1.2, Water Quality Control Planning Process, on the consideration of beneficial uses and Common Response 3.1, Fish Protection, on the use of best available science and updates to scientific literature. CEQA does not require the identification of a “preferred alternative,” and the Staff Report does not do so. See also Common Response 7.24, Alternatives Analysis, for further explanation.

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		[Footnote 50: Staff Report, p. 5-16.] The thresholds referenced here are from Chapter 3 of the Staff Report, which is based on 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). However, since the 2017 Scientific Basis Report was finalized, numerous scientific papers have been published that significantly improve our understanding of the flow/survival relationship for Chinook salmon and other species that rely on the Bay-Delta.	
277	22	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 2019 (Michel) 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 outmigration. [Footnote 51: Michel, Cyril]. "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] A study published in 2022 (Hassrick et al.) 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. [Footnote 52: 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] A study published in 2020 (Sturrock et al.) found that lower flows delay juvenile outmigration timing and survival. [Footnote 53: 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] Further, the Board itself has acknowledged the strong relationship between flow and abundance [Exhibits 4 and 5] of Chinook salmon. [Footnote 54: Staff Report p. 3-44.]	See Common Response 3.1, Fish Protection, on use of best available science, updates to literature in Chapters 3 and 4, habitat benefit analyses and flow benefits analyses.

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		Other research has demonstrated that flow is an essential component of restored habitat, and that existing habitat, especially in the Delta, is not heavily used at current flows or population size. This suggests that habitat is not limiting population size. Authors Munsch et al. found in 2020 that, “for juvenile salmon [less than 55mm in size] to actualize benefits of restored habitats will likely require maintaining spawner abundances and flows at or above intermediate values.” Their findings indicated that flows of 17,000-26,000 cfs (measured at the mainstems of the Sacramento and San Joaquin Rivers) correlated with a marked increase in juvenile salmonids using Delta habitats. [Footnote 55: 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] In 2019, authors Henderson et al. found that off-channel (e.g. floodplain) habitat was not important at current salmon population sizes, stating, “[t]he most important [variable] affecting salmon survival was flow.” [Footnote 56: Henderson, Mark J., et al. "Estimating spatial-temporal differences in Chinook salmon outmigration survival with habitat-and predation-related covariates." Canadian Journal of Fisheries and Aquatic Sciences 76.9 (2019): 1549-1561. https://doi.org/10.1139/cjfas-2018-0212] Scientific research also demonstrates that critical flow thresholds greatly impact biological outcomes. Below them, aquatic species have severe survival consequences, and above them, aquatic species have the potential for population growth. A study in 2021 [Exhibit 6] found that a flow of 10,712 cfs (which the authors called the “historic mean”) at Wilkins Slough in the spring greatly improved survival in juvenile salmon migrating out to sea. [Footnote 57: 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] These authors also report that from 1993-2019 that flow (10,712 cfs) was only achieved in 37% of days during the April 15- May 15 peak outmigration period, and only 10% of days in below average water years. [Footnote 58: Id.] For comparison, the current baseline at	

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		Wilkins Slough is 5,000-7,000 cfs, 7,500-8,800 cfs at 55% unimpaired, and 10,000-11,700 cfs at 75% unimpaired. [Footnote 59: As noted by The Nature Conservancy in its presentation at the December 1, 2023 State Water Board hearing on the Draft Staff Report.] A separate study published in 2022 examined the relationship between survival and flow (measured at Freeport) on endangered juvenile winter-run Chinook salmon. They found that flow of 35-52,000 cfs at Freeport was strongly correlated with salmon survival, and that flows at Freeport were predictive of survival in other areas throughout the system. [Footnote 60: 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] Regarding habitat, these authors stated, "fish were likely to enter a large floodplain during flood conditions and that survival in the floodplain was comparable to the mainstem Sacramento River." [Footnote 61: Id. (emphasis added).]	
277	23	[Exhibit 4: Four graphs titled Figure 2. The relationship between juvenile salmon survival to adulthood (smolt-to-adult, or SAR) and flow during outmigration (left) and upwelling during the first spring at sea (right)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	24	[Exhibit 5: Excerpt from Figure 3.4-12, Mean Catch of Unmarked Chinook Salmon Smolt per Cubic Meter (x 1,000) in the Midwater Trawl at Chipps Island between April and June versus Mean Daily Sacramento River Flow (cfs) at Rio Vista between April and June from (a) 1978 through 1997 and (b) 1976 through 2015, from the 2023 Draft Staff Report]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	25	[Exhibit 6: Graph titled Figure 4. Thresholds of predicted survival as a function of flow at Wilkins Slough]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	26	The Staff Report claims that a juvenile Chinook salmon outmigration flow threshold (Feb-Jun) of >20,000 cfs at Freeport/Rio Vista would "increase abundance and survival of Chinook salmon populations." [Footnote 62: Staff Report, Table 3.4-7, p. 3-49.] However, as mentioned above, recent science indicates that increased survival during outmigration is	Please see Common Response 3.1, Fish Protection, on use of best available science and process for updates to literature in Chapters 3 and 4, frequency of flows and flow thresholds. As described in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, the flow thresholds identified from the scientific literature or estimated in the analyses should

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		associated with a critical flow threshold of 35-52,000 cfs at Freeport, which is approximately 35 miles upstream of Rio Vista. [Footnote 63: Hance, 2022.] This research indicates that a minimum flow of 20,000 cfs at Rio Vista would not be protective of fall-run or endangered winter-run Chinook salmon and thus not protect beneficial uses. In fact, such flows could cause further degradation or complete loss of some beneficial uses. The critical state of the listed winter- and spring-run Chinook salmon populations and the crash of the fall-run fishery indicates the need for drastic change in minimum flow standards. To achieve salmon recovery and protect a multitude of associated beneficial uses, science demonstrates that flows at Freeport of >35,000 cfs are the more likely minimum flows protective of juvenile Chinook salmon. The Board must designate a minimum flow that is conservatively protective, not the bare minimum estimates for survival. Thus, the Board should revise the Staff Report (Section 3.4.5 “Flow Effects on Salmonids”) to reflect the most recent science and update flow thresholds accordingly. Further, the Board must specify the frequency with which such a threshold must be met to achieve population growth. A similar flow/survival relationship is seen in many other species using the Bay-Delta and its tributaries. For example, numerous studies have shown longfin smelt abundance is closely linked to spring/summer Delta outflow. [Footnote 64: United States Fish and Wildlife Service, California Department of Fish and Wildlife. Species Status Assessment for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt. U.S. Fish and Wildlife Service. San Francisco Bay-Delta Fish and Wildlife Office, Sacramento, California. 2022. https://ecos.fws.gov/ServCat/DownloadFile/223002] This well-established relationship is acknowledged and described by the Board in its 2017 Scientific Basis Report. [Footnote 65: 2017 Scientific Basis Report, p. 3-55 to 3-56.] Longfin smelt depend on adequate freshwater flows into the estuary, especially during spring and summer, for successful spawning, egg incubation, larval transport, juvenile rearing habitat, and food production. Further, in its proposal to list the longfin smelt as endangered under the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) identified reduced flows as the primary threat to longfin smelt viability [Exhibit 7]. [Footnote	not be taken to represent absolute flow needs that must be met at all times or in all years to support native species. Rather, they serve as indicators of conditions that favor native species and constitute a set of quantifiable metrics that can be used to assess the relative benefits expected from a range of flows. In addition, Chapter 3 has been updated with literature review of recent science and updated ecological flow thresholds, and Section 13.5, Beneficial Environmental Effects, includes analysis of the expected frequency of achieving updated flow thresholds under different flow scenarios.

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		66: United States Fish and Wildlife Service. “Endangered and Threatened Wildlife and Plants; Endangered Species Status for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt.” 87 FR 60957. (Oct. 7, 2022). https://www.federalregister.gov/documents/2022/10/07/2022-21605/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-the-san-francisco] In addition, the Longfin Smelt is listed as threatened under the California Endangered Species Act (CESA).	
277	27	[Exhibit 7: Graph titled Figure 5 (left). Fall Midwater Trawl Index values for longfin smelt demonstrating a strong positive relationship between population size and Jan-June Delta outflow]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	28	[Exhibit 8: Graph titled Figure 6 (right). Probability of population growth for longfin smelt demonstrating a 50% probability threshold at 42,800 cfs, and greater probability of population growth with greater flows]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	29	The 2017 Scientific Basis Report and the Staff Report claim that a January-June Delta outflow of 42,800 cfs is “indicated to be protective of Longfin Smelt recruitment.” [Footnote 69: 2017 Scientific Basis Report, Table 3.5-1, p. 3-60.] However, the confidence interval associated with this threshold (Figure 6 [Exhibit 8]) also includes the potentially low probability of population growth (30%). Thus, the estimated “protective” threshold of 42,800 cfs Delta outflow is on the very cusp of population growth and may not be protective of Longfin Smelt. Further, recent unpublished findings by Baykeeper [Exhibit 9] suggest that Longfin Smelt population growth does not begin until Jan-Jun Delta outflows near 60,000 cfs. [Footnote 70: See “Longfin Smelt Population Growth 1988-2022” table presented by San Francisco Baykeeper at the December 1, 2023 State Water Board hearing on the Draft Staff Report.] The Longfin Smelt was once one of the most abundant species in the San Francisco Bay-Delta estuary. Given its drastic state of decline, its listing as threatened under CESA, and pending listing as endangered under the ESA, the Board should choose a more conservative approach to “protective” flows – one that has a high probability to assist in species recovery. Observed/empirical data provided by Baykeeper indicate that a Delta outflow threshold of greater than 60,000 cfs could contribute to species recovery and	See Common Response 3.1, Fish Protection, on use of best available science and the process for updates to literature in Chapters 3 and Chapter 4, and flow benefits analyses. See also Common Response 1.2, Water Quality Control Planning Process, on reasonable protection of fish and wildlife beneficial uses. As described in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, the flow thresholds identified from the scientific literature or estimated in the analyses should not be taken to represent absolute flow needs that must be met at all times or in all years to support native species. Rather, they serve as indicators of conditions that favor native species and constitute a set of quantifiable metrics that can be used to assess the relative benefits expected from a range of flows. In addition, Chapter 3 has been updated with literature review of recent science and updated ecological flow thresholds, and Section 13.5, Beneficial Environmental Effects, includes analysis of the expected frequency of achieving updated flow thresholds under different flow scenarios.

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		protection of beneficial uses. The Board should revise the Staff Report (Section 3.5.4 “Flow Effects on Longfin Smelt”) to reflect a flow threshold that is more likely to achieve recovery of Longfin Smelt. Further, the Board must specify the frequency with which such a threshold must be met to achieve population growth. Additional recent scientific findings demonstrate similar flow thresholds for numerous other species and estuarine prey items. For more discussion of scientific research on critical flow thresholds for Delta species of significance, please refer to the comments of Baykeeper et al., incorporated herein.	
277	30	[Exhibit 9: Graph titled Figure 7. The relationship between population growth (or decline) and Delta outflow is statistically positive and significant ($r=0.432$, $P<0.01$)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	31	The above discussion demonstrates that flow is a master variable for biological outcomes. Adequate flow is closely related to survival of multiple species and is needed to activate aquatic habitats. Recent science suggests that habitat is not currently limiting depressed populations, and that there are meaningful biological flow thresholds related to survival. Flows below such thresholds will not achieve reasonable protection of beneficial uses. According to the Staff Report, the Proposed Plan Amendments to add a 55% unimpaired flow with an adaptive range of 45-65% often does not meet critical biological flow thresholds. According to Board modeling, 55% unimpaired flows would rarely achieve the scientifically supported biological thresholds described above. [Footnote 71: Staff Report, Figures A1-35 and A1-48.] The Staff Report must demonstrate that the 55% unimpaired flow proposal will achieve reasonable protection of fish and wildlife beneficial uses and the objectives of the Plan. Incremental progress is not reasonable protection. The Board should conduct a literature review of recent science, some of which is referenced above, to update flow thresholds to reflect the best available science. These updated thresholds must include frequency metrics describing how often flow criteria must be met to recover fish and wildlife populations and protect related beneficial uses. The Board must also apply to its analysis its responsibility to protect the most sensitive beneficial uses under § 131.11 of the Clean Water Act.	See Common Response 3.1, Fish Protection, on use of best available science and flow benefit analyses. See also Common Response 1.2, Water Quality Control Planning Process, on reasonable protection of fish and wildlife and consideration of beneficial uses. As described in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, the flow thresholds identified from the scientific literature or estimated in the analyses should not be taken to represent absolute flow needs that must be met at all times or in all years to support native species. Rather, they serve as indicators of conditions that favor native species and constitute a set of quantifiable metrics that can be used to assess the relative benefits expected from a range of flows. In response to public comments, Chapter 3 has been updated with literature review of recent science and updated ecological flow thresholds, and Section 13.5, Beneficial Environmental Effects, includes analysis of the expected frequency of achieving updated flow thresholds under different flow scenarios.

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277	32	The No Project and Low Flow Alternatives will not reasonably protect beneficial uses, the public trust, or achieve Plan objectives. Under the No Project Alternative (Alternative 1), real Delta inflows and outflows significantly exceed the minimum flows required under D-1641. These unprotected flows are expected to be further diminished over time do to “continuation of increasing water demands.... based on observed historical conditions in the absence of instream flow protections.” [Footnote 72: Staff Report, p. 7.2-4.] In addition, this alternative would likely result in the continuation of abuse of the Temporary Urgency Change Petitions (TUCP) process, and continued collapse of the Bay-Delta ecosystem, including complete loss of endangered species. This alternative is wholly inadequate to reasonably protect beneficial uses, or public trust resources.	The Staff Report includes the No Project Alternative because the CEQA Guidelines provide that the potential impacts of not approving a proposed project are evaluated under a No Project Alternative. “The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project” (Cal. Code Regs., tit. 14, § 15126.6). Under the No Project Alternative, the 2006 Bay-Delta Plan and requirements under D-1641 would continue. At the time of the last Sacramento/Delta amendment and adoption of D-1641, those requirements were formed to reasonably protect beneficial uses, or public trust resources. Please see Common Response 1.3, Revised Proposed Plan Amendments, for a discussion of TUCPs. Please see Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses and public trust.
277	33	The No Project and Low Flow Alternatives will not reasonably protect beneficial uses, the public trust, or achieve Plan objectives. The Low Flow Alternative (Alternative 2), would establish new and modified objectives similar to that of the Proposed Plan Amendments, with one key exception – the numeric inflow objective 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.” [Footnote 73: Staff Report, p. 7.7-7.] We submit that, considering the evidence presented above in Section IV(a), the Low Flow Alternative would not achieve biologically significant flow thresholds to support recovery of the Bay-Delta ecosystem. Thus, this alternative would fail to protect fish and wildlife beneficial uses or public trust resources and should be excluded from further consideration.	The quoted statement from the Staff Report does not state that the Low Flow Alternative would not achieve the purpose and goals of the project and does not state that it would not provide reasonable protection of beneficial uses. Please see Section 7.24.3.6, Achievement of Project Purpose and Goals of the Low Flow Alternative (Alternative 2), of the 2023 draft Staff Report. Also see Common Response 1.2, Water Quality Control Planning Process, on the consideration of beneficial uses and public trust.
277	34	The High Flow Alternative could negatively impact cold water management, and thus beneficial uses, but could be improved by additional analysis.	Please see Common Response 7.1, General CEQA and Approach to the Analysis, for information on the level and scope of the analysis. As described in Section 6.2.2 Unimpaired Flow Scenario Assumptions, of the 2023 draft Staff Report, carryover storage

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		The High Flow Alternative (Alternative 3) would establish new and modified objectives similar to that of the Proposed Plan Amendments, with one key exception – the numeric inflow objective would range from 65-75% unimpaired flows. This alternative is more likely to achieve biologically significant flow thresholds to support recovery of the Bay-Delta Ecosystem, but comes with significant drawbacks, especially in balancing flows with cold water pool management. Per the Staff Report, “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.” [Footnote 74: Staff Report, p. 7.2-8.] Temperature management for Chinook salmon and steelhead would be particularly challenging in the Sacramento, Feather, and American Rivers. [Footnote 75: Id.] Cascading impacts on other wildlife species are also expected, including reduced water supply to wildlife refuges, and conversion of rice acreage reducing migratory waterfowl habitat. [Footnote 76: Staff Report, Appendix F. Impact Summary Table for Alternative 3.] The High Flow Alternative shows promise, but its critical deficiencies cannot be ignored. Friends of the River et al. request additional analysis of the High Flow Alternative to better understand potential benefits and impacts: - Analysis of the High Flow Alternative with additional flexibility to manage and conserve reservoir cold water pools and habitats throughout the Phase II area. This could include, but is not limited to, a more tailored approach to inflow requirements with specific focus on conserving cold water pools or reduced Delta	was modeled alongside the inflow requirements for all flow scenarios, including the high flow. All flow scenarios, including the high flow alternative, were modeled and analyzed in Chapter 6, Changes in Hydrology and Water Supply, Chapter 7, Environmental Analysis, and Chapter 8, Economic Analysis and Other Considerations, of the 2023 draft Staff Report. In addition, the High Flow Alternative was adequately analyzed in Section 7.24, Alternatives Analysis, of the 2023 draft Staff Report. Please see Common Response 7.24, Alternatives Analysis, for more information on the analysis of alternatives; Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, for information on the scope of the water temperature analysis and constraints that would result from the combination of carryover storage and higher flow requirements; and Common Response 1.2, Water Quality Control Planning Process, on the consideration of beneficial uses and public trust. As described in Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, of the 2023 draft Staff Report, the cold water habitat objective could be implemented through non-flow measures, which could include fish passage improvement projects. See Common Response 1.3, Revised Proposed Plan Amendments, for further information on regulatory pathway implementation of the cold water habitat objective.

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		inflow requirements. - Analysis of opportunities to return salmon to historic high elevation habitats to reduce reliance on cold water pool management. - Analysis of the ability of Phase II area reservoirs to meet cold water management objectives into the future. Recent research has demonstrated that most California reservoirs cannot provide reliable cold water pool resources, with Shasta being a key exception. [Footnote 77: Willis, Ann D., Ryan A. Peek, and Andrew L. Rypel. "Classifying California's stream thermal regimes for cold-water conservation." PLoS One 16.8 (2021): e0256286. https://doi.org/10.1371/journal.pone.0256286] This study emphasized the importance of groundwater-fed streams for cold- water species conservation. - Analysis to better understand if and how groundwater-fed streams can be prioritized as a mechanism for conserving cold water habitats to mitigate for reduced cold water pools in the framework of the High Flow Alternative. [Footnote 78: See Willis (2021) for additional discussion of groundwater-fed and groundwater-dominant streams, including specific locations with increased habitat value.] Friends of the River et al. ask that these additional analyses are completed and used to improve the High Flow Alternative and then circulated for public review with the next version of the Draft Staff Report.	
277	35	Modular Alternatives Alternative 4a: Exclusion of Interior Delta Flow and Fall Delta Outflow Related Amendments Alternative 4a would exclude the new interior Delta flow and fall Delta outflow objectives from the Proposed Plan Amendments and other flow alternatives. A key change under this alternative would be the removal of the new inflow-to-export (I:E) provisions from the Proposed Plan Amendments and other alternatives. In real terms, this alternative would exclude from	Alternative 4a (Exclusion of Interior Delta Flow and Fall Delta Outflow Related Amendments Alternative) evaluates the effects of excluding the new interior Delta flow and fall Delta outflow components of the proposed Plan amendments and other flow alternatives that are based on BiOp and ITP provisions. Because the Old and Middle River flow, DCC gate closure, and fall Delta outflow provisions of the proposed Plan amendments are largely consistent with current and expected future conditions, removal of these provisions would not be expected to result in substantial changes to project operations. However, removal of the export constraints based on San Joaquin River inflows (I:E) could have a

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		the Bay-Delta Plan export restrictions and reverse flows at Old and Middle River. These are critical issues impacting beneficial uses in the Bay-Delta. The Board cannot rely on other governing bodies to adequately address these issues and must instead include protective measures for interior Delta flow and fall Delta outflow in the Plan. The Board should remove alternative 4a from further consideration.	larger effect if those provisions are not maintained into the future. Accordingly, this alternative largely evaluates removal of the new I:E provisions from the proposed Plan amendments and other flow alternatives. As discussed in Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, of the Staff Report, the BiOps and ITP have changed since the 2018 Framework was released identifying the proposed Plan amendments. As also discussed in Chapter 5, the 2019 changes to the BiOps are under litigation and associated court orders and the BiOps and ITP are in the process of being updated further, in part to resolve the litigation. Those updates are expected to result in changes to interior Delta flow constraints. Alternative 4a provides information about water supply costs of backstopping the baseline in the proposed Plan amendments and potential impacts that could result if ESA requirements were not backstopped and were changed.
277	36	Modular Alternatives Alternative 4b: Head of Old River Barrier Alternative The Head of Old River Barrier (HORB) alternative would require DWR and Reclamation to install and operate a physical barrier at the head of Old River to prevent entrainment at the CVP and SWP pumping facilities for an interim period of 10 years [Footnote 79: Staff Report, p. 7.24-40.] This barrier would be installed for several months in the spring to reduce impacts to juvenile outmigrating salmon, and several months during fall to protect migrating adult salmon by improving flow conditions. [Footnote 80: Id.] The HORB has been found to successfully protect juvenile salmon, [Footnote 81: Staff Report, p. 7.24-42.] but could increase Old and Middle River Reverse flows, and thus could increase entrainment risk for Delta smelt, longfin smelt, in the east and central Delta, especially larval and juvenile life stages. [Footnote 82: Id.] The HORB is generally not compatible with high flows. [Footnote 83: Staff Report, P. 7.24-43.] While this alternative does reduce impacts CVP and SWP pumping in the southern Delta, a more reliable and nature-based mechanism to reduce these impacts would be to require adequate flows in the San Joaquin River.	The 2023 draft Staff Report, including Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, and Section 7.2, Description of Alternatives, describes that implementation of Alternatives 2, 3, and the proposed Plan amendments would include recommendations for physical habitat restoration and other complementary ecosystem measures, as well as voluntary implementation plans (now referred to as local cooperative solutions) that could include habitat restoration. Please see Common Response 1.2, Water Quality Control Planning Process, on State Water Board's consideration of non-flow measures. Also see Common Response 1.3, Revised Proposed Plan Amendments, for more information on habitat restoration activities included in the revised proposed Plan amendments, and Common Response 7.24, Alternatives Analysis, regarding the reasonable range of alternatives. Historically, the "physical solution doctrine" refers to a specific legal remedy used by courts to resolve water rights disputes between senior water rights in light of the doctrine of reasonable use that applies to all water rights. "A water diverter can be compelled to employ a physical solution through which competing water demands can be met and the constitutional goal of promoting maximum beneficial use of the State's water

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		Friends of the River et al. appreciates the Board's application of the physical solution doctrine in considering requiring seasonal installation of the HORB in Alternative 4b. FOR et al. notes also that Alternatives 1-3 and the Preferred Plan Amendments lack physical solutions, while Alternative 6 (VAs) includes physical solutions. The inconsistent application of physical solutions bars a comprehensive comparison of alternatives and limits the public's ability to assess the whole of the action. A plug-and-play approach is not appropriate to fully ascertain whether alternatives will result in the reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta. The Board should develop a suite of potential physical solutions, conduct an analysis to prioritize solutions that will best contribute to achieving Plan objectives, and then revise each alternative to reflect this analysis. For further discussion of the physical solutions doctrine, please see the comments of Baykeeper et al., incorporated herein.	will be served." (State Water Board Decision 1631 (1994)) The comment appears to broaden the use of the term to apply any instance where construction projects or physical habitat restoration is suggested, regardless of whether it settles a water right dispute. Reference to the physical solution doctrine is not necessary and could cause confusion. The State Water Board has consistently acknowledged and incorporated flow and non-flow measures to comprehensively address Delta aquatic ecosystem and tributary ecosystem needs in all watersheds. The State Water Board's authority to require non-flow actions can be somewhat limited; however, the program of implementation identifies actions that other entities should take to address other ecosystem stressors and provides a framework to incorporate both flow and complementary ecosystem projects such as physical habitat restoration into local cooperative solutions (see Bay-Delta Plan, Section 4.4.2.4). Some complementary ecosystem projects may also serve as an implementation mechanism for the proposed cold water habitat objective. In addition, the VA pathway includes implementation of non-flow habitat restoration actions targeted at improving spawning and rearing capacity for juvenile salmonids, estuarine species, and other native fish and wildlife on a portion of the Sacramento/Delta tributaries for an initial 8 years (with the possibility to extend the term).
277	37	Modular Alternatives Alternative 4c: Extended Export Constraint The Extended Export Constraint Alternative would expand upon the Proposed Plan Amendment's San Joaquin River export limits (25-100% of San Joaquin River flows based on water year type for a 61-day window from April 1 through May 31), applying them to the entire San Joaquin River spring pulse flow period of February through June. [Footnote 84: Staff Report, p. 7.24-43.] This would provide greater protections to San Joaquin River salmonids and other Delta species of significance by providing more functional outflow from the San Joaquin River. The staff report states this could impact agricultural, municipal, and water supply to wildlife refuges and habitat for special- status	Alternative 4c, Extended Export Constraint, was adequately described in Section 7.2, Description of Alternatives, and adequately analyzed in Section 7.24, Alternatives Analysis, of the 2023 draft Staff Report. Please see Common Response 7.24, Alternatives Analysis, for more information on the description and analysis of alternatives. Mitigation specific to Alternative 4c could be considered if the State Water Board decides to move forward with this alternative.

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		terrestrial species. This alternative has great potential to meet plan objectives and improve fish and wildlife beneficial uses in the southern Delta. The Board should conduct additional analysis to improve this alternative, including what mechanisms exist to reduce water use in a tiered manner to mitigate potential impacts of this alternative on fish and wildlife beneficial uses. Such an analysis should evaluate the scenario of reductions in this order: agricultural, municipal, then wildlife refuges, with the goal of not further constraining limited wildlife habitats. Such an analysis could help determine how to best restore and protect fish and wildlife beneficial uses if this alternative is selected.	
277	38	Modular Alternatives Alternative 5a: Instream Flow Protection Provision The Instream Flow Protection Provision would allow the Board to curtail additional water rights when releases are being made (SWP/CVP) to meet Delta flow and water quality objectives. Currently only 115 of approximately 17,000 water rights holders are subject to "Term 91," which provides for the Board to curtail these users." [Footnote 85: Staff Report, p. 7.24-47.] This alternative would apply this type of approach to more senior water rights holders, requiring them to bypass flows to meet Bay-Delta Plan objectives. While FOR et al. supports expanding the Board's authority to issue curtailments to a broader suite of diverters, issuing and enforcing curtailments can be a clunky and protracted process, and carries with it the risk of delaying or not achieving Plan requirements. Droughts are part of California's hydrologic reality. The Board should work to develop a more proactive approach to reduce diversions and deliveries during droughts, and reduce reliance on curtailments and enforcement to protect beneficial uses. One potential benefit of this alternative is that it could help to avoid temperature management concerns below Project reservoirs [Footnote 86: Staff Report, p. 7.24-48.] by reducing the amount of water that must be released from Project reservoirs to meet Bay-Delta Plan objectives. Thus, this alternative has the potential to reduce the impacts of flow requirements in other alternatives (Proposed Plan Amendments,	Alternative 5a, Instream Flow Protection Provision, was adequately described in Section 7.2, Description of Alternatives, and adequately analyzed in Section 7.24, Alternatives Analysis, of the 2023 draft Staff Report. Please see Common Response 7.24, Alternatives Analysis, for more information on the description and analysis of alternatives.

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		Alternative 3) on cold water management. The Staff Report finds that this alternative could reduce the use of Temporary Urgency Change Petitions (TUCPs) and reduce to some degree water supply impacts to the CVP, SWP, and their contractors. [Footnote 87: Staff Report, p. 7.24-49.] Although TUCPs reduce flows in the Delta below already insufficient standards, they have been relied upon heavily in the last decade as a reactionary drought water management strategy. California Water Code clarifies that TUCPs are intended only for urgent issues that could not be avoided through due diligence. [Footnote 88: CA Water Code § 1435, subdivision (c).] Serial reliance on TUCPs is not consistent with California Water Code and FOR et al. supports actions that will reduce reliance on TUCPs. This alternative has potential but needs additional development and analysis for the public to truly ascertain how it would work in practice when combined with other alternatives. FOR et al. request that the Board revise this alternative to include additional analysis and description.	
277	39	Modular Alternatives Alternative 5b: Shared Water Shortage Provision The Shared Water Shortage Provision alternative would require all water right holders and claimants to reduce their consumptive use of water by a specific percentage to increase instream flows during drought periods. [Footnote 89: Staff Report, p. 7.24-50.] In essence, this provision attempts to equitably distribute the burden of drought across a broader group of water users rather than concentrating curtailments on certain users. In addition, the Staff Report finds that this provision could help avoid TUCPs and could result in more cold water storage. [Footnote 90: Id.] Distributing the responsibility of meeting instream flow requirements across more water users equitably would reduce the need for the CVP and SWP to make releases to meet those requirements, thus reducing the impetus for TUCPs and reducing impacts on cold water storage. Friends of the River et al. appreciates the idea of equitable distribution of drought impacts, as this will incentivize water efficiency	The 2023 draft Staff Report described the Shared Water Shortage Provision (Alternative 5b) in Section 7.2, Description of Alternatives, with sufficient detail for the purposes of the analysis, and this alternative was adequately analyzed in Section 7.24.6, Modular Drought Alternatives (Alternative 5a and 5b). Please see Common Response 7.24, Alternatives Analysis, for more information on the description and analysis of alternatives.

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		practices among water rights holders and claimants – especially those who have been exempt from historic curtailment. In addition, the Board should provide additional information and analysis of how this provision would be calculated and implemented in real time.	
277	40	Modular Alternatives Alternative 6a: Protection of Voluntary Agreement Flows The Protection of Voluntary Agreement Flows Alternative would protect Voluntary Agreement flows to ensure they are additive to D-1641 flows and the 2019 BiOps by not authorizing new or expanded points of diversion to divert water from January to June except when Delta outflows “were at levels determined in the State Water Board’s 2017 Scientific Basis Report...” [Footnote 91: Staff Report, p. 7.2-16.] In addition, the Fully Appropriated Streams listing at the Delta above Collinsville would be proposed to be expanded to include September through December except during high flows events. FOR et al. do not support the Vas as a package (discussed more below), and thus does not support this alternative on the grounds that it is a component of that VA package. Further, the D-1641 minimum flows are widely recognized as unprotective of beneficial uses and should not be used as a baseline from which to measure additional protected flows. The Staff Report demonstrates that a significant amount of the average Jan-June Delta outflow is unprotected. [Footnote 92: Staff Report, Figure 7.24.1.] Using D-1641 as the baseline for which to add VA flows could result in further reduction of average Delta outflow, which would not reasonably protect fish and wildlife beneficial uses, and would be likely to exacerbate the ecological crisis in the Bay-Delta. Scientific findings indicate that additional Delta outflow is needed, additive to existing average unprotected Delta outflow, to protect beneficial uses (discussed below). Moving the goalpost down to add flows back thus will not protect beneficial uses. For similar reasons, FOR et al. also do not support the use of the 2019 BiOps as a baseline condition. The Water Board should remove Alternative 6a from further consideration.	The purpose of Alternative 6a which was not carried forward as part of the revised proposed Plan amendments was to protect unprotected flows except during high flow events from future water supply projects. This alternative was meant to protect the VA base to preserve the benefits of the VAs while also allowing for the possibility for future water development during high flow periods when additional water diversions would be expected to have less effect on native species. Please refer to Staff Report Section 9.3.6, Points of Comparison for VA Flow Assets, and Common Response 6.2, Baseline and No Project Alternative, for a description of the baseline used to analyze the VAs. See also Common Response 1.2, Water Quality Control Planning Process, for details on the reasonable protection of beneficial uses. Please see Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for a description of the components of the revised proposed Plan amendments that were carried forward.

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277	41	The Voluntary Agreements are not the healthy rivers alternative. The proposed Voluntary Agreements (VAs) are unlawful because they are incomplete, not enforceable, will not achieve Plan objectives, will not protect beneficial uses, and are not based on the best available science	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses; Common Response 1.3, Revised Proposed Plan Amendments, for information on the operable provisions of the VA pathway, including enforceability; Common Response 3.1, Fish Protection, for information on the use of best available science; Staff Report Section 9.7.23, Ability to Achieve Project Purpose and Goals, for a discussion of the ability of the VAs to achieve the project purpose and goals; and Common Response 7.24, Alternatives Analysis, for additional discussion and information on the alternatives.
277	42	The VA Narrative Objective is inconsistent with Board policy and federal and state law, and must be rejected outright. The VA narrative objectives are inconsistent with the Staff Report's proposed objectives, the Board's Salmon Doubling Goal, and federal and state law. The narrative objective proposed by the VA framework is to: "Maintain water quality conditions, including flow conditions in and from tributaries and into the Delta, together with other measures in the watershed, sufficient to support and maintain the natural production of viable native fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include, but may not be limited to, (1) flows that support native fish species, including the relative magnitude, duration, timing, temperature, and spatial extent of flows, and (2) conditions within water bodies that enhance spawning, rearing, growth, and migration in order to contribute to improved viability. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity. Flows provided to meet this objective shall be managed in a manner to avoid causing significant adverse impacts to fish and wildlife beneficial uses at other times of the year." [Footnote 93: Staff Report, p. 9-7.] In addition, the VA parties will contribute to achieving the existing Narrative Salmon Protection Objective by 2050. (p. 9-5)	The proposed new narrative fish viability objective is additional to the current objectives. It would not replace or change any existing objectives such as the salmon protection objective. Please see Common Response 1.2, Water Quality Control Planning Process, for information on Porter-Cologne, Clean Water Act, and public trust requirements, as well as the reasonable protection of fish and wildlife beneficial uses. Also see Staff Report Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for information on the objectives and the VA pathway, including enforceability.

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		The VA objectives are in conflict with the Board's proposed objectives. The Board proposed new narrative and numeric objectives in the Plan to (1) maintain inflow conditions from the Sacramento River/Delta tributaries (2) maintain stream flows and reservoir storage conditions on the Sacramento River/Delta tributaries, and (3) maintain Delta outflows sufficient to support and maintain natural production of fish populations. [Footnote 94: Staff Report, Chapter 5.] Noticeably absent from the VA objectives is inclusion of specific requirements to maintain cold water habitat and suitable temperature and quantities of habitat on streams, which is a critical factor in Salmon survival, as previously described. The VA's narrative objective is also plainly inconsistent with the Board's established salmon doubling goal: "In 2006, the Water Board affirmed its priority to protect salmon and beneficial uses related to salmon. The 2006 Bay-Delta Plan states, "Water Quality conditions shall be maintained, together with other measures in the watershed, sufficient to achieve a doubling of natural production of chinook salmon from the average production of 1967-1991, consistent with the provisions of State and federal law." [Footnote 95: California State Water Resources Control Board. Bay-Delta Water Quality Control Plan. 2006. Table 3. "Salmon Protection Objective." https://h8b186.p3cdn2.secureserver.net/wp-content/uploads/2017/10/Bay-Delta-2006_plan_final.pdf] The VA objectives eliminated the requirement to achieve doubling of natural production of chinook salmon. Instead, the VA objective states they will contribute to achieving the existing Narrative Salmon Protection Objective by 2050. [Footnote 96: Staff Report, p. 9-5.] This is inconsistent with the Board's established salmon doubling goal. The proposed VA objective is also inconsistent with goals established in federal law to achieve the salmon doubling goal by 2002. Section 3406(b)(1) of the Central Valley Project Improvement Act directs the Secretary of the Interior to, "implement a program which makes all reasonable efforts to	

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		ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable...at levels not less than twice the average levels attained during the period of 1967-1991." The VAs would delay achievement of this goal until 2050, over four decades after Congress intended to restore sustainable natural production of native fish, and long after the VA initial term of 8 years. The unreasonable delay in meeting the salmon doubling goal as proposed by the VA narrative objective is inconsistent with federal law. The narrative objective proposed by the VAs will not provide for the reasonable protection of beneficial uses. The new objectives proposed by the VA parties will delay the salmon doubling goal for another 25 years and do not require that the VA parties achieve the salmon doubling goal within the timeframe of the program's implementation. Instead, the VA parties will merely contribute towards achieving the objective. Additionally, because the VA program is proposed to last for only eight years, the program will expire long before the 2050 deadline proposed for achieving salmon doubling. The VA objective lacks accountability and would allow the VA parties to abandon responsibility for meeting the salmon doubling goal altogether. This unreasonable delay and lack of accountability are inconsistent with the Porter-Cologne Water Quality Control Act and the Clean Water Act requirements, discussed in further detail in Section II of these comments, to establish water quality objectives for the reasonable protection of beneficial uses. The proposed VA objective is not consistent with state law requirements to protect the public trust. As described in Section II (d) of these comments, the Board has a duty to manage water as a public trust resource, even after an appropriation has been approved. The Board's public trust responsibility is not included or analyzed in the discussion of the VA proposal. The VA objective abandons responsibility to achieve the salmon doubling objective within the proposed time frame of the VA program implementation. This is inconsistent with the Board's public trust duty to protect aquatic resources and wildlife.	
277	43	As a package, the Voluntary Agreements are not based on the best available science and will not protect beneficial uses or	Please see Common Response 1.2, Water Quality Control Planning Process, for information on reasonable protection of

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		achieve objectives of the Plan. The proposed Voluntary Agreements are based on the premise that habitat can substitute for flow. However, as discussed above and throughout these comments, scientific findings published since 2017 have demonstrated, clearly, that flow is an unequivocal driver of habitat value, ecosystem processes, and biological cues. Critical flow thresholds throughout the Bay-Delta watershed determine survival outcomes for Central Valley Chinook salmon and other Bay-Delta species of significance. Delta habitats are not well occupied by juvenile salmonids below certain flow thresholds, but are well occupied above biologically important thresholds. And further, juvenile salmon outmigrants who use floodplain habitat do not have increased survival compared to those that do not. These and other recent findings [Footnote 97: Please refer to Baykeeper et al.] strongly suggest that, at current flows, habitat is not limiting population growth or recovery. While habitat is an important component of a successful Bay-Delta Plan, habitat restoration cannot be the primary mechanism with which to achieve protection of beneficial uses in the San Francisco Bay-Delta watershed. The VA proposal offers a pittance of additional flows to the Bay-Delta watershed, ranging from less than half of one percent to little more than two percent depending on water year type (Table 3 [Exhibit 10]), assuming these flows would actually materialize (we submit that they will not). These additional flows are arbitrary and not biologically significant, and thus are a continuation of the same status quo water management that caused the Board to conclude that its current water quality standards were “insufficient to protect fish and wildlife.” [Footnote 98: 2017 Scientific Basis Report, p. 1-5.] The proposed VA Assets will do little to meaningfully change Delta inflow. The proposed volumes, if used in their entirety, could only help achieve Longfin Smelt population growth a maximum of 14.6 days per year. In critical years, the proposed VA Asset volume could only do this for 2.5 days (Table 3, last row). The reality is that this is not an improvement on current water quality standards. Further, the Staff Report demonstrates that the VA proposal will	fish and wildlife beneficial uses, and the Scientific Basis Report Supplement (Appendix G2) for an analysis of the expected benefits of the VAs.

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		result in an overall net reduction in flows in some water year types (Table 4 [Exhibit 11]), and that flow increases in the Jan-June time period are offset by reduced flows during Jul-Dec. [Footnote 99: Staff Report, p. 9-44.] A net flow reduction occurs in Critical water year types. This goes directly against best available science that demonstrates a crucial need for additional flow, especially in dry years, to improve survival of anadromous and estuarine species, and to protect related beneficial uses.	
277	44	[Exhibit 10: Table titled Table 3. Analysis of VA Assets by Water Year Type]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	45	[Exhibit 11: Table titled Table 4. Net Change in Delta Inflow by Water Year Type (TAF/yr) for the Proposed VA Scenario]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	46	[Exhibit 12: Graphic modified by commenter of Figure 9.5-19, Monthly South of Delta Exports for Baseline, 2008–2009 BiOps Condition, VA, and VA High Export Cuts Scenarios, from the 2023 Draft Staff Report]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	47	Further, the VA proposal results in increased South of Delta exports in all years compared to the 2008-2009 BiOps condition [Exhibit 12]. The Staff Report states, “Generally, compared to the 2008-2009 BiOps condition, exports could increase between 123 and 249 TAF for the VA High Export Cuts and VA scenarios, respectively.” [Footnote 100: Staff Report, p. 9-46. (emphasis added).] These net increases in exports occur in all but Critical water year types. [Footnote 101: Staff Report, Table 9.5-38.] The issue with increased exports is exacerbated by the timing of these increased exports. Figure 9.5-19 of the staff report shows that under the VA proposal, exports will increase relative to the 2008-2009 BiOps condition in October, November, April, and May, with significant increases in April and May. These are critical months for salmon out-migration and other Bay-Delta species of significance. This is precisely the period of time that should have greater constraints on exports to protect Delta outflow, not less. Further, increased exports as a result of the VAs is not consistent with the Delta Reform Act policy of reducing reliance on the Delta in meeting the State’s water supply needs.	Please see Staff Report Sections 9.7.6.2 and 13.7.6.2, Aquatic Biological Resources, for the analysis of the impacts of the VA pathway on aquatic biological resources and see the Scientific Basis Report Supplement (Appendix G2 to the Staff Report) for an analysis of the benefits of the VA pathway. Please see also Common Response 1.2, Water Quality Control Planning Process, for information on the reasonable protection of fish and wildlife beneficial uses, and Common Response 1.3, Revised Proposed Plan Amendments, for a discussion of the VAs.

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277	48	The proposed VA Assets are clearly inadequate to achieve the existing narrative salmon protection objective or protection of a multitude of beneficial uses. Flows provided in all water year types by the VA proposal are inadequate to meet ecosystem needs, and in critically dry years, the VA proposal will result in net negative flows. Meager flow increases and are often offset later in the year or by increased South of Delta exports during periods of biological significance.	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the reasonable protection of fish and wildlife beneficial uses.
277	49	The VA proposal, on its face, violates the Porter-Cologne Water Quality Control Act, the Clean Water Act, the Delta Reform Act, and the Constitutional principle of public trust, and will not achieve the objectives of the plan. The Staff Report demonstrates that the Voluntary Agreement proposal will not result in healthy rivers. The Board should exclude the Voluntary Agreement package from further consideration.	Please see Common Response 1.1, General Comments; Common Response 1.2, Water Quality Control Planning Process; and Staff Report Section 9.7.23, Ability to Achieve Project Purpose and Goals, for a discussion of the ability of the VAs to achieve the project purpose and goals.
277	50	Not all Voluntary Agreements are created equal: The VA proposal will result in disparate impacts across watersheds. Below, Friends of the River et al. discuss two examples of voluntary processes to examine potential outcomes of the VA proposal on the watershed scale – one on the American River and one on the Yuba River. The negative impacts of the VA proposal are less for the American River due to a local collaborative water management forum. Negative impacts of the VA proposal will be greater on the Yuba River, which has a history of voluntary process that has failed to meet its objectives. As discussed above, taken as a package, the Voluntary Agreements will not achieve the objectives of the Bay-Delta Plan. The American River case example demonstrates the benefits of an inclusive and scientifically rigorous process. While the Yuba case example demonstrates the perils of self-regulation by the parties with the most self-interest to maintain the status quo. A successful voluntary process: The American River Voluntary Agreement is predicted to align with the Regional Water Authority and Water Forum objectives and history of success. In 2000, environmental, business, public and water industry stakeholders came together to sign the landmark Water Forum Agreement [Footnote 102: Of which Friends of the River is a	Please refer to Common Response 1.2, Water Quality Control Planning Process, for a discussion of the reasonable protection of fish and wildlife beneficial uses. Also see Common Response 1.3, Revised Proposed Plan Amendments, for details on the VAs, including oversight and evaluation of the effectiveness of the VAs.

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		signatory and was instrumental in developing. Friends of the River remains a senior member of the Water Forum today, leading negotiations in the Water Forum Agreement 2.0 process.], a visionary long-term plan created to balance two co-equal objectives: Provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030; and Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. During the past 24 years of implementation of the agreement, the inclusive structure, consensus process and rigorous science has resulted in meaningful efforts to balance water scarcity, competing interests, environmental stress, and population growth. The Agreement established pre SGMA regional groundwater management, brought key urban water conservation programs to the region, established new limitations on diversions, created temperature management and flow management programs for Reclamation's operations at Folsom Reservoir, and created and implemented mechanisms for habitat restoration along the lower American River. [Footnote 103: The Water Forum. "The Water Forum Agreement." https://www.waterforum.org/wp-content/uploads/2020/10/WaterForum_Brochure_Final_SinglePages-1.pdf] The Sacramento Regional Water Authority (RWA) is the signatory to the American River Voluntary Agreement. The RWA is informed by the Water Forum agreement and process. Hence, the American River VA has had the benefit of consideration and consensus building from environmental, business, public and water industry stakeholders who have decades of experience with complex and competing demands of flow, temperature, and supply under conditions of scarcity and excess. The Water Forum and its related VA proposal is an exceptional example of what a successful voluntary agreement to the Bay-Delta Plan could be. However, the Forum was born out of exceptional circumstances, and has important elements of success that are not replicated in some other watersheds in the VA package. For example, the Forum has worked to build trust among its members for decades, has achieved local buy-in, and it	

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		is by definition an inclusionary process. By comparison, some other proponents of Voluntary Agreements have excluded key local stakeholders from their VA development processes. The American River voluntary agreement is not an attempt to evade regulation, but rather, to protect the Forum's legacy of working together to protect and enhance beneficial uses on the American River. The success of the Forum also demonstrates that, for any chosen alternative, respect and inclusion of primary stakeholders representing the environment and the public is non- negotiable. A failed voluntary process: The Lower Yuba River Accord has failed to restore fisheries on the Yuba River. The Lower Yuba River Accord (Yuba Accord) is a settlement agreement implemented in 2008 after a series of legal battles over instream flows on the Yuba River. [Footnote 104: Water Education Foundation. The Lower Yuba River Accord: From Controversy to Consensus. 2009. https://www.yubawater.org/DocumentCenter/View/84/Lower-Yuba-River-Accord-Overview-PDF] This agreement was signed by Yuba Water Agency (YWA), the California Department of Fish and Wildlife (CDFW), and several NGOs, including Friends of the River. The intent of the Accord was to establish protective instream flows, along with other measures, to restore and sustain Yuba fisheries, including salmon and steelhead. The Yuba Accord consists of a Fisheries Agreement, [Footnote 105: Lower Yuba River Fisheries Agreement. 2008. https://www.yubawater.org/DocumentCenter/View/68/Fisheries-Agreement-PDF] Water Purchase Agreement, [Footnote 106: California Department of Water Resources and Yuba County Water Agency. Agreement for the Long- term Purchase of Water from Yuba County Water Agency by the Department of Water Resources. December 4, 2007. https://www.yubawater.org/DocumentCenter/View/83/Water-Purchase-Agreement-PDF] and Conjunctive Use Agreement. [Footnote 107: The Proposed Lower Yuba River Accord Conjunctive Use Agreements Technical Brief. https://www.yubawater.org/DocumentCenter/View/86/Conjunctive-Use-Agreement-PDF] The Fisheries Agreement established	

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		a flow schedule (Figure 9 [Exhibit 13]), funding for a “River Management Team” (RMT) to monitor and assess effectiveness of the Yuba Accord, and a fund for research and restoration. The flow schedule was a centerpiece of negotiations on the Yuba and was incorporated into Yuba Water Agency’s federal operating license for its hydroelectric project. Despite implementation of the Yuba Accord, Yuba salmon populations have continued to crash (Figure 9). In recent years, escapement has achieved less than 8% of the Anadromous Fish Restoration Program (AFRP) doubling goal (Figure 10 [Exhibit 14]). The 2022 total population estimate for (combined spring- and fall-run) Chinook salmon was only 3,164 fish, [Footnote 108: Lower Yuba River Accord Monitoring and Evaluation Plan. Chinook Salmon Escapement Technical Memorandum. Fall 2022. Colin Laubach. The Pacific States Marine Fisheries Commission. Internal Review Draft.] -- less than 5% of the doubling goal. Yuba Central Valley Spring-run Chinook salmon have declined 99.7% from their historic population size, with a current average run size of 439 individuals (Figure 11 [Exhibit 15]). [Footnote 109: Goodearly, Tyler and Zettler-Mann, Aaron. Salmon and River Restoration: Floodplains Fatten Fry. June 15, 2021. Powerpoint Presentation.] Additionally, Yuba Steelhead have declined 98.8-99.4% from their historic population size, with a current average run size of only 91 individuals (Figure 11). [Footnote 110: Id.] For comparison, this is the equivalent of Sacramento’s population dropping to only 15,700 people. Even in this dire state, salmonids are incredibly resilient and populations can rebound quickly if given proper resources. One specific failure of the Yuba Accord is its inability to manage water temperature for anadromous fish. The 2017 Scientific Basis Report reads, As noted in [Water Right Order 2008-0014], water temperature data from the lower Yuba River indicate that operations under the Yuba Accord flows do not meet CDFW’s and NMFS’s maximum water temperature requirements for anadromous fish in the months of May through September, even in wet years. In addition, wet year Yuba Accord flows did not meet the index temperature of 60° F in August and September. [Footnote 111:	

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		Staff Report, Appendix B, 2017 Scientific Basis Report, p. 5-38.] High temperatures have been documented to result in stress impacts on salmonids related to growth, survival, reproductive success, migration success, physiological processes, disease, feeding, swimming, etc. Temperatures greater than 86°F (30°C) can be immediately lethal, [Footnote 112: Hicks, Mark. Evaluating standards for protecting aquatic life in Washington's surface water quality standards: temperature criteria. Olympia, WA: Washington State Department of Ecology, 2000.] and extended exposure to water temperatures of 77.2°F (25.1°C) can cause 50% death in a population. [Footnote 113: Brett, John Roland. "Temperature tolerance in young Pacific salmon, genus <i>Oncorhynchus</i>." Journal of the Fisheries Board of Canada 9.6 (1952): 265-323. https://doi.org/10.1139/f52-016] It is well documented that high temperatures have deleterious or lethal effects on salmonids. [Footnote 114: For extended discussion of salmonid thermal tolerances, see also: Richter, Ann, and Steven A. Kolmes. "Maximum temperature limits for Chinook, coho, and chum salmon, and steelhead trout in the Pacific Northwest." Reviews in Fisheries science 13.1 (2005): 23-49. https://doi.org/10.1080/10641260590885861] Flow can be a driver of temperature in highly modified rivers. Yuba Water Agency serially attempts to circumvent flow requirements on the Yuba River, and is often successful at doing so within the current regulatory framework. YWA's FERC license for its Yuba River Development Project (YRDP) requires a pulse flow from January 1-15 of 1,030 cfs (measured at the Smartsville Gage on the lower Yuba River). However, YWA frequently seeks a "Temporary Variance" from FERC to forego this pulse flow requirement and instead release approximately 580 cfs (450 less cfs per day, or a 15-day total savings of 13,338 acre-feet). YWA sought and received similar flow variances in 2004, 2007, 2008, 2009, 2011, 2013, 2015, 2016, and 2021, [Footnote 115: Foothills Water Network. "Motion to Intervene by Foothills Water Network, American Rivers, American Whitewater, California Outdoors, California Sportfishing Protection Alliance, Friends of the River, Gold Country Fly Fishers, Northern California Council Fly Fishers International, Sierra Club Mother Lode Chapter South Yuba River Citizens League, and Trout	

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		Unlimited” for the Yuba River Hydroelectric Project, FERC Project P-2246- 094 Nov. 15, 2021. FERC eLibrary no. 20211115-35178.] and 2022. [Footnote 116: Yuba County Water Agency. “Request for Pulse Flow Variation from January 15, 2023.” Yuba River Hydroelectric Project, FERC Project P-2246-094 Sept. 6, 2022. FERC eLib. No. 20220906-5169.] In some of these same fiscal years that YWA claimed it didn’t have enough water to release a 15-day pulse flow, YWA appears to have profited greatly from water sales, exceeding \$51 million just as recently as 2022 (Table 5 [Exhibit 16]). This appears to be water that was sold at the expense of public trust resources. The 1,030 cfs pulse flow is an ecologically important attraction flow to draw spawning adult steelhead to the Yuba River. Without it, steelhead could miss the environmental cue to enter the Yuba River. In claiming to not have enough water to provide a FERC-ordered pulse flow while apparently having enough surplus water to sell out-of-county. If anything, this is certainly not a demonstration of good faith in achieving fisheries restoration on the Yuba River. Another issue with the Yuba Accord is that flows provided in the flow schedule are not sufficient to inundate restored floodplain habitats on the Yuba River. According to the Draft Voluntary Agreement Strategic Plan, 100 acres of restored floodplain habitat on the Yuba river would be activated at flows of 2,000 cfs. [Footnote 117: Staff Report, Appendix G, Voluntary Agreement Proposal, Draft VA Strategic Plan, p. 63.] However, this flow is only achieved in one month (May) of the wettest years in the Yuba Accord flow schedule (Figure 9 [Exhibit 13] above). January through May are the most important months for floodplain inundation to support juvenile rearing and outmigration. Flows in addition to the Yuba Accord flow schedule will be needed to provide floodplain habitat. The proposed VA asset for the Yuba River is 50,000 acre-feet, [Footnote 118: Staff Report, Table 7.2-1.] which will be additive to Yuba Accord flows. [Footnote 119: Staff Report, Appendix G, Voluntary Agreement Proposal, Draft VA Strategic Plan, p. 18.] The Yuba VA asset could be used to resolve the deficit between Yuba Accord flows and floodplain flows of 2,000 cfs. However,	

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		this volume of water would rarely be enough to make a meaningful difference biologically. Floodplain inundation must occur for a minimum of three weeks to realize trophic benefits for juvenile salmonids (food chain activation). Unfortunately, in January through April (15th) of every water year type, the proposed Yuba VA asset cannot provide enough additional water to inundate floodplain habitat at 2,000 cfs for a three-week duration (Table 6 [Exhibit 17]). In months where the deficit is small enough that the asset would augment floodplain flows, it could only do so for a maximum of 25 days in a given year (Table 6). This barely meets the minimum duration required for the floodplain food chain to activate. Further, some floodplain habitat (either restored or planned) on the Yuba River is not inundated until flows reach 5,000 cfs. [Footnote 120: Conway, Danielle. 17 Jan. 2024. Personal communication.] The Yuba asset could only augment these flows for a maximum of 6 days in a given year (Table 7 [Exhibit 18]). This is not long enough to achieve ecologically significant outcomes and is thus biologically meaningless for higher-flow floodplain habitats. Further, the Staff Report demonstrates that the proposed Yuba VA asset will do little to change the status quo on the Yuba River, and thus not protect beneficial uses. Flow increases in April are accompanied by flow decreases in many other months, including January, February, March, August, and September (Figure 12 [Exhibit 19]). Confidence intervals during juvenile rearing periods include flows that will not provide floodplain habitats. Thus, flows that will meaningfully benefit juvenile Yuba salmon are not guaranteed to be realized. And, as discussed above, greater flow from each sub-watershed is needed to meet flow thresholds that will improve survival outcomes for a multitude of species throughout the Bay-Delta watershed, including to support Yuba salmon on their journey to the sea. The only way to guarantee such flows is through regulation. In summary, 16 years after its inception, the Yuba Accord has yet to recover anadromous fisheries on the Yuba River. Recently completed and planned habitat restoration on the Lower Yuba could benefit salmonid populations, but scientific evidence strongly suggests that more flow is needed in the Yuba and throughout the system for salmon populations to rebound. In	

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		addition, current minimum flow requirements will rarely activate restored floodplain habitat, and the additional flows provided as Yuba VA assets can do little to augment this deficit in most months of most water year types. Without adequate flows, these restored floodplain habitats will not be useful to juvenile salmon. Further, temperature conditions on the Yuba remain hostile to salmonids during some parts of the year. Thus, a plan to recover salmon primarily through habitat measures is built to fail and will not protect beneficial uses. It is important to acknowledge that while Yuba fisheries remain at historic lows, Yuba Water Agency has taken many actions to avoid regulation, including, but not limited to: - Participation in the Voluntary Agreements; - Attempting to a “settle” remaining issues in its YRDP FERC license by trading flow for a controversial proposal to build a nature-like fishway around Daguerre Point Dam; - Serially requesting (and attaining) flow variances on its YRDP FERC license to forego a biologically significant pulse flow; - Sought (and received) waiver from FERC of the State Water Resources Control Board’s authority to issue a Clean Water Act § 401 water quality certification on its YRDP license; [Footnote 121: This waiver of state conditioning authority by FERC was, thankfully, overruled by the U.S. Court of Appeals for the Ninth Circuit in August 2022, after successful litigation by Friends of the River and other NGO partners. It’s worth nothing that YWA appealed this case to the U.S. Supreme Court, but the Court declined to hear the appeal.] and - Sued to challenge the State Water Resources Control Board’s Clean Water Act § 401 certification for YRDP. One possible interpretation of the above actions by YWA, when taken as a whole, is a demonstrated pattern of gaming the regulatory system where possible to maximize water supply. This is the unfortunate circumstance of water agencies – their business model is built on the foundational principle that more	

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		water means a bigger budget, more special projects, better salaries and benefits, professional recognition and more. Water agencies survive on extracting water to sell both water and power. This is exactly why they are not capable of regulating themselves. Fixing the damage they cause to the environment is in direct conflict with causing that damage in order to sell water and power. For these reasons, voluntary proposals, even once written in stone, carry the extreme risk of not protecting beneficial uses. The Yuba Accord demonstrates that the ability to reach an agreement does not guarantee the goals of such an agreement will be realized. The Accord is an example of the potential failure of voluntary workarounds in place of regulation.	
277	51	[Exhibit 13: Two tables titled Figure 9. Lower Yuba River Fisheries Agreement Exhibit 1. Instream Flow Requirements (flow schedule)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	52	[Exhibit 14: Graph titled Figure 10. Annual Chinook Salmon Escapement on the Lower Yuba River]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	53	[Exhibit 15: Table titled Figure 11. Percent decline of Yuba River salmon and steelhead from historic population size]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	54	[Exhibit 16: Table titled Table 5. YWA Revenue from Water Sales 2010-2022]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	55	[Exhibit 17: Table titled Table 6. Amount of days the proposed Yuba VA asset could resolve the flow deficit (to 2,000 cfs) if the total volume of the VA asset were applied in any given month (days)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	56	[Exhibit 18: Table titled Table 7. Amount of days the proposed Yuba VA asset could resolve the flow deficit (to 5,000 cfs) if the total volume of the VA asset were applied in any given month (days)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.

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277	57	[Exhibit 19: Figure G3a-28, Yuba River above Confluence with Feather River (SWRCB Yuba River) Monthly Boxplot, from the 2023 Draft Staff Report]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
277	58	The only real defense of beneficial uses is strong regulation. This is true on the Yuba, and this is true for most other tributaries to the Bay-Delta. The VA proposal is entrenched in risk, and the Bay-Delta cannot afford additional delay of action in order to accommodate either good- or bad-faith attempts to incorporate voluntary measures. The Water Board must reject the Voluntary Agreement package and establish measures in the Bay-Delta Water Quality Control Plan that will fully protect beneficial uses.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project and Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses.
277	59	[Attachment 1: Document titled Appendix A: Staff Report Tables 8.4-4, 8.4-6, 8.4-9 and 8.4-11 depicting change in crop revenue by sub-watershed and unimpaired flow scenario, across two hydrologic scenarios (Average and Dry). Tables assume no replacement groundwater pumping]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
278	1	Resources Control Board Members, Why I write My name is David Schrom. I came to California in 1972 after completing graduate study. I've swum, sailed, paddled, rowed, drunk, bathed in, and grown vegetables and tree crops with California's waters for more than fifty years. I want them regulated to further common good. I empathize with you. I write first to thank you for your service. Yours is a daunting task: allocating diminishingly accessible and reliable freshwater resources among a growing population of diverse individuals and groups with conflicting present and future claims on its beneficial uses and with widely disparate power to secure those claims. I empathize with your desires to act wisely and to treat all fairly.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
278	2	Science-based policy is essential. Perhaps in your difficult situation, you can take comfort in	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		admitting that wisdom and fairness are to a large degree dictated by Nature. If we accede to one or another demand, the consequences of doing so will be real and felt both by those whos demands we grant and countless others. Water connects us all in ways often beyond our ability to control. Though we might wish otherwise, Nature bats last, and our ability to realize policy goals is critically dependent upon discerning and adhering to Her laws. Your staff and their expert advisors have afforded you remarkably thorough and competent analyses to support you in doing these things. You've read the science and you understand that it's the sole demonstrated basis for predictions better than we can make by chance. As we seek to secure the many benefits of California water for people now and in the future, we're utterly dependent upon science.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
278	3	Pursuit of narrow interests may be incompatible with common good. A century ago, Upton Sinclair remarked, "It is difficult to get a man to understand something when his salary depends on his not understanding it." You may concur that this observation appears to apply to many opposing implementation of the Bay Delta Plan, including urban water agency representatives charged with preparing for continuing population growth—even though demographers are in near unanimous agreement that human numbers will peak within a few decades—and irrigation district personnel seeking to protect agriculturalist constituents from costs of investing in more efficient irrigation or of changing what they raise or grow. Reasoning motivated by narrow financial interests, basis for the so-called "voluntary agreements"—an Orwellian term, given the few narrowly-interested parties who have voluntarily accepted them—has proven a poor predictor of real-world impacts. The immeasurably great costs of despoiling nature, most recently coming to attention in the form of adverse impacts of climate degradation, are an obvious example of such failed prediction. S&P Global Trucost has found whole industries (e.g., coal mining) to be destroying rather than creating value. At least some California agriculture may fall into this category. So may some	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		continuing growth of urban populations. Supporting such endeavors is facilitating theft.	
278	4	An inspiring parallel In 1874, when a few individuals of the presumed-extinct tule elk were protected by Henry Miller, the rancher on whose land they were discovered, he gave all of us a beautiful and enduring gift and a shining example. Shortly after his death, when his holdings were subdivided, people returned to killing the elk, whose numbers, having increased for twenty years, began again to drop. After multiple efforts to establish free-ranging herds failed, once again an individual, rancher Walter Dow, stepped in to rescue a handful of elk and resettle them on his land. Since then others have successfully contributed to the persistence of tule elk, and today an estimated more than 5,000 range freely on nearly two dozen sites in California. Each of you may cast a deciding vote that does for a salmon population or any of countless less charismatic species what Miller, Dow, and others did for tule elk. We're all part of a chain of custody for biodiversity with its myriad benefits. You're situated to wield powerful—perhaps existential—influence to protect it and sustain these. If you act effectively in this critical moment you may prevent irrevocable loss and provide others opportunity to build on your success. I can understand why you might hesitate in the face of pressure from those with whom you've worked, or from a governor apparently willing to sacrifice his home state's natural resources to his national political ambitions, yet there are times when what's paramount is who we see when we look in the mirror. How will you feel seeing someone who combined sound science and political power to act to secure for people alive today or who may live in the future the ecological integrity of the Bay Delta and its tributary rivers and the innumerable benefits flowing from a restored river-floodplain system?	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	1	Since 2017, Reclamation, state and Federal agencies, municipal and agricultural water suppliers, and others, have undertaken extensive efforts to develop Voluntary Agreements (VA). As part of the Memorandum of Understanding Advancing a Term Sheet	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		for the VA, dated March 29, 2022, the parties have already developed a draft Strategic Plan, draft Governance Agreement, draft Science Plan, and draft Implementing Agreements and are actively working towards completing the draft Flow Accounting and Enforcement Agreements this Spring. In addition, the most recent Biological Assessment on the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP), transmitted November 9, 2023, includes a modeling representation of the complete VA and analyzes the effects of CVP and SWP related VA actions. Based on Reclamation's review of the Draft Staff Report, the VA alternative appears to be the only alternative that has a viable path towards implementation. In addition, we note that the VA is preferable over the unimpaired flows (UIF) alternatives and modules because the uniform application of UIF objectives across varied watersheds has disparate impacts due to the variability in hydrology in those watersheds. For example, the American River is a dynamic and flashy system. Therefore, implementation of a uniform UIF on that system could significantly compromise the CVP's American River Division's ability to perform its intended Federal purposes. The UIF alternatives and modules should also be reviewed for consistency with, among others, the Central Valley Project Improvement Act, Trinity River Restoration Program, San Joaquin River Restoration Program and other Federally funded restoration programs, such as Battle Creek River Restoration Program.	
279	2	Reclamation is also concerned with the SWRCB's methodologies for analyzing CVP operations under UIF alternatives and modules. Specifically, modeled CVP operations in the UIF alternatives and modules are neither reasonable, nor operational, resulting in masked, skewed, and unreliable conclusions for the disclosed impacts. In Reclamation's review of the modeling, we are especially concerned about 1) modeled CVP operations and temperature analyses not based on integrated CVP operations, tending to take project water allocations to zero mid-season; and 2) temperature operations neither reflecting the conditions included in the 2019 Long-Term Operations of the Central Valley Project and State Water Project	It is unclear what the commenter is referring to. CVP allocations do not change after April 1st, until the following year in SacWAM. Please see Chapter 6, Changes in Hydrology and Water Supply, which describes the modeling assumptions for the baseline and alternatives with a discussion of the changes in requirements due to updates in the Biological Opinions.

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		(LTO) nor the currently proposed LTO. As such, the SWRCB would not appear to be able to implement a UIF alternative or modules without additional analysis to model feasible CVP operations and ensure compliance with the Federal Endangered Species Act.	
279	3	The Draft Staff Report, as in the Phase I SED, is relying on End of September carryover storage to mitigate temperature impacts of the UIF alternatives and modules. The Staff Report assumes carryover targets for temperature management based on total storage rather than the volume of cold water in the reservoir. Within years of similar inflow, temperature performance can vary significantly based on the volume of available cold water, due to other factors such as ambient air temperatures and the ratio between snow melt and rainfall as inflow. Linking temperature objectives to the volume of cold water provides a more meaningful metric as compared to total storage. Without such linkage, the adverse effects to temperature management are likely to be overstated in the early temperature management season and understated in the late temperature management season. Without an accurate reflection of temperature modeling and CVP operations, it is unknown what the true impacts of the UIF alternatives and modules would be on the operation, water delivery, power generation, fish and wildlife, recreation, and other project purposes and beneficial uses of the CVP.	The effect of managing the volume of cold water in the reservoirs described by the commenter is included in the HEC-5Q water temperature modeling performed for the Staff Report. Carryover storage targets based on historical data represent a preliminary method for managing cold water volumes in reservoirs to prevent depletion of cold water storage. Please see Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, regarding implementation of the cold water habitat objective and carryover storage and flexibility included in the revised proposed Plan amendments related to the long-term temperature management strategy.
279	4	In September 2022, Reclamation worked with interested parties, state and Federal fishery agencies, and the SWRCB during the LTO process to develop Knowledge Based Papers. These papers illuminate the historical and updated scientific basis of many CVP operations, actions and regulatory criteria and the relationship to species outcomes. These organizations provided updated literature, datasets, and models regarding Shasta Cold Water Pool Management for salmonid growth and survival, Old and Middle River Flow Management for smelt and salmon survival and migration, Delta Spring Outflow Management for Smelt Growth and Survival, Summer Fall Habitat Actions for Smelt Growth and Survival, Pulse Flow Effects for salmonid survival, Central Valley Tributary Habitat Restoration for salmonid growth and survival, Head of Old River Barrier, Spring run Chinook salmon juvenile production estimate, and Steelhead juvenile production estimate. These papers identified more than	Please see Common Response 3.1, Fish Protection, on use of best available science and updates to literature in Chapters 3 and 4. In response to public comments, Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, has been updated with literature review of recent science and updated ecological flow thresholds, and Section 13.5, Beneficial Environmental Effects, includes analysis of the expected frequency of achieving updated flow thresholds under different flow scenarios.

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		225 literature, dataset, and model citations published since 2020 regarding fish and water operations, a majority of which are not incorporated into either the Draft Staff Report or the Draft Scientific Basis Report. Therefore, we have concerns the Draft Staff Report is not based on the best scientifically available information.	
279	5	The Draft Staff Report includes a discussion that the VAs propose to: a) “contribute to achieving the existing Narrative Salmon Protection Objective by 2050”; and, b) “if in year 8 the VAs are not expected to achieve the stated objectives, then either: 1) new agreements may be negotiated, or 2) the State Water Board would impose a regulatory pathway to implement the Bay-Delta Plan (Voluntary Agreements Parties 2022).” In Reclamation’s review of the other alternatives and modules, Reclamation was unable to identify any similar qualitative assessment of the UIF alternatives and modules achievements nor prescribed dates on meeting the Narrative Salmon Protection Objective nor “Year 8” type review processes. Elaboration from the SWRCB on any achievement dates and review processes for the UIF alternatives and modules would help evaluate the significance of environmental impacts associated with those methods of compliance.	The revised proposed Plan amendments include provisions for annual and periodic review, as described in Common Response 1.3, Revised Proposed Plan Amendments.
279	6	Lastly, from Reclamation’s reading of next steps in the Draft Staff Report, listening to the public workshops, and discussions in other forums, Reclamation does not have a consistent understanding of the SWRCB’s next steps and timelines. Reclamation would appreciate the SWRCB sharing a clear, concise, and consistent schedule and timeline on updating existing documents (e.g. Final Staff Report), developing new documents (e.g. Program of Implementation, final proposed Bay-Delta Plan amendments), consideration by the State Water Board, and opportunities for public review and comment.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	7	The Draft Staff Report includes multiple references and reliance on standards and Reasonable Prudent Alternatives included in the 2008 USFWS Biological Opinion and 2009 NMFS Biological Opinion on the Long-Term Operation of the Central Valley Project and State Water Project (LTO). These requirements were updated, replaced, or removed by the 2020 Record of Decision on the LTO, as currently under consultation. The Draft Staff Report should be updated to reflect the most current	Please see Common Response 3.1, Fish Protection, on the process for updates to literature in Chapters 3 and 4. Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations of the final Staff Report has been revised to describe updated requirements in the 2024 BiOps and 2024 ITP. Chapter 13, Revised Proposed Plan Amendments, of the final Staff Report incorporates analysis of the revised proposed Plan

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		requirements and most current scientific literature (September 2022 Knowledge Papers are one source).	amendments that has been updated to reflect the current requirements and operational conditions under the 2025 LTO ROD for Action 5 for the CVP and the 2025 ITP amendments for the SWP. In addition, Chapter 3 and Section 13.5, Beneficial Environmental Effects, of the Staff Report have been updated to reflect the most current scientific literature.
279	8	[Chapter/Appendix] 1 [Section] 1.4.4 [Page Number] 17 The Draft Staff Report includes multiple modules but does not describe the parameters for when they would or would not be applied individually or collectively to VA and/or Unimpaired Flows Alternatives. A matrix of how and when the modules apply to Alternatives would be helpful, along with a better explanation of effects resulting from their addition.	Refer to Staff Report Section 7.2, Description of Alternatives, for a description of the modular alternatives. See Section 7.24, Alternatives Analysis, and Section 9.9, Modular Alternatives for Proposed VAs, for analysis of the modular alternatives.
279	9	[Chapter/Appendix] 1 [Section] 1.5 [Page Number] 20 The section states, "Draft language is anticipated to be released for public review and comment in 2024." and other sections state "mid-2024". Could you please verify the milestones and timelines for public input and completion of the various documents prior to the Board's approval.	Please see Staff Report Chapter 12, Public Participation, and Common Response 1.1, General Comments, for a description of the public process.
279	10	[Chapter/Appendix] 2 [Section] 2.4.3 [Page Number] 100 "Whether the HORB will continue to be installed in the future is uncertain and is being discussed in the ongoing reconsultation process between the Reclamation and the National Marine Fisheries Service." The HORB is not included the Biological Assessment transmitted to USWS and NMFS on November 9, 2023.	This additional insight into the potential for the HORB to be non-operational in the future is acknowledged.
279	11	[Chapter/Appendix] 2 [Section] 2.2.6.4 [Page Number] 59 This does not appear to be a complete list of American River diverters (e.g. City of Sacramento), suggest reviewing and updating list based from Appendix A, CVP and SWP Facilities, from 2023 BA. Regional Water Authority may have a more comprehensive list of all American River diverters.	The narrative describing diversions, transfers, reservoirs, and imports of water in the watershed of the American River is not meant to be an exhaustive list, but to highlight some of the principal components. The City of Sacramento is included in the list of principal diversions.
279	12	[Chapter/Appendix] 2 [Section] 2.3.5 [Page Number] 89 No mention is made of the Yolo Bypass Salmond Habitat	The Yolo Bypass Salmond Habitat Restoration and Fish Passage Project is not included in the project baseline or project alternatives. Please refer to Common Response 7.23, Cumulative

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		Restoration and Fish Passage Project, which is currently scheduled for operation in 2024. Please verify whether it is included and analyzed.	Impact Analysis, for responses to comments related to the consideration and analysis of other past, present, and reasonably foreseeable probable future projects.
279	13	[Chapter/Appendix] 2 [Section] Table 2.1-1 [Page Number] 15 Identifies "Instream Flow Requirements" for Clear Creek as "2009 NMFS BiOp". Please verify the BiOp established the instream flow requirement and if it is still applicable.	Table 2.1-1 of the Staff Report identifies the flow requirements on Clear Creek as: Combination of 1960 MOA between DWR and CDFG, (b)2 actions, and 2009 NMFS BiOp. This is a correct representation of the project baseline conditions. More information on each of these requirements can be found in Table 7-38 of the SacWAM model documentation (^SacWAM 2023a). The issuance of the 2019 Biological Opinions largely maintained the 2009 flow requirements on Clear Creek, but the 2024 Biological Opinion has included larger changes to the flow requirements on Clear Creek which includes temperature targets, pulse flows and changes to the minimum instream flows.
279	14	[Chapter/Appendix] 3 [Section] 3.1 [Page Number] 1 What criteria and process were used to identify the "best available science" identified in Section 3.1?	Please see Common Response 3.1, Fish Protection, on use of best available science.
279	15	[Chapter/Appendix] 3 [Section] 3.2.1 [Page Number] 3 What is meant by sub-populations in relation to the objectives of the ESA, CESA, or WQCP?	The 2023 draft Staff Report considered "subpopulations" as the genetically distinct groups of organisms within a population that evolved from individual rivers and their tributaries (p. 3-3). For example, ^NMFS (2014) illustrated the Central Valley spring-run Chinook salmon into two genetically distinct subpopulations, Butte Creek population, and Mill and Deer creek population based on the genetic analysis by Banks et al. (2000). Additionally, ^NMFS (2014) considered the spring-run Chinook salmon populations in Mill and Deer creeks as two separate populations as they occupy discrete spawning areas with independent population dynamics. In this context, a subpopulation of Chinook salmon in the Central Valley watershed could be the genetically distinct group of a Chinook salmon population with fidelity to specific river(s) or stream(s). This is consistent with the context used in the Draft Final Biological Goals Report (ICF 2023) which describes Biological Goals for the LSJR/SD Update to the Bay-Delta Plan. In explaining the spatial structure of salmonid species,

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			^McElhany et al. (2000) defined “subpopulations” as the groups of fish that are relatively reproductively isolated to some degree from other groups within a population but not sufficiently isolated to be considered independent. Such isolation commonly occurs when salmonid populations are separated by discrete patches of spawning habitats. Additionally, levels of straying among different habitat patches (i.e., streams and rivers) could be a determining factor for subpopulations. However, the spatial scales that define habitat patches and subpopulation boundaries are not strictly defined as such determinations would be species- and population-specific (^McElhany et al. 2000).
279	16	[Chapter/Appendix] 3 [Section] 3.2.1 [Page Number] 6 The discussion of TCDs states temperature management can be achieved only through flow management on tributaries other than Sacramento and Clear Creek. Operations at Folsom and Nimbus Dam also provide for temperature operation through blending of water from different elevation. Please clarify.	The 2023 draft Staff Report acknowledges the existence and operations of TCDs for temperature management on Shasta, Folsom, and Oroville Dams and states “The other rim dams of the Central Valley lack TCDs, so temperature management can be achieved only directly through flow management (^NMFS 2009 BiOp).”
279	17	[Chapter/Appendix] 3 [Section] 3.2.1 The discussion of mechanisms underlying the flow-abundance relationships is suggested to be not resolved, but the citations for this statement are from 2002-2014. The last sentence of this paragraph states likely mechanisms are rapidly developing. What is the conceptual model for native species used in the Draft Staff Report to identify the hypothesized mechanisms, our understanding, and their predictability related to stressors, flows and habitats?	See Common Response 3.1, Fish Protection, for a discussion of the flow benefit analysis and flow-abundance relationships. The Staff Report does not use a conceptual model but instead includes qualitative and quantitative analysis based on historically observed data. Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, includes species-specific analysis for native species such as all four runs of Chinook salmon, Central Valley steelhead, longfin smelt and Delta smelt. For all of the native species in Chapter 3, there is adequate information from the scientific literature to estimate the ranges of flow predicted to be protective of individual species. In addition, Chapter 3 has been updated with more citations of recent science and updated ecological flow thresholds.
279	18	[Chapter/Appendix] 3 [Section] 3.2.3 [Page Number] 11 What is the supporting citation for the statement “Young salmon migrate on currents driven by Delta outflows to the ocean” Mechanisms causing currents include tides (gravitation), wind, and themohaline circulation. What would be the mechanism of currents in the Bay and nearshore coastal ocean currents driven by outflow?	To clarify, the reference to “currents” used in Section 3.2.3, San Francisco Bay and Nearshore Coastal Ocean, of the 2023 draft Staff Report is in reference to “the flow of water”, not the specific current types, e.g., ocean currents, tidal currents.

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279	19	[Chapter/Appendix] 3 [Section] 3.4.5.2 & 3.4.5.3 Sections could be updated with the best available science regarding flow related to through Delta emigration, floodplain rearing, riparian habitat, and tributary habitat. Citations for inclusions could include Peterson and Duarte (2019), Perry et al 2019, Hance et al 2021, Michel et al 2020, and many citations in these publications from the last 5-10 years. Citations for inclusions are listed in the September 2022 Knowledge Base Papers developed as part of the CVP and SWP LTO consultation.	See Common Response 3.1, Fish Protection, on use of best available science and process for updates to literature in Chapters 3 and 4. In addition, Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, and Chapter 13, Revised Proposed Plan Amendments, Section 13.5, Beneficial Environmental Effects has been updated with more citations of recent science and updated ecological flow thresholds.
279	20	[Chapter/Appendix] 3 [Section] 3.4.5.3 [Page Number] 49 Figure 3.4-12 is misleading. Tagging rates between 1978-1997 and 1976-2015 were different and may bias the detection of natural origin fish (unmarked) and inference from these fishes. April-June is the period when Central Valley hatcheries are releasing the production. Why is catch per cubic meter a surrogate for as a measure of benefit? Is it indicative of high survival, longer migration window, increased cohort production? How should we interpret this correlation? A conceptual model explaining the linkages between increase seasonal flow and mechanisms affecting the production, migration window, or other biological outcomes would be helpful for understanding statements in this section about flow and biological objectives.	The Staff Report states in Figure 3.4-12 in Section 3.4, Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) and Central Valley Steelhead (<i>Oncorhynchus mykiss</i>), that there was a positive relationship between abundance of unmarked juvenile Chinook salmon and the Sacramento River at Rio Vista flows during the April-June period for 1978-1997 by citing the analysis by ^Brandes and McLain (2001). Additionally, Figure 3.4-12 and associated text reaffirm the continued existence of a largely similar relationship between the Rio Vista flows and Chipps Island catch by extending the data period to 1976-2015. The Chipps Island midwater trawling has been conducted between April and June to index the number of primarily fall-run Chinook salmon smolts leaving the Delta and provides historical comparisons of emigrating smolt numbers using the same gear. Relative abundance of fish was compared using average catch per cubic meter, and its relationship to the Sacramento River flows at different locations were different depending on the months of collection. ^Brandes and McLain (2001) found that the density of salmon smolts leaving the Delta collected during the April-June period increased as the Sacramento River flow at Rio Vista increased, indicating that the overall juvenile salmon production migrating from the Delta was greater in wet years. Further ^Brandes and McLain (2001) determined that the flow and juvenile salmon abundance relationship at Chipps Island applied to hatchery fish (from Coleman National Fish Hatchery) as well as wild Chinook salmon smolts. Additionally, ^Brandes and McLain (2001) further qualifies that these catch indices include the fall-run Chinook smolts released from Coleman National Fish Hatchery and wild fish as most other unmarked

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			hatchery fish would be released downstream of Chipps Island. The comment suggests the tagging rates of hatchery-produced juvenile salmon were different between the 1978-1997 period (Staff Report Figure 3.4-12a; ^Brandes and McLain (2001) Figure 13) and the 1976-2015 period (used in the Staff Report Figure 3.4-12b). The State Water Board Staff understand that the Central Valley Constant Fractional Marking/Tagging Program (CFM) was initiated in the spring of 2007 with marking 25% of the fall-run Chinook salmon production releases with adipose fin-clip and coded-wire tagging. Thus, the years of catch data with “different” tagging rates would represent eight years (out of forty data points) of the whole data set. It is noted here that the total hatchery releases of the Central Valley fall-run Chinook salmon have not changed dramatically during the data period (Huber and Carlson 2015). Additionally, as explained in the paragraph above, the general pattern of hatchery practice including their release location and timing has not changed considerably during the data period of 1976-2015. Further, the slopes (Figure 3.4-12a: 0.00001; Figure 3.4-12b: 0.0000129) and intercepts (Figure 3.4-12a: 0.4076; Figure 3.4-12b: 0.417) are very similar. The commenter raises minor suggestions for additional information to be included in the final Staff Report that is not significant to the Staff Report analyses or its conclusions. Therefore, the suggested revisions to the 2023 draft Staff Report are not warranted. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	21	[Chapter/Appendix] 3 [Section] 3.4.5.3 [Page Number] 50 Figure 3.4.13. These figures do not represent current operations or best available information regarding interior Delta hydrodynamics and loss. The DCC gates are not operated in a manner indicative of these hydrodynamics. Losses at the level observed in outlier years in these figures have not been observed since those years (e.g. 00-01 and 99-00). More recent science including Perry et al 2012 and 2013 and citations to these paper	Please see Common Response 3.1, Fish Protection, on use of best available science and entrainment. The purpose of these graphs (Figures 3.4-13 and 3.4-14 in Section 3.4, Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) and Central Valley Steelhead (<i>Oncorhynchus mykiss</i>)) is to illustrate the effects of a range of flows diverted into the interior Delta through the DCC gates and/or Georgiana Slough on juvenile winter-run Chinook salmon losses occurring at the south Delta

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		in the last 5 years provide an updated mechanistic understanding on Delta survival and interior Delta flow routing. These citations should be reviewed for reconsideration of the statement in the Staff Report that “a floating boom fish guidance structure may reduce entrainment to Georgiana Slough under low and moderate flow conditions.” and provide estimates for the actual biological outcomes sensitivity to changes in entrainment.	export facilities regardless of time periods or regulatory constraints. Although the DCC gates are not currently operated in December and January in the same manner under the current LTO as during the historical period used in these figures, the cumulative flows entering Georgiana Slough and the DCC gates still represent diverted flows and affect routing of juvenile salmon into the interior Delta. Additionally, more recent scientific literature indicates that the relative magnitude of flows and juvenile salmon entering the interior Delta through Georgiana Slough and the DCC change depending on the DCC gate operations (^Perry et al. 2015, 2018), consistent with the relationships depicted in these figures.
279	22	[Chapter/Appendix] 3 [Section] 3.4 Frequent citation to regulatory standards, and data to support these, that are not currently in operations for the CVP and SWP are used. For example, data and figures from the period prior to the 2009 NMFS biological opinions seem to be used to support statements not in the operational plan of the 2009 NMFS BiOp (See Figures 3.4-15 and 3.4-1 with pencil lines from a copied version of these figures). [These figures with pencil lines were not provided with the comment letter.]	The purpose of these graphs (relationships between Old and Middle River reverse flows and entrainment at the Federal and State pumping facilities, 1995–2007) is to illustrate the effects within a range of OMR reverse flows on loss of juvenile salmon occurring at the south Delta export facilities regardless of time periods or regulatory constraints. These figures and their captions do not reference the 2009 NMFS BiOps, they merely illustrate that increasingly net negative OMR flows are associated with salmon loss, a pattern which is also described in the 2009 NMFS BiOps.
279	23	[Chapter/Appendix] 3 [Section] 3.4.5.3 [Page Number] 57 Figure 3.4.-17 present data from more than 30 years ago under quite different operating and ecological conditions as information regarding flow and survival of juvenile salmon in the San Joaquin River. More recent work developed initially under the VAMP program and continued by USBR resulted in a series of papers by Brandes, Buchanan and other between 2012-2022 that developed a model for survival based on flow and other environmental and operation variables between 2009-2017. Important to incorporate these sources of information if the best available science is going to inform recommendations."	See Common Response 3.1, Fish Protection, on use of best available science, fish entrainment, and process for updates to literature in Chapters 3 and 4. Figure 3.4-17 in Section 3.4, Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) and Central Valley Steelhead (<i>Oncorhynchus mykiss</i>), shows that the reverse flows in the San Joaquin River at Jersey Point created by high export conditions decreased the survival of salmon smolts migrating through the lower San Joaquin River corridor from Jersey Point to Chipps Island. Though the data for this graph was collected during 1989-1991 period, it still shows the trend of negative impacts of reverse flows in this reach of the lower San Joaquin River corridor on migrating juvenile salmon (USFWS 1992). The reverse flows occurring at the San Joaquin River at Jersey Point, indicated by negative values in Figure 3.4-17, and its impact on migrating juvenile salmonid fish would be similar to those occurring under current operating conditions that at times result in negative OMR

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			flows. Recent studies that investigated the effects of spatial, environmental, and hydrologic parameters on through-Delta survival of juvenile salmonids migrating through the lower San Joaquin River corridor and south Delta have reached similar conclusions. ^Buchanan et al. (2021), using results of a 6-year study (2011-2016), concluded that through-Delta (from the Head of Old River to Chipps Island) survival rates of juvenile steelhead were positively correlated with net OMR flows, i.e., fish had higher survival under more positive OMR flows. Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, of the final Staff Report has been updated with findings of ^Buchanan et al. 2021.
279	24	[Chapter/Appendix] 3 [Section] 3.5.3 [Page Number] 60 Figure 3.5-1. The interpretation of this figure is difficult to interpret as it says “The specific flow estimated to correspond to a 50- percent probability of population growth is sensitive to the choice of months and years included in the analysis”. This suggests there may be multiple mechanisms operating at different temporal scales. Recognizing this uncertainty, some explanation of life stages affected and hypothesized mechanisms would be valuable for understanding why recommendations are being made and the basis of these recommendations.	Please see Common Response 3.1, Fish Protection, for a discussion of the flow-benefit analyses and flow effects on longfin smelt. The sentence quoted should be interpreted with the context provided in the two preceding sentences: “The flows in the State Water Board analyses associated with a 50-percent probability of positive population growth was 42,800 cfs between January and June, respectively (Figure 3.5-3). In comparison, results of the logit analyses were statistically significant, TBI and NRDC (2010) found that positive population growth was predicted for 51,000 cfs between January and March, or 35,000 cfs between March and May.” The two analyses, by the State Water Board (and presented in the 2023 draft Staff Report) and TBI and NRDC (2010), showed that different Delta outflows for different months, were associated with a 50-percent probability of positive population growth. The sentence quoted in the comment thus provides a qualitative description of the Delta outflow needed for the combined period (January through June) that would result in a positive population growth for longfin smelt presented in Figure 3.5-3, in Section 3.5.4.1, Delta Outflow.
279	25	[Chapter/Appendix] 3 [Section] 3.6.4.2 [Page Number] 74 Table 3.6-1. What is meant by “...indicated to be protective of ...” What is the affect expected with these flows? Why is that considered protective? The value presented here seems to be	The Staff Report concluded that Delta outflows of 37,000 cfs or higher between March and July were associated with a 50-percent probability of producing a strong year-class of juvenile white sturgeon, as indexed by number of juvenile recruits. This flow threshold is described as “indicated to be protective” of

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		from a presentation in 2014. Is this presentation available for review?	sturgeon because it would be associated with a strong year class more than half of the time. Strong year classes are necessary for population resilience and population growth. As described in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, the flows found in the scientific literature or estimated in the analyses should not be taken to represent absolute flow needs that must be met at all times or in all years to support native species. Rather, they serve as indicators of conditions that favor native species and constitute a set of quantifiable metrics that can be used to assess the relative benefits expected from a range of flows. Please see Common Response 3.1, Fish Protection, for a discussion on use of best available science. The presentation is available online. If you need assistance locating this document, please contact Bay-Delta staff at sacdeltacomments@waterboards.ca.gov.
279	26	[Chapter/Appendix] 3 [Section] 3.2.1 [Page Number] 3 The hypothesis that sub-populations exhibiting important genetic diversity that, when preserved, allows use of a wider array of environments than without it (McElhany et al. 2000; ^Moyle 2002; ^NMFS 2014a) is contrary to the environment being the agent that results in subpopulations. Suggest removing this circular argument or clarifying that adaptation occurs based on variation in the environment, not the populations cause use of variation in the environment. If this was the case, then by preserving subpopulation you can create an array of environments, but evolution of potential life history diversity is driven by the environment.	Genetic diversity within a salmonid population would enable a species to occupy and use a wider range of environments when those environments (streams) become available than they could without such diversity (variability). The cited studies in Section 3.2.1, Riverine Flows, of the Staff Report are peer-reviewed and also cited in the peer reviewed 2017 Scientific Basis Report. Please see Common Response 3.1, Fish Protection, for a discussion on use of best available science.
279	27	[Chapter/Appendix] 3 [Section] 3.2.1 [Page Number] 3 Please clarify what is being meant by subpopulations with salmonids. NMFS 2014a refers to these as ESUs, but here it seems to be about another level of biological organization. There seems to be some reference to genetically distinct populations, which may mean ESUs but this section seems to be talking more generally about life history diversity, that exists due to spring flow patterns but not be related to genetic distinctiveness described in NMFS 2014a.	The use of the term “sub-population” in Chapter 3, Scientific Information to Inform Fish and Wildlife Flow Recommendations, is not referring to the same unit as NMFS’s 2014 definition of an ESU. However, the term is similar to the one in the NMFS Recovery Plan (^NMFS 2014). “Sub-population” is referring to populations that are genetically distinct from other populations that may be the same run and are in the same ESU. For example, “Banks et al. (2000) suggest the spring-run phenotype in the Central Valley is shown by two genetically distinct subpopulations: 1) Butte Creek, and 2) Deer and Mill creeks”.

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			Increasing flows to each of the 22 tributaries would benefit the fish populations throughout the Plan area.
279	28	[Chapter/Appendix] 3 [Section] 3.2.1 [Page Number] 5 Schoellhamer et al 2016 identified about 50% of reduction in sediment may be caused by dams. Some discussion of the findings in Wright and Schoellhamer 2005 about the causes of reduction in sedimentation, which are legacy issues (e.g. mining, urbanization, agriculture), would clarify the multiple mechanisms behind sediment dynamics in the Central Valley.	See Common Response 3.1, Fish Protection, on updates to literature in Chapters 3 and 4. Although Section 3.2.1, Riverine Flows, of the Staff Report briefly discusses sediment dynamics, Chapter 4, Other Aquatic Ecosystem Stressors, contains an expanded discussion on sediment and turbidity. Chapter 4 has been updated in response to this comment to further clarify the multiple mechanisms driving sediment dynamics.
279	29	[Chapter/Appendix] 3 [Section] 3.4 [Page Number] 17 "The U.S. Environmental Protection Agency recommends that water temperatures (measured as maximum 7-day average of the daily maximums) for salmon and trout spawning, egg incubation, and fry emergence not exceed 55.4°F (USEPA 2003)." The data in that document focuses on the Columbia River. To provide a complete analyses, we recommend inclusion of the other lines of evidence for temperature on the Sacramento River identified in the Knowledge Papers, September 2022, attached to the LTO Biological Assessment, transmitted November 9, 2023.	The knowledge paper (Reclamation 2024) suggested by the commenter does not contain any additional or different information that would change the conclusions supporting the use of the ^USEPA (2003) temperature criteria. For information on the use of ^USEPA (2003) temperature criteria for the Sacramento/Delta, please see Common Response 3.1, Fish Protection, regarding temperature effects on salmonid fish.
279	30	[Chapter/Appendix] 3 Reclamation does not concur with the metrics used to describe the biologic relevance of river temperatures on fish mortality. While it is common to utilize a cumulative degree day metric to describe temperature performance throughout a temperature management season, use of a mean cumulative degree day metric masks the relative importance of temperature throughout the season. Put another way, a degree day exceedance of the target in May is not as biologically relevant as a degree day exceedance in September when redds are in the water. Either a time weighted cumulative degree day value should be reported or a metric that accounts for the variability of temperature on fish biology throughout the season, such as temperature dependent redd mortality. It is also unclear why the conversion was done to daily mean temperatures from the seven day daily maximum metric. The HEC5Q models utilized in the modeling have the ability to run with a six hourly timestep, which would allow the direct use of the daily maximum temperature rather	Please refer to Appendix A6, Water Temperature Modeling and Fish Assessment for the Sacramento, Feather, and American Rivers, Section A6.4.1, Methods, for more information on how the water temperature analysis was conducted and its biological relevance. The analysis does consider the presence of different life stages of fish throughout the year and applied different index values for evaluation of each life stage of each fish species. The exceedance of water temperatures above each life stage's index value was treated equally across the months of the life stage's presence. As described in Section A6.4.1, Methods, multiple temperature indices were used in the assessment of water temperature effects on fish. Some of the temperature indices are 7-day average daily maximum temperatures (7DADMs) and others are daily average temperatures. By converting the 7DADM indices to averages, a single set of simulated daily average water temperature results could be used in the analysis. In addition, use of empirically derived differences between daily average and

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		than an ad hoc conversion based on observed rather than modeled outputs, which may differ in their transform accuracy between daily mean and daily maximums.	7DADM temperatures avoids incorporation of any modeling inaccuracies associated with using the 6:00 pm water temperature modeling results to represent daily maximum temperature.
279	31	[Chapter/Appendix] 4 [Section] Universal It would be helpful to include the conceptual models relied upon by the Board in order to understand the stressors on species and to guide impact analysis. Would you please provide those models or where to find them in the Draft Staff Report.	The scientific rationale used to understand ecosystem stressors within the Bay-Delta system can be found in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, and Chapter 4, Other Aquatic Ecosystem Stressors, of the 2023 draft Staff Report. For additional information on the use of best available science in the Staff Report, please see Common Response 3.1, Fish Protection.
279	32	[Chapter/Appendix] 5 [Section] 5.1 [Page Number] 2 "...and could become applicable to VA regions in the future if the VAs are not continued." Please clarify the intent of this language. Is the intent that if, under the VA, a "red" is identified in "Year 8" that the VA parties: 1) would be automatically be subject to an unimpaired inflow alternative; or 2) could be subject to an unimpaired inflow alternative following a public process.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including the provisions for continuation, modification, or termination of the VA pathway.
279	33	[Chapter/Appendix] 5 [Section] 5.4.2.4 [Page Number] 17 "Subject to possible modifications for drought, public health and safety, public trust obligations for wildlife refuges, or alternative arrangement in a voluntary implementation plan, implementation of the flow objective would be required to be met in order of water right priority." These "possible modifications" have the potential to result in significant cold water and physical availability impacts and should be described in detail to understand the environmental impacts.	Any possible modifications to the strict rule of water right priority would fall within the same range of supply reductions as what is already analyzed in the Staff Report. Depending on how the exception is implemented, the flow obligation will either be from the next priority water right or reduce the total amount of environmental flow. Either way, these exceptions are expected to be small and would not substantially affect the overall analysis. Additional opportunities for public review will occur with the development of the implementation methodology and curtailment regulations.
279	34	[Chapter/Appendix] 5 [Section] 5.4.4.3 [Page Number] 29 "Because the State Water Board has a separate obligation from the ESA (and the California Endangered Species Act) to ensure that fish and wildlife are reasonably protected, these measures are proposed to be added to the Bay-Delta Plan to ensure that needed measures continue even if the BiOp changes. As described in the program of implementation, maintain Delta outflows during fall to provide suitable quantities of quality habitat for sensitive native estuarine species, including the flows	The fall Delta outflow objective is not interdependent on Federal Endangered Species Act actions since the State Water Board would need to consider and approve any changes to biological opinion provisions before they could affect implementation of the objective. In addition, the project is revised. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the proposed fall Delta outflow objective.

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		identified in the 2019 USFWS Biological Opinion. The State Water Board may approve modifications to these flow levels based on updates to the biological opinion." Given the recognition the Biological Opinion will change, unclear why the Board proposes to make the Narrative Objective language interdependent upon this Federal ESA action, which is focused solely on the effects of the operation of the CVP and SWP.	
279	35	[Chapter/Appendix] 5 [Section] 5.6.1.3 [Page Number] 54 This sections call for the establishment of a new and additional monitoring program, the Bay-Delta Monitoring and Evaluation Program. Would you please provide a graphic showing which existing programs would fall within the BDMEP and new groups what would need to be established. Also, would you please provide the expected new resource requirements, including additional staff time and funding requirements (a cost table like 9.8-7 or 9.8-8 would be helpful).	Section 5.6.1.2, Existing Monitoring, Assessment, Special Studies, and Reporting for the Bay-Delta Plan and Watershed, provides describes existing programs that would fall within the Bay-Delta Monitoring and Evaluation Program (BDMEP). However, it would be speculative at this point to assess future staff time and funding since it is unclear which existing programs the federal government intends to eliminate, reduce, or change (Reclamation 2025b). This may require a broader BDMEP in order to ensure there is accurate monitoring and evaluation of ecosystem conditions related to the Bay-Delta Plan implementation measures. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the BDMEP.
279	36	[Chapter/Appendix] 6 [Section] 6.2.1 [Page Number] 4 "Updates to the Biological Opinions (BiOps) and issuance of an Incidental Take Permit (ITP) have changed the requirements for operation of the SWP and CVP, though under most circumstances actual operations have not significantly changed." The operations of the CVP are not subject to the ITP for the operations of the SWP pursuant to CESA.	For more information, please see Common Response 6.2, Baseline and No Project Alternative, for responses to comments that raise issues about the hydrological and regulatory baseline used in the draft Staff Report.
279	37	[Chapter/Appendix] 6 [Section] 6.2.1 [Page Number] 4 "San Joaquin inflow to export (I:E) limits" have not been a requirement of the CVP since the 2020 Record of Decision on the LTO and does not represent existing conditions.	For more information, please see Common Response 6.2, Baseline and No Project Alternative, for responses to comments that raise issues about the regulatory baseline used in the draft Staff Report.
279	38	[Chapter/Appendix] 6 [Section] 6.2.1 [Page Number] 5 The baseline assumptions for CVP and SWP actions as they pertain to OMR, Fall X2, Summer Action, San Joaquin I:E requirements are not consistent with the new proposed action	For more information, please see Common Response 6.2, Baseline and No Project Alternative, for responses to comments that raise issues about the hydrological baseline used in the draft Staff Report.

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		that is being analyzed for the Reinitiation of the Long Term Operation of the CVP and SWP.	
279	39	[Chapter/Appendix] 6 [Section] 6.2.1 [Page Number] 5 "The SacWAM baseline incorporates the San Joaquin I:E limit as formulated in the 2020 ITP, but applied to both SWP and CVP exports....The SacWAM baseline incorporates OMR limits as defined by the 2019 BiOps and 2020 ITP." The ITP for the operations of SWP pursuant to CESA does not apply to the operations of the CVP and inclusion/application onto the operations of the CVP is inaccurate and inappropriate.	Chapter 6.2, SacWAM Model Assumptions, of the draft Staff Report includes the regulatory assumptions and rationale for including the San Joaquin I:E export limit for both the SWP and the CVP. For more information, please see Common Response 6.2, Baseline and No Project Alternative, for responses to comments that raise issues about the hydrological and regulatory baseline used in the draft Staff Report.
279	40	[Chapter/Appendix] 6 [Section] 6.3.1.1 [Page Number] 11 Proposed modeling shows changes in releases along the American River that will result in less water available in summer months to meet the regulatory requirements of the LTO of the CVP. Reductions in water available to refuges and other water diverters are reasonably foreseeable as a result of the proposed changes.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments that raise issues about CVP allocations and obligations.
279	41	[Chapter/Appendix] 6 [Section] 6.3.2.1 [Page Number] 42 Carryover storage at reservoirs are influenced by more than just cold water pool reservoirs and releases for the water quality control plan. Reclamation has obligations to make water available to downstream water rights holders that divert the water for a myriad of purposes. These assumptions that are being referenced are not an accurate representation of the trade-offs between increased unimpaired flows and reservoir storage.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments that raise issues about CVP allocations and obligations.
279	42	[Chapter/Appendix] 6 [Section] 6.3.2.5 [Page Number] 52 The reduction in exports from the Delta to reservoirs in other regions should be analyzed in more detail as a potential major impact associated with the course of the proposed action.	Descriptions of the analyses and the impacts associated with reduced Delta exports can be found in Chapter 7, Environmental Analysis, Chapter 8, Economic Analysis and Other Considerations, and Chapter 9, Proposed Voluntary Agreements, or in many of the various appendices of the draft Staff Report. For results specific to water supply in reservoirs receiving water exported from the Delta, please refer to Appendices A1a. Methods for Estimating Regional Sacramento/Delta Surface Water Supply for Agricultural and Municipal Use, A1b. Methodology for Estimating Existing Water Supply from

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			Historical Water Deliveries Data, or Appendix 3: Agricultural Economic Analysis: SWAP Methodology and Modeling Results.
279	43	[Chapter/Appendix] 6 [Section] 6.4.3 [Page Number] 62 - 67 The assumptions on how the water reductions associated with different water users (agricultural, municipal and industrial, and refuge) do not appear to account for water right priorities that may result in refuges bearing a greater proportion of the water delivery shortages.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding CVP allocations and obligations. The revised Plan includes a provision that allows for the Executive Director to approve exceptions to curtailments for wildlife refuges. Updated SacWAM modeling presented in Chapter 13, Revised Proposed Plan Amendments, of the 2025 partially recirculated draft Staff Report reflects this provision and shows very small reductions to refuge supplies. As discussed in Section 13.4, Changes in Hydrology and Water Supply, SacWAM results for average annual Sacramento/Delta water supply to wildlife refuges under the 55 w/WSAs scenario show limited changes for all water year types that would be assumed to be negligible and are within the expected precision of the model. These changes are very similar to those for the flow scenarios generated using SacWAM version 2025.08.28 and presented in Appendix H1a3, Sacramento Water Allocation Model Results for Updated Unimpaired Flow Scenarios, and are less than those generated using SacWAM version 2023.06.12 and evaluated in Chapter 6, Changes in Hydrology and Water Supply, and Chapter 7, Environmental Analysis, for the flow scenarios. As discussed in Section 13.4, Changes in Hydrology and Water Supply, refuge priorities were increased relative to other senior demands to reflect provisions of the December 2025 revised draft Bay-Delta Plan intended to prioritize refuge water supplies. However, while the SacWAM results suggest that changes in Sacramento/Delta water supply to wildlife refuges under the 55 w/WSAs scenario and flow scenarios could be negligible, the analysis of impacts resulting from changes in refuge water supplies is complicated by Reclamation's past practice of reducing water supplies to Central Valley Project Improvement Act (CVPIA) wildlife refuges when it reduces allocations to Sacramento River settlement contractors; therefore, it is possible that reductions in Sacramento/Delta surface water supplies to wildlife refuges could at times be larger than indicated by the modeling.

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279	44	[Chapter/Appendix] 6 [Section] 6.5 [Page Number] 84 Include groundwater pumping modeling impacts so that the impacts can be assessed.	Please refer to Section 7.12.2, Groundwater, for environmental setting, potential impacts, and mitigation measures for groundwater effects that may result from changes in hydrology and changes in water supply, including pumping. This section provides regional descriptions of the potential for changes in groundwater pumping and changes in incidental and intentional groundwater recharge, and the resulting changes in groundwater levels that could occur as water users respond to the proposed Plan amendments using the SacWAM and SWAP models to produce results for groundwater hydrology at the regional level.
279	45	[Chapter/Appendix] 7 [Section] Universal The impact analysis sometimes compares to “baseline” and some times to existing condition but does not explain why it alternates between the two.	The terms “baseline” and “existing conditions” are used interchangeably throughout the 2023 draft Staff Report. This is described in Chapter 6, Changes in Hydrology and Water Supply, and Chapter 7, Environmental Analysis. These chapters explain that the project baseline includes requirements as they have been implemented in recent years in an attempt to represent the existing conditions. For more information on this topic, please see Common Response 6.2, Baseline and No Project Alternative.
279	46	[Chapter/Appendix] 7 [Section] Universal It appears the Staff Report makes scant use of Biological Models.	Please see Chapter 3, Scientific Information to Inform Fish and Wildlife Flow Recommendations and Common Response 3.1, Fish Protection, for a discussion on how the models used in the Staff Report, including those for species and habitat, are all appropriate and adequate for the purposes in which they are used.
279	47	[Chapter/Appendix] 7 [Section] 7.7.5 [Page Number] 23 Mitigation measures may commit costs to reservoir operators in response to impacts of the WQCP actions to cultural resources.	The potential to commit reservoir operators to costs associated with implementing mitigation measures for cultural resources does not constitute a significant environmental issue. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	48	[Chapter/Appendix] 7 [Section] 7.24.7 [Page Number] 56 Concur with analysis of alternatives statement - "Under the proposed VAs, impacts from changes in hydrology and supply would be smaller in magnitude and geographic scope than the changes that would occur under the proposed Plan amendments. In many instances, the VAs would have no impact or less-than-	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. See also Common Response 7.24, Alternatives Analysis, for more information on the description and analysis of alternatives.

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		significant impacts where the proposed Plan amendments would have potentially significant impacts."	
279	49	[Chapter/Appendix] 7 / App F [Section] 7.24.7 /Table F.2 [Page Number] 23 / App F pg 27 Suggest adding a consolidation of mitigation measures identified per environmental resource to support the analysis and consolidate for the reader in the Analysis Chapter. Currently Ch. 7 points reader to Table F-2, however that table does not provide description of the mitigation measure. Mitigation measures may commit facility operators to develop plans, conduct studies, general response to mitigate/manage an impacted environmental resource.	The commenter suggests minor text revisions that would not alter the Staff Report's analysis or conclusions. The suggested revisions to the 2023 draft Staff Report are not warranted. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	50	[Chapter/Appendix] 7 [Section] 7.2.3.5 [Page Number] 9 Alternative 4a, "... requirements that are based on constraints from NMFS and USFWS BiOps and the CDFW ITP for the operations of the SWP and CVP." The operations of the CVP are not subject to the ITP for the operations of the SWP pursuant to CESA. Please revise all language in this section.	The commenter suggests minor text revisions that would not alter the Staff Report's analysis or conclusions. The suggested revisions to the 2023 draft Staff Report are not warranted. Furthermore, this distinction is described on page 7.2-3 of the 2023 draft Staff Report. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	51	[Chapter/Appendix] 7 [Section] 7.2.3.5 [Page Number] 10 Alternative 4b, Head of Old River Barrier Alternative. Reclamation and DWR, in coordination with NMFS and CDFW, did not include this project into the Biological Assessment, transmitted November 9, 2023, and are not considering any further action.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	52	[Chapter/Appendix] 7 [Section] 7.2.3.5 [Page Number] 11 Alternative 4c, this action is not included into the Biological Assessment, transmitted November 9, 2023, and is not supported by the lines of evidence included in the Knowledge Papers, September 2022.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
279	53	[Chapter/Appendix] 7.2 [Section] 7.2.3.3 [Page Number] 6 May Folsom storage is at full capacity in over 50% of years in the baseline, but only 6% of years in the UI55 flow scenario.	In the 2023 draft Staff Report, temperature impacts of the proposed Plan amendments are analyzed in Section 7.6.2, Aquatic Biological Resources. Please see Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, for

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		Conversely, UI55 carryover is generally higher than the baseline. The lower fill and higher carryover in UI55 translate to a more limited use of storage capacity at Folsom. UI55 fill, which averages 705 taf, may be sufficient for the temperature in the lake to stratify, but holding that stratification through the season is unlikely, due to the lower overall thermal mass and operations that would lose cold water more quickly, such as power bypasses.	information on the scope of the water temperature analysis and constraints that would result from the combination of carryover storage and higher flow requirements. Also, the project has been revised in part to allow more water to be stored in reservoirs at the outset of Plan implementation, which could improve cold water habitat conditions. See Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for further information on regulatory pathway implementation of the inflow and cold water habitat objectives.
279	54	[Chapter/Appendix] 8 [Section] 8.1 [Page Number] 4 Consider including Trinity County within the economic profile and analysis due to relation of Trinity River water into the Sacramento/Delta."	The revised proposed Plan amendments contain a provision to ensure that implementation of the Bay-Delta Plan does not result in redirected impacts to native fish and wildlife resources in the Trinity River watershed, including temperature and instream flow impacts. Please see Common Response 1.5, Trinity River, for further discussion on how the Bay-Delta Plan update relates to the Trinity River.
279	55	[Chapter/Appendix] 9 [Section] 9.9.2 [Page Number] 199 Alternative 6a, "...any new point of diversion of water or expanded point of diversion of water would not be authorized to divert water during the January-through-June period unless Delta outflows were at levels determined in the State Water Board's 2017 Scientific Basis Report, or future equivalent analyses, to provide conditions expected to result in the recovery of a wide array of native fish and wildlife species." This doesn't appear to be an alternative as much as the Board determining a Fully Appropriated Stream. We were unable to locate the analysis in the Draft Staff Report and/or Appendices upon which this determination was made, would you please direct us to those analyses."	Alternative 6a is not dependent on any Fully Appropriated Stream determination. As described in Section 7.2.3.7, Proposed Voluntary Agreements (Alternative 6), of the 2023 draft Staff Report, Alternative 6a was developed in response to the terms of the VA MOU requesting that the State Water Board use its legal authorities to protect VA flows against diversion for other purposes for the term of the VAs. This section further describes how Alternative 6a could be implemented in part through an expansion of the State Water Board's list of Fully Appropriated Streams, but any such expansion would proceed through the appropriate process. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the provision to protect the flow base from new water projects.
279	56	[Chapter/Appendix] 12 [Section] 12.4 [Page Number] 4 Sacwam is based on and old version of CALSIM three that uses a graphic interphase that does not allow to examine the code. The model does not meet allocations.	The WEAP software platform is used worldwide and has been utilized in hundreds of peer reviewed scientific studies. All model variables and constraints are accessible through the data tree of the model interface. Additionally, the SacWAM logic is explained in the SacWAM Documentation (available on the State Water Board's Bay-Delta webpage). SacWAM has been designed to prioritize environmental requirements first and then deliver additional water supplies to users in the order of generalized water rights groupings. Please see Common Response 6.1,

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			Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for more information about SacWAM.
279	57	[Chapter/Appendix] 12 [Section] Universal Add modeling result to text to help the reader to understand ambiguous adjectives used to explain the modeling results conducted.	Chapter 12, Public Participation, is intended to address public participation, not to display modeling results. Modeling results can be found in Appendix A1, Sacramento Water Allocation Model Methods and Results; Appendix G3a, Sacramento Water Allocation Model Methods and Results for the Proposed Voluntary Agreements; and Appendix H1a2, Sacramento Water Allocation Model Results for Revised Proposed Plan Amendments, through Appendix H1a5, Sacramento Water Allocation Model Results for Export Constraint Sensitivity Analysis of the Staff Report.
279	58	[Chapter/Appendix] 12 [Section] Universal Chapter should indicate where to find document identifying how submitted comments were addressed.	Responses to comments are included in Volume 3 of the final Staff Report.
280	1	The County supports and joins in the detailed comments submitted on January 18, 2024 by the East Bay Municipal Utility District (“EBMUD”) on the Draft Staff Report and the amendments proposed for the Bay-Delta Water Quality Control Plan. The County shares the position of EBMUD with respect to strongly supporting Voluntary Agreements, as well as its critique of several of the alternatives described in the Draft Staff Report. Rather than repeat those comments here, the County incorporates EBMUD’s comments by reference as though fully set forth herein. [Footnote 2: See EBMUD’s January 18, 2024 Comments on the September 2023 Draft Staff Report re: Potential Updates to the Bay-Delta Water Quality Control Plan with Exhibits, attached hereto as Attachment 1 [see ATT 1].]	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. Please refer to Comment Letter 311 to review responses to the comments incorporated by reference.
280	2	In addition, the State Water Board should consider EBMUD’s sustained efforts over the years to effectively manage the Mokelumne River flows. The North San Joaquin water right was severely restricted after State Water Board Decision 1641 and the Joint Settlement Agreement that requires fishery flows already proven to be beneficial to the fishery resources on the Mokelumne River. The alternative flow proposal presented by State Water Board staff would negatively impact the Mokelumne River fishery and reverse positive results that have been experienced in the system over the last decades. The Voluntary	Please see Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, and Chapter 4, Other Aquatic Ecosystem Stressors, of the Staff Report and Common Response 3.1, Fish Protection, for information on the benefits of the regulatory pathway. Please see Common Response 1.1, General Comments, regarding consistency with other laws, policies, and agreements.

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		Agreement for the Mokelumne River is an opportunity to build on the positive steps that have been accomplished and continue managing the system for the benefit of the fishery resources as well as water users. The alternative flow regimes will result in the opposite.	
280	3	Lastly, the County is making strides toward groundwater sustainability as required by the Sustainable Groundwater Management Act ("SGMA"). The County water users are reliant on surface supplies and are looking at managing flows in a manner to complement additional efforts to reach sustainable groundwater goals. The staff alternative flow proposal decreases the County water users' alternatives that could be implemented to support sustainability. This significant curtailment to municipal supplies from the Mokelumne system would have additional negative impacts not fully considered.	The 2023 draft Staff Report recognizes the potentially significant impact on groundwater supplies from water supply shortages and is discussed as Impact GW-b in Section 7.12.2 Groundwater. Local management of groundwater under the Sustainable Groundwater Management Act (SGMA) could reduce or eliminate impacts on groundwater, particularly in medium- and high-priority groundwater basins. As stated in the Staff Report, the State Water Board can ensure that mitigation is implemented for actions within its authority, other measures are largely within the jurisdiction and control of other agencies and depend on how water users respond to changes in water supply. In addition, the State Water Board cannot guarantee that measures always will be adopted or applied in a manner that fully mitigates the impact. Therefore, unless and until the mitigation is fully implemented, the impact remains potentially significant. Please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for a discussion on the Sacramento/Delta Bay Delta Plan update overlap with the implementation of the Sustainable Groundwater Management Act (SGMA).
280	4	[Attachment 1: Attachment 1—Email from East Bay Municipal Utility District to State Water Resources Control Board dated January 18, 2024 Re: Comments of East Bay Municipal Utility District on the September 2023 Draft Staff Report re: Potential Updates to the Bay-Delta Water Quality Control Plan]	Please refer to Comment Letter 311 to review responses to the comments incorporated by reference.
281	1	These supplemental comments reveal and document significant CEQA compliance issues, including the failure to provide an accurate baseline and provide a full range of alternatives that meet federal and state legal requirements. Our comments focus specifically on the failure to analyze of impacts to the Trinity River watershed due to the Trinity River Division (TRD) Central Valley Project (CVP) facilities that store and regulate water in the Trinity River, as well as facilities that divert water to the Sacramento River Basin.	The Bay-Delta Plan is developed for the Bay-Delta watershed and not the Trinity River. The U.S. Bureau of Reclamation (Reclamation) is responsible for independent federal statutory obligations for the Trinity River and should comply with those obligations. In addition, Reclamation is responsible for compliance with Order 90-5. The State Water Board may consider its record of compliance with state and federal law in the future as part of the annual and periodic review process in determining whether any additional actions are needed to

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		Although the Project's stated purpose is to reasonably protect fish and wildlife beneficial uses (emphasis added), This Project purpose does not meet federal numerical standards that establish a fishery restoration goal to: (1) double anadromous fish populations in Central Valley Rivers and streams [Footnote 1: Set by the Central Valley Project Improvement Act (CVPIA), the baseline is the 1967-1991 Central Valley Chinook salmon natural production annual average of 497,054 for all Central Valley runs (fall, late fall, spring, and winter). The 15-year rolling annual average of natural production for all Central Valley Chinook salmon runs is 990,000 by 2065, nearly doubling the baseline of 497,054]; and (2) reestablish Trinity River anadromous fish populations to pre-TRD levels of abundance(pursuant to P.L. 98-541, as amended by P.L. 104-143). Specifically, regarding the Trinity River, section 2 of the 1955 Trinity Act (P.L. 84-386) directs the US Department of Interior to "adopt appropriate measures to insure the preservation and propagation of fish and wildlife." Such measures that now govern TRD and CVP operations include, but are not limited to, the 2000 Trinity River Mainstem Fishery Restoration Record of Decision and the 2017 Long-Term Plan to Protect Adult Salmon in the Lower Klamath River Record of Decision. The Project must fully implement those decisions. As it applies to The Project, the proposed objective to "to reasonably protect fish and wildlife beneficial uses" does not meet Congressional directives both regarding the Central Valley Project Improvement Act and the 1955 Trinity Act P.L 84-386 §2.	address any redirected impacts on the Trinity River or to ensure that beneficial uses are protected on the Trinity River. Please also see Common Response 1.5, Trinity River, for more information on how the Bay-Delta Plan Update relates to the Trinity River.
281	2	The Project SED relies upon an inaccurate baseline that artificially inflates flows for the Sacramento/Delta project: The Project uses a baseline for Sacramento surface waters, flow and likely temperatures that are not accurate: [Footnote 2: The Sacramento Water Allocation Model (SacWAM) is a hydrologic and system operations model developed by the Stockholm Environment Institute (SEI) and State Water Board to assess the potential effects of revisions to instream flow and other requirements in the Bay-Delta watershed, including potential changes to the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento—San	Please refer to Common Response 6.2, Baseline and No Project Alternative, regarding the environmental baseline. Please also see Common Response 1.5, Trinity River.

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		Joaquin Delta Estuary (2006 Bay-Delta Plan) resulting from the Sacramento/Delta update of the Bay-Delta Plan.. SacWAM is a monthly time-step model developed for long-term planning-level analyses. The model is run for a 94-year (from water year 1922 to water year 2015) historical hydrologic period at existing levels of land use, population, and water demands and under an assumed framework of regulations. See A1-1to A1-2 https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/2023/staff-report/app-a1.pdf]. A) Reliance on the assumed Trinity River exports in the baseline flows (from water year 1922 to water year 2015) to meet Sacramento and Delta Flow objectives inflates the amount of available water to meet flow objectives. The time frame used to estimate exports from the Trinity River fails to recognize the limits on the exports and overestimates amounts of water available to the Sacramento River basin due to federal and state constraints, including but not limited to the: i) 1955 Trinity Act, which authorized the construction and operation of the TRD (P.L.84-386) and constrained diversions to the CVP; ii) Trinity River Record of Decision (2000 ROD); iii) California Endangered Species Act and the Federal Endangered Species Act; iv) Central Valley Project Improvement Act (Public Law 102-575, Title 34); v) SWRCB Public Trust obligations to the Trinity River; vi) Ca. Fish and Game Code § 5937.	
281	3	The Project SED relies upon an inaccurate baseline that artificially inflates flows for the Sacramento/Delta project: These state and federal laws and regulations set temperatures, minimum flows and releases that are guaranteed and Section 3406(b)(23) (now 21) of the CVPIA provides the monies and	Please refer to the response to comment 281-2. The SacWAM modeling appropriately includes the flow requirements on the Trinity below Lewiston which includes the 2000 ROD and the 2017 fall flow augmentation (see Section 7.7.9 of the SacWAM Documentation). Commenter may be misconstruing information presented in Chapter 2, Hydrology and Water Supply, which

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		performance goals for the restoration and preservation of the Trinity River fishery. More recently, the 2017 ROD [Footnote 3: https://mavensnotebook.com/2017/04/21/announcement-record-of-decision-for-the-long-term-plan-to-protectadult-salmon-in-the-lower-klamath-river-project/] provides an additional 35,000 AF to augment downstream flows to assist in the Trinity River watershed and Klamath River. The Project fails to analyze and provide information regarding these constraints and protections for the Trinity River with regard to flow and temperature assumptions for the Sacramento River and Delta flows. A) The Project modeling analysis suggests roughly 700,000 AF available for export. And yet significant changes to allowable exports have been in place since 2005. Utilizing any portion of the 1991-2003 time-period would result in an inflated average flow because roughly two thirds of the annual inflow was diverted from the Trinity River and Trinity Lake to the Sacramento River Basin via Lewiston Dam, Carr, Tunnel, Whiskeytown Reservoir, and Spring Creek Tunnel. These diversions flow into Keswick Reservoir where they are combined with Sacramento River water released from both the Shasta Dam and Spring Creek Debris Dam. This water is not available for export due to legal constraints. B) Even with The Project's distorted time frame, there is no analysis provided of the impact of assumed diversions upon the Trinity River watershed of approximately 720 square miles, or fish and wildlife requirements for the Trinity River Main-stem Fishery Restoration ROD, dated December 19, 2000. This ROD requires 368,000 to 815,000 acre feet (AF) annually for Trinity River flows to meet habitat, temperature, and sediment transport objectives. C) Subordination of the duty to protect and restore the Trinity River fishery to the operations of the CVP and State Water Project (SWP) as presented in The Project is arbitrary and not supported in either state or federal law.	presents background setting information explaining that water is imported to the Sacramento River watershed from the Trinity River. It is not intended to describe any modeling. An additional edit has been added for average imports from 2005-2021 following implementation of the 2000 Trinity Record of Decision. This edit does not affect any of the analyses. SacWAM documentation for the Trinity ROD implementation, and Appendix A1, Sacramento Water Allocation Model Methods and Results (Table A1-134) shows that long-term average Trinity imports as modeled are lower than that 1986-2021 average at 456 TAF/yr.
281	4	The Project SED relies upon an inaccurate baseline that artificially inflates flows for the Sacramento/Delta project:	Please refer to the response to comment 281-3. SacWAM modeling does not include the 50,000 AF for Humboldt County

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		The Project uses flows from the Trinity River to the Sacramento River that are not accurate. Chapter 2, Hydrology and Water Supply, page 2-20, states “Annual imports from the Trinity River into Keswick Reservoir averaged 694 TAF/yr. from water years 1986 through 2021 (Figure 2.2-2)” This is problematic. The average should be determined from the years 2005- 2021 because 2005 is the first full year of the Trinity ROD implementation. A recalculation of the actual diversions during the reduce flow diversion would be roughly 605,000 AF. Even this flow figure for the Sacramento River is inflated and needs to be further reduced throughout the entire project analysis due to: a) the Trinity River 2017 flow augmentation ROD of 35,000 AF, and b) the TRD Act Proviso 2, in which 50,000 AF dedicated to Humboldt County can no longer be assumed available for diversion.	however because that water has never been actually delivered or kept in the stream. Please see Common Response 6.2, Baseline and No Project Alternative.
281	5	The Project’s SED fails to describe a range of reasonable alternatives to the proposed project which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of The Project. 1) Any alternative consideration of the Voluntary Agreement implementation proposals must be measured against overarching federal requirements to meet (a) the Hoopa Valley Tribe’s property rights in the Trinity River fishery, which the United States holds in trust for the tribe while balancing other uses [Footnote 4: See 1993 Solicitor’s Opinion on Tribal Fishing Rights, Page B13. Accessed at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/PCFFA&IGFR/part2/pcffa_94.pdf], and (b) the fish and wildlife needs of the Trinity River. All water needed for preservation and propagation of the Trinity River fishery has priority over exports to the CVP and SWP [Footnote 5: See the Krulitz Opinion: Memorandum from Interior Solicitor to Assistant Secretary Land and Water Resources, regarding proposed contract with Grasslands Water	Please see refer to the response to comment 281-1.

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		District, 12/7/1979, Page B-13, accessed at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/PCFFA&IGFR/part2/pcffa_96.pdf and Section 2 of the 1955 Trinity Act P.L. 84-386].	
281	6	The analysis of alternatives also must include impacts on interstate commerce due to the fishery health of the Trinity River and Klamath Basin because the watershed affects sport, commercial and tribal fishing take from California to the Washington border. As such, the inflated flows relied upon by The Project, and taken from the Trinity River to serve CVP and SWP contractors, would need to conform to conservation measures required to implement the Magnuson-Stevens Fishery Conservation and Management Act (MSA) rather than limiting the analysis to merely the operations of the CVP and SWP and the demands of artificially high contracts for paper water.	The Bay-Delta Plan is developed for the Bay-Delta watershed and not the Trinity River. The project is not anticipated to result in any impacts to the Trinity River and therefore need not identify alternatives in that regard. The U.S. Bureau of Reclamation is responsible for independent federal statutory obligations for the Trinity River and should comply with those obligations, including the Magnuson-Stevens Fishery Conservation and Management Act.
281	7	The Project Violates the Public Trust Doctrine, Porter Cologne Act, the Clean Water Act the Public Trust Doctrine and California Fish and Game Code § 5937. 1) The Proposed Project fails to define biological outcomes and protection of fish and wildlife beneficial uses and specifically fails to analyze and define how continued exports of Trinity River water will preserve Tribal fishing and property rights, existing fish, and wildlife beneficial uses, and established numerical water quality objectives.	The Bay-Delta Plan is developed for the Bay-Delta watershed and not the Trinity River. Plan provisions include the development of biological goals to inform the continued update and implementation of the Bay-Delta Plan, including adaptive implementation, the effectiveness of Bay-Delta Plan and its implementation; the BDMEP, and future changes to the Bay-Delta Plan and its implementation.
281	8	2) Trinity River diversions have consistently resulted in the failure to meet State Water Resources Control Board (SWRCB) WRO Order 90-05 [Footnote 6: This information and a request for a notice of violation was provided to the State Water Resources Control Board by Mike Palmer October 25, 2023] and CA Fish and Game Code § 5937. The Project mitigation measures and water right changes must address these existing violations: a) USBR water management of the Trinity River Watershed has led to routine exceedances of temperature requirements that are a significant contributor to increased fish mortality and poor fish returns. For the 11 years that data are available SWRCB WRO 90-05 was met only 4 times or 36% of the time.	Please see Common Response 1.5, Trinity River, on the consideration of the Trinity River watershed, and for a discussion of state law, including Order 90-5, as comments on compliance with Order 90-5 are outside the scope of the Bay-Delta Plan updates. The Bay-Delta Plan is developed for the Bay-Delta watershed and not the Trinity River. The U.S. Bureau of Reclamation is responsible for independent federal statutory obligations for the Trinity River and should comply with those obligations.

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		b) North Coast Regional Water Quality Control Board Basin Plan for the North Coast Region set temperature targets at Douglas City for the period July 1 - September 30 that have yet to be implemented through water rights. c) Under WRO 90-05 if temperature compliance is exceeded in the Trinity River, as it has been, USBR is required to immediately file with the Chief of the Division of Water Rights a report "containing project operational data sufficient to demonstrate that the exceedance was not due to modifications of Trinity River operations for water temperature control on the Sacramento River." According to records such a filing has never happened, and no enforcement action has been taken to ensure compliance. The Project provides no relief or mitigation measures to remedy these violations that have significant impacts on the Trinity River fisheries. These impacts have not been analyzed or disclosed. d) For the years 2010-2022, there are 11 years of temperature data accessible (See the 2019 - TRRP Annual Report: Data is not available for 2019, because the equipment failed during the hottest part of the season and targets likely were exceeded. Data are not yet available for 2022). Overall, for the period 2010-2021, the temperature targets were met in only 4 of the 11 years for which data are available [Exhibit 1]. (Source Michael Palmer October 25, 2023, Correspondence to SWRCB Hon. Eileen Sobeck and annual TRRP reports) e) Further, The Project fails to disclose impacts to Trinity River Coho salmon, a federal and state threatened species, which suffered nearly 100% egg mortality at Trinity River Hatchery in November 2021 due to warm water because of low Trinity Lake storage from excessive diversions to the CVP. The Project would continue these operations without further mitigation of the impacts to fish and wildlife. (See Chapter 6 Table 6.3-4. Potentially Affected Upper Watershed Inter-basin Diversions Trinity to Clear Creek (no changes).) f) For the first 22 years that the Trinity River Restoration Program (TRRP) has been in place, an average of 50% of natural Trinity River flow has been diverted to the CVP. However, in the Critically Dry years of 2014, 2018, 2021 and 2022, when river	

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		temperatures were especially critical for the fishery, exports from the Trinity River to the CVP were 162%, 68%, 172% and 176%, respectively, of the total river flow for that year. This led to extremely low storage in Trinity Lake and exceedances of mandated temperatures in the Trinity River during the critical spawning and holding seasons for those years. (Source Michael Palmer letter to SWRCB July 3, 2023, and TRRP annual reports.) g) Trinity River fishery impacts, which were not analyzed or disclosed by The Project, were provided to the SWRCB On September 12, 2022, when the federal Pacific Fishery Management Council (PFMC) concerning the “Sacramento River Temperature Targets” alerted the SWRCB that existing Trinity River water temperature requirements under WRO 90-05 were not sufficient to protect incubating salmon eggs and temperature dependent egg mortality rapidly increases at daily average temperatures above 53.5°F. H) Trinity fishery returns are now dismal, with salmon and steelhead returns running between 7.7 and 14.9% of pre-project levels. The following chart [Exhibit 2] documents the 2021-22 Natural-Origin Escapement v. Draft USBR EIS Goals (Best Estimate of Pre-Dam Populations) [Footnote 7: Fork Trinity confluence after Annual Report Trinity River Salmon and Steelhead Monitoring Project, California Department of Fish and Wildlife, Table 4, pp 21].	
281	9	[Exhibit 1: Table titled Days Temperature Target Exceeded]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
281	10	[Exhibit 2: Table described as documenting the 2021-22 Natural-Origin Escapement v. Draft USBR EIS Goals (Best Estimate of Pre-Dam Populations)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
281	11	The Project Violates the Public Trust Doctrine, Porter Cologne Act, the Clean Water Act the Public Trust Doctrine and California Fish and Game Code § 5937. For Trinity and Sacramento Chinook, the temperature should be 53.5°F. For Trinity Coho, it should be 48°F-50°F. The 56°F Trinity	Please see Common Response 1.2, Water Quality Control Planning Process, on the consideration of the Porter Cologne Act, the Clean Water Act, and the Public Trust Doctrine. Please also see Common Response 1.5, Trinity River, on the consideration of the Trinity River watershed, and for a discussion of state law, including Order 90-5.

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		River temperature objective kills 100% of Trinity coho eggs. See Figure 1 below [Exhibit 3]. The 56°F temperature requirement in WRO 90-5 is also killing a good portion of endangered Sacramento Winter Run Chinook and threatened Spring Run Chinook.	
281	12	[Exhibit 3: Graph titled Figure 1. Coho salmon egg survival and Trinity River Hatchery water temperatures, 2021]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
281	13	The Project also fails to consider impacts on Coho salmon survival in the Trinity River from continued CVP operations and exports. On April 27, 2022, NOAA Fisheries submitted comments on the Bureau of Reclamation's draft 2022 Sacramento River Temperature Management Plan to the SWRCB. Based on Coho salmon egg mortality data at Trinity River Hatchery, NOAA Fisheries recommended a water temperature objective of 50°F (daily average) and daily average maximum of 53.5°F at the North Fork Trinity confluence after November 1st to protect egg incubation of Coho salmon (SONNC ESU). Additionally, they recommended increasing the minimum end-of-September carryover storage in Trinity Reservoir to 1.2 million acre-feet to preserve the cold-water pool in order to accommodate water temperature management in the Trinity River the following water year. None of these recommended mitigation measures are considered by The Project.	Section 7.1.3, Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan, of the Staff Report lists the purposes and goals of the project. The State Water Board is responsible for adopting and updating the Bay-Delta Water Quality Control Plan (Bay-Delta Plan), which establishes water quality control measures and flow requirements needed to provide reasonable protection of beneficial uses in the Bay-Delta watershed, particularly for fish and wildlife beneficial uses in the Sacramento River watershed, Delta eastside tributaries, and Delta regions (Sacramento/Delta). The Trinity River is not in the Bay-Delta watershed and therefore is not included in the plan area, and the new flow requirements would not apply to the Trinity River. The Bay-Delta Plan does contain provisions to prevent redirected impacts on the Trinity River from implementing the Plan. Please see Common Response 1.5, Trinity River, on independent federal statutory obligations on the Trinity River and future Trinity River water quality proceedings.
281	14	5) The Project relies upon continued existing operations of the CVP that allow banking Trinity River exports and then proceed to take them in critically dry years to serve water contractor supplies and flow requirements. The impacts of this water banking and transfer of Trinity River water during critically dry periods have not been analyzed nor disclosed. This export regime has led to extremely low storage in Trinity Lake and exceedances of WRO 90-05 mandated temperatures in the Trinity River during the critical spawning and holding seasons. This fish and wildlife impact due to the hydrology of the Trinity Lake, which has the lowest refill rate of all the CVP reservoirs, can be extended for years or months depending on weather	Please see the response to comment 281-13.

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		condition creating significant impacts on the short rearing periods for the fishery.	
281	15	Water temperature requirements established under WRO 90-05 in 1990, several of which apply to the Trinity River basin as well as to the Sacramento River below Keswick Dam, are outdated and need to be updated with contemporary information. Based on updated information concerning temperature dependent mortality of Chinook salmon and Coho salmon eggs, the current temperature requirements for the Trinity River are simply not sufficient to protect these important fishery resources. The Trinity River Act requires that water needed for the preservation and propagation of fish and wildlife of the Trinity River must be met before diversions of water to the serve CVP contractors as contemplated under The Project.	Please see Common Response 1.5, Trinity River, for a discussion of state law, including Order 90-5, as comments on compliance with Order 90-5 are outside the scope of the Bay-Delta Plan updates. Interested parties should raise issues or concerns relating to implementation and compliance with Water Right Order No. 90-5 in that process. Federal trust responsibilities to the Trinity River exist independent of the Bay-Delta Plan. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
281	16	7) The 2002 Lower Klamath fish kill in which over 65,000 adult salmon died from poor water quality will occur again unless cold water from the Trinity is available, even when the four Klamath Dams are gone. The Trinity River provides cold, clean water to the Lower Klamath River when conditions are unfit for adult salmon to survive under a Bureau of Reclamation 2017 Record of Decision [Footnote 8: Record of Decision for the Long-Term Plan to Protect Adult Salmon in the Lower Klamath River, U.S. Bureau of Reclamation, 2017, accessed at https://www.trrp.net/library/document/?id=2465]. Failure to provide temperature protection for the Trinity River dooms the Klamath-Trinity salmon restoration to failure and impacts the cultures and livelihoods of the Hoopa Valley and Yurok Tribes, who have federally reserved fishing rights. Commercial and sport fishing economies that depend on healthy salmon runs are also known impacts. The failure to provide sufficient flow and cold waters to protect the Trinity and Sacramento Rivers is evidenced by the total shutdown of commercial and recreational salmon fishing in 2023 and the likely repeat of that closure in 2024.	The State Water Board agrees that the Trinity River is important for restoration of salmon and steelhead populations in both the Trinity River and the Klamath River. While the Trinity River is not specifically mentioned in the Governor's Salmon Strategy, it cites the removal of four dams on the Klamath River as the largest river restoration project in American history. Dam removal on the Klamath River, which once hosted many of the most prodigious salmon runs in California, will improve river health for salmon by improving water quality and restoring access to over 420 miles of habitat for the first time in a century. (State of California 2024) The Trinity River is the largest tributary of the Klamath River and would likely be a priority to maximize the benefits of significant State and federal resources that have gone toward restoring the Klamath River.
281	17	Conclusion: The failure of The Project SED and Delta Plan changes to disclose and analyze the proposed amendments' impact on the Trinity River and legally required priorities to that watershed's flows permeate and impact the entire analysis and assessment. This flaw results in inflated flows as can be seen in	To the extent that this comment summarizes other comments, please see the substantive responses to those comments. The SacWAM modeling of the Trinity River is appropriate and incorporates the flow requirements on the Trinity below Lewiston.

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		The Project's discussion of Delta inflows, outflows and cold-water carryover storage and related comments.	
282	1	Our planet is facing an existential ecological crisis, putting us on a path toward Earth's sixth mass extinction. The condition of the San Francisco Bay-Delta is clear evidence of the dire situation we face. We are now called on to do everything in our power to protect and preserve a habitable planet. The State Water Board must lead this effort on the Bay-Delta and rivers that feed it. We cannot allow our legacy to be that of the generation that allowed the ecological collapse to occur, squandering the miraculous natural resources we inherited and leaving little behind for our children. Your mission is: "To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper resource allocation and efficient use, for the benefit of present and future generations." This should be the moment you've been waiting for – a once-in-a-generation opportunity to demonstrate true leadership and correct the destructive course we've been on. Please do what's necessary to protect our Public Trust resources and prevent the waste and unreasonable use of water, even if it means going against the Governor's agenda.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
282	2	Reject the Voluntary Agreements At best, the Voluntary Agreements (VAs) have been a stall tactic initiated by recalcitrant water agencies that refuse to acknowledge their legal responsibility to protect fish, wildlife and water quality. 15 years have passed since the 2009 Delta Reform Act was enacted, and we have yet to see any progress on restoration of the Bay-Delta ecosystem. In fact, conditions have gotten worse, as evidenced by the proliferation of toxic algae blooms, declining fish and wildlife populations and the closure of the commercial fishing season. In reality, the VAs are a cynical attempt by water agencies to pressure the Water Board into replacing the Bay Delta Water Quality Plan with far inferior measures that would fail to reverse the decline of the Bay-Delta ecosystem.	Please see the Scientific Basis Report Supplement (Staff Report Appendix G2) for an evaluation of the benefits of the Voluntary Agreements and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		The Delta Reform Act established the coequal goals of securing a reliable water supply for California and protecting, restoring, and enhancing the Sacramento-San Joaquin Delta ecosystem and the fish, wildlife, and recreation it supports. At best, the VAs might slow the demise of the Bay-Delta ecosystem, but they won't restore it. They should be rejected outright. The main limiting factors for salmonid recovery in our rivers are water temperature, rearing habitat and sufficient instream flows for juvenile fish outmigration. The VAs barely touch on any of these issues. By focusing almost exclusively on non-flow measures, they would be destined to fail. Adding spawning gravel might help produce more fry, but without adequate rearing habitat, such as inundated floodplains, the additional fry won't survive. The VAs are a sham. No NGOs were engaged in their development; there is no support from conservation, fishing, environmental justice or tribal groups; they are based on the Trump Administration's bogus 2019 Biological Opinions; they don't establish water quality objectives, provide cold water habitat, or limit Delta exports; they don't include realistic adaptive management plans; and they would only last 8 years.	
282	3	As a result of unsustainable diversions, the Bay-Delta estuary experiences a nearly permanent drought. The following two slides [see Exhibit 1, Exhibit 2] are from the Water Board's staff workshop on October 19, 2023. While it's difficult to compare the Bay Delta Plan (which focuses on year-round flows) to the VAs (which focus on January to June), it is clear that the VAs would produce very little new water compared to the Bay Delta Plan. For example, in "all years" the VAs would produce only 169 additional thousand-acre-feet (TAF) of water (with San Joaquin contributions), while the Bay Delta Plan would produce 1,466 TAF at 55% of unimpaired flow, 2,625 TAF at 65% of unimpaired flow, and 3,960 TAF at 75% of unimpaired flow.	Please refer to Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
282	4	[Exhibit 1: Table titled Change in Annual Total Delta Outflow by Water Year Type (TAF)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.

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282	5	[Exhibit 2: Two tables titled Change in January-June Delta Outflow by Water Year Type (TAF)]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
282	6	The Voluntary Agreements falsely promise to produce more fish with less water through non-flow measures, such as habitat restoration. Yet they would create very little new habitat. Table ES-4 [see Exhibit 3] in the staff report shows that the VAs would only increase salmonid rearing habitat by 2-3%. Delta smelt larvae would actually lose 11-13% of their habitat.	The benefits of the VAs are described in the Scientific Basis Report Supplement (Appendix G2 to the Staff Report). Also see Common Response 3.1, Fish Protection, regarding the flow and habitat benefit analyses. The table referred to by the commenter (Table ES-4 in the Scientific Basis Report Supplement) does not show a loss of 11-13% of their habitat, but instead presents a range of 11% loss to 13% gain in habitat for Delta smelt larvae in the VA scenario, relative to the reference condition.
282	7	[Exhibit 3: Table ES-4, Projected Increases in Habitat Area for Delta Smelt, Longfin Smelt, and Salmonids within Relevant Seasons for Each Species, from the 2023 Draft Staff Report]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
282	8	The VAs would do extremely little to improve the health of the San Francisco Bay-Delta estuary. Toxic algae blooms in the Delta would continue to proliferate due to the lack of freshwater inflow, and saltwater intrusion higher up into the Delta would continue to stress the ecosystem. The following two graphics [see Exhibit 4, Exhibit 5] are from the Bay Institute's report, San Francisco Bay: The Freshwater Starved Estuary." [Footnote 1: San Francisco Bay: The Freshwater Starved Estuary, The Bay Institute, September 2016 -- https://bayecotarium.org/wp-content/uploads/freshwater_report.pdf] The report explains, "How much fresh water makes it to the estuary, when, and for how long, shapes the Bay's ecosystem. Reducing Bay inflows so dramatically shifts the size and location of the ecologically important salinity mixing zone, reduces the inflow of nutrients, food, and sediment from the watershed that are vital components of fish and wildlife habitat; allows pollutants to accumulate; and facilitates invasions by undesirable non-native species." The first graphic shows that between 1967 and 2017, the Bay-	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		Delta would have naturally experienced 11 dry years and one super-critically dry year, had there been no diversions from the rivers that feed it. However, as a result of diversions, the Bay-Delta experienced 10 dry years and 20 super-critically dry years. 60% of all years were either dry or super-critically dry as a result of upstream diversions. The following graphic [see Exhibit 5] shows a typical shift in the salinity mixing zone as a result of upstream diversions. Please take a lesson from President Obama. Attempting to compromise with unreasonable opponents on a health care plan simply did not work. Obama and his supporters had to take a firm stand in order to enact the Affordable Care Act and look how successful it's been. Once you establish a fair playing field for the Bay-Delta and its tributaries, the diverters will figure out how to live within their means. As Chair Esquivel has said, we don't need a CalFed 2.0. It's time to learn from past failures and not repeat them. The science is clear: the Bay-Delta and its tributaries have been starved of freshwater for far too long. It's time to provide relief!	
282	9	[Exhibit 4: Two graphs of Bay Inflow titled Unimpaired and Actual, respectively]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
282	10	[EXHIBIT 5: Two graphics titled The Effect of Water Diversion on Salinity in the Bay]	This exhibit was included in the comment letter. The exhibit does not raise a specific environmental impact or economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
282	11	Support the High Flow Alternative The Bay Delta Plan incorporates the right approach for incentivizing success. Establishing a range of unimpaired flow that could be adjusted depending on the success or failure at achieving biological goals will incentivize the non-flow measures needed to complement higher flows. The Bay Delta Plan includes effective adaptive management, unlike the VAs, which are essentially just checklists. If the VAs are adopted and fail, there will be no effective back-up plan.	Please see Common Response 1.1, General Comments, for information on the Delta Flow Criteria Report and for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. See also Common Response 1.3, Revised Proposed Plan Amendments, for details on the VA pathway.

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		The State Water Board's 2010 report, Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, states, "Recent Delta flows are insufficient to support native Delta fishes for today's habitats. In order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Water Board are crafted as percentages of natural or unimpaired flows. These criteria include: 75% of unimpaired Delta outflow, 75% of unimpaired Sacramento River inflow..." Please support the High Flow Alternative identified in the Phase 2 staff report.	
282	12	Protect Beneficial Uses and Prevent the Waste and Unreasonable Use of Water There is still a lot of waste in California's water system, which provides an opportunity to redirect wasted water to beneficial instream use. Agriculture is the primary culprit, due in part to the "use it or lose it" doctrine, but more so due to senior water rights that enable irrigation districts to sell water too cheaply to incentivize efficiency. If faced with potential water shortages, irrigation districts will partner with urban water agencies to implement efficiency measures and projects to recharge groundwater in wet years at a fraction of the cost of developing expensive alternative water supplies in urban areas. Water efficient irrigation practices and technologies, including 1) soil moisture sensors and smart irrigation controllers, 2) real-time weather data, daily evapotranspiration reports and computer models that help farmers irrigate more precisely, and 3) shifting crops from flood irrigation to sprinklers and drip systems would help farmers adjust to reduced water availability. Improving irrigation efficiency has the added benefit of reducing fertilizer and pesticide use, reducing soil erosion, and minimizing runoff. Pressurized irrigation delivery systems present significant opportunities to save water. The South San Joaquin Irrigation District (SSJID) completed a pilot project to understand the	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		potential benefits of converting open canal deliveries to a pressurized water delivery system. The pilot project, conducted on a 3,800-acre portion of the District, demonstrated that water use could decrease by 30% while productivity increased 30%. [Footnote 2: American City & County, March 2015. Maximizing crop per drop for California farmers, p. 5. http://viewer.zmags.com/publication/a0d7babd#/a0d7babd/6] For SSJID alone, this could translate into saving as much as 73,000 acre-feet of water per year. [Footnote 3: The Modesto Bee, September 8, 2015. SSJID exploring remaking the entire delivery system. http://www.modbee.com/news/article34425708.html] With higher crop yields on prime farmland, the irrigation districts could provide incentives to retire drainage-impaired and/or flood-prone areas and reduce irrigation on marginal farmland. For example, the Dos Rios project at the confluence of the Tuolumne and San Joaquin Rivers has restored 2,100 acres of former farmland to wildlife habitat and floodplains that reduce downstream flood risk. The site is now scheduled to become the next State Park. In California, water is a public trust resource, meaning it belongs to the people of California. Water agencies have water rights, but the State Water Board can determine which beneficial uses have priority. It could be argued that food grown for Californians is a beneficial use of our water, but it's difficult to make that case for exports. Agricultural exports benefit a few farmers – often corporations – at the expense of other beneficial uses. Privatizing the gains of water extraction while socializing the losses is unacceptable and contrary to the Public Trust Doctrine. The State should consider imposing a fee on water used to grow crops for export, and dedicate the funds to helping farmers implement water efficiency measures.	
282	13	Conclusion We are long overdue for the Water Board to establish limits on water diversions. Once new requirements are in place, the pieces will fall together. Water agencies will be forced to do what they should have done long ago to meet the requirements of CA Fish	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		and Game Code 5937: "The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam." Once attempts to scuttle the Bay Delta Plan have failed, urban water agencies will partner with irrigation districts to improve the efficiency of agricultural water delivery and use, and recharge groundwater in wet years. Shared savings will benefit everyone, including fish and wildlife. Please reject the Voluntary Agreements and move forward expeditiously with the adoption and implementation of the High Flow Alternative for Phase 2 of the Bay Delta Water Quality Control Plan. We depend on you to leave behind a legacy we can all be proud of.	
283	1	Freshwater resources are shrinking California freshwater resources are a foundational component of the life sustaining qualities of our state. Due to decades of abuse, they are shrinking. At first we deny that our policies are causing the problem, later, when the problem occurs, every stakeholder scrambles to protect their share of the decreasing pie, thereby amplifying the problem.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
283	2	Effective Science-based Government Regulation Often the only effective solution to tragedies of the commons such as the one we face in the Sacramento Delta is government regulation. The regulations need to be based in science, and they need to fairly allocate costs and benefits. The total resource allocation should not add to more than 100%, in practice to a far lesser percentage like 60-70%, not favor one group over another, and especially not favor private over public interests.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
283	3	Reject the Voluntary Agreements These are woefully inadequate and fail to provide the one key ingredient needed for a healthy river: adequate stream flow (at least 55% of unimpaired flow). The state's own task force concluded this years ago, so why are we not dismissing the VAs	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		out of hand? (https://calmatters.org/environment/water/2023/09/california-delta-bay-plan/)	
283	4	Humans are in ecological overshoot, we can thrive if we adapt Every one of us on the planet needs to internalize the fact that humans are in ecological overshoot. Our demands on the biosphere are greatly in excess of what the biosphere can deliver. After internalizing this fact, we need to put policies in place to reduce our numbers and our individual consumption. The payout for this adaptation can be handsome: a healthy ecosystem that provides for both current and future generations. Failing to adapt will result in degradation for both current and future generations, even to the point of collapse.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
283	5	Do your job, govern for common good, not special interests Agricultural exports in effect privatize the public waters of the Sacramento Bay Delta. Surely this is lower priority than ensuring healthy salmon runs in our rivers. Reject the VAs out of hand, mandate at least 55% of unimpaired stream flow, force private stakeholders to accommodate the ecologically based regulations.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
284	1a	The Board of Supervisors opposes mandatory regulatory action that could results in large negative impacts on regional water flows including the proposed approach requiring a 55 percent unimpaired flow, with an adaptive range from 45 percent to 65 percent unimpaired flow.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
284	1b	Per our local irrigation district, this approach could severely limit the amount of water our local irrigation would be allowed to capture and store in its reservoirs. The reduction of allowable diversions could result in large swings of water surface elevations in our local reservoirs throughout the year and could create water supply constraints leading to more frequent water rationing especially for our irrigation water users who depend on the water for agricultural production. Reduction in available water supplies would cause an increase in water rates, would reduce the production of hydropower generation, negatively impact open space recreation in many areas, and cause negative impacts to our local biodiversity and species that rely on our local system for water and habitat today.	The 2023 draft Staff Report analyzes the impacts from changes in water supply. Effects on costs related to changes in water supply under the proposed Plan amendments was analyzed in Section 8.5, Municipal Water Supply Economic Effects. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments. In addition to the proposed Plan amendments, which remain part of the project as the regulatory pathway, the revised proposed Plan amendments include water supply adjustments and relaxations to carryover storage requirements for existing water right holders at the outset of Plan implementation to reduce water supply impacts and allow more water to be stored in reservoirs.

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284	2	Instead, we support and encourage the State Water Board's consideration of voluntary agreements to help achieve the desired benefits of the Bay-Delta Plan. The Board of Supervisors supports regulatory actions that provide maximum local flexibility and secure local water rights and regional water security that mitigate impacts associated with a) water supplies for cities, rural communities, and farms; b) water supplies needed for fish habitat preservation and enhancement projects; c) water supplies needed for birds along the Pacific Flyway; d) the ability to generate clean, renewable hydropower; e) protection of our recreational facilities and opportunities; f) protection of our groundwater supplies; and g) mitigates impacts on cold-water pools in upstream reservoirs that are needed to provide cold-water releases for salmon spawning and rearing habitats. Voluntary agreements (also known as Agreements to Support Healthy Rivers and Landscapes) alternative provides more benefits and fewer impacts than the proposed unimpaired flow alternatives. The alternate approach is more beneficial to reduce the unintended consequences resulting from severely reducing allowable diversions that could have devastating impacts throughout the county. The implementation of a more holistic program that includes flow contributions, the construction of fish habitat projects, multiple funding sources and governance, science and adaptive management programs is more beneficial to fish and water users. The program is also designed to be adaptive to allow for modifications as needed as time goes on. The unimpaired flow alternatives would severely limit the amount of water our local irrigation would be allowed to capture and store in its reservoirs.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
284	3	As reported by our local irrigation district, an unimpaired flow could result in a reduction of hydropower being produced by our local irrigation district. Projections of modeling of unimpaired flow alternatives shows a decrease of between about 36% and 50% of our local irrigation district's annual hydroelectric energy production from its Yuba-Bear Project, or a reduction in power supply to roughly 21,600 to 30,000 homes. This not only reduces clean energy sources for the state but will also result in negative impacts to the county's economy through higher rate increases. The Board of Supervisors understands the need of the State	Please see Common Response 7.8, Energy and Hydropower, regarding Staff Report analysis of individual facilities and commenter estimates of local effects. Energy in the state is derived from multiple sources, including hydropower and other renewable clean energy sources. Energy pricing is complex and accounts for many factors affecting both supply and demand. Similarly, consumer rates are established by many different factors. There is no direct relationship between reduced hydropower generation and energy consumer rates, and it is speculative to assume that higher rates and accompanying

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		Water Board to improve the water quality in the delta to support the fisheries that are in severe decline; however, the Board of Supervisors encourages the State Water Board to develop solutions that not only accomplish this need but also take in consideration the other beneficial uses of water throughout the entire water system including the upper watershed area in Nevada County.	negative impact on the economy are a likely outcome of the flow scenarios. In addition, please see Common Response 1.2, Water Quality Control Planning Process, for information concerning consideration of beneficial uses.
285	1	I oppose mandatory regulatory action that could results in large negative impacts on regional water flows including the proposed approach requiring a 55 percent unimpaired flow, with an adaptive range from 45 percent to 65 percent unimpaired flow. This approach would severely limit the amount of water our local irrigation would be allowed to capture and store in its reservoirs. The reduction of allowable diversions would result in large swings of water surface elevations in our local reservoirs throughout the year and could create water supply constraints leading to more frequent water rationing especially for our irrigation water users who depend on the water for agricultural production. Reduction in available water supplies would cause an increase in water rates, would reduce the production of hydropower generation, negatively impact open space recreation in many areas, and cause negative impacts to our local biodiversity and species that rely on our local system for water and habitat today.	The Staff Report analyzes the impacts from changes in water supply. Effects on costs related to changes in water supply under the proposed Plan amendments were analyzed in Section 8.5, Municipal Water Supply Economic Effects, and corresponding Section 13.8, Economic Analysis and Other Considerations. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments. In addition to the proposed Plan amendments, which remain part of the project as the regulatory pathway, the revised proposed Plan amendments include water supply adjustments and relaxations to carryover storage requirements for existing water right holders at the outset of Plan implementation to reduce water supply impacts and allow more water to be stored in reservoirs.
285	2	Per the recently released Nevada County 2022 Crop and Livestock Report, the gross value of all agriculture production in the county is approximately \$18,773,400. Over the past several years, our agriculture sector has suffered from extreme weather. In fact, in 2022 the county requested a USDA disaster declaration through the California Office of Emergency Services for grape growers who revealed an overall estimated production loss of 55% throughout the county due to extreme weather. A mandatory a 55 percent unimpaired flow would have self-induced devastating impact on our agriculture sector who is sill recovering from climate events, thereby further threatening our local economy.	Section 7.4, Agriculture and Forest Resources, of the Staff Report evaluates impacts on agriculture, and discloses that impacts on agriculture could be potentially significant with implementation of the project. Chapter 8, Economic Analysis and Other Considerations, analyzes the economic effects of changes in hydrology and water supply on agricultural and municipal use.
285	3	Instead, I support and encourage the State Water Board's consideration of voluntary agreements to help achieve the desired benefits of the Bay-Delta Plan. I support regulatory actions that provide maximum local flexibility and secure local	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		water rights and regional water security that mitigate impacts associated with a) water supplies for cities, rural communities, and farms; b) water supplies needed for fish habitat preservation and enhancement projects; c) water supplies needed for birds along the Pacific Flyway; d) the ability to generate clean, renewable hydropower; e) protection of our recreational facilities and opportunities; f) protection of our groundwater supplies; and g) mitigates impacts on cold-water pools in upstream reservoirs that are needed to provide cold-water releases for salmon spawning and rearing habitats. Voluntary agreements (also known as Agreements to Support Healthy Rivers and Landscapes) alternative provides more benefits and fewer impacts than the proposed unimpaired flow alternatives. The alternate approach is more beneficial to reduce the unintended consequences resulting from severely reducing allowable diversions that could have devastating impacts throughout the county. The implementation of a more holistic program that includes flow contributions, the construction of fish habitat projects, multiple funding sources and governance, science and adaptive management programs is more beneficial to fish and water users. The program is also designed to be adaptive to allow for modifications as needed as time goes on. The unimpaired flow alternatives would severely limit the amount of water our local irrigation would be allowed to capture and store in its reservoirs.	
285	4	An unimpaired flow would result in a reduction of hydropower being produced by our local irrigation district. Projections of modeling of unimpaired flow alternatives shows a decrease of between about 36% and 50% of our local irrigation district's annual hydroelectric energy production from its Yuba-Bear Project, or a reduction in power supply to roughly 21,600 to 30,000 homes. This not only reduces clean energy sources for the state but will also result in negative impacts to the county's economy through higher rate increases.	Please see Common Response 7.8, Energy and Hydropower, regarding Staff Report analysis of individual facilities and commenter estimates of local effects. Energy in the state is derived from multiple sources, including hydropower and other renewable clean energy sources. Energy pricing is complex and accounts for many factors affecting both supply and demand. Similarly, consumer rates are established by many different factors. There is no direct relationship between reduced hydropower generation and energy consumer rates, and it is speculative to assume that higher rates and accompanying negative impact on the economy are a likely outcome of the flow scenarios.

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			In addition, please see Common Response 1.2, Water Quality Control Planning Process, for information concerning consideration of beneficial uses.
285	5	Additionally, I have serious concerns over the insufficient CEQA Analysis performed as part of the staff report, including: - Lack of Climate Change Hydrology included in analysis of the proposed unimpaired flow scheme improper for informed decision making and public disclosure as to the actual environmental effects of the proposed plan amendments under CEQA.	See Common Response 4.2, Drought and Climate Change, for information regarding the consideration of climate change in the Staff Report and consistency with regulatory requirements and other policies.
285	6	Additionally, I have serious concerns over the insufficient CEQA Analysis performed as part of the staff report, including: - An EIR (or in this case the functional equivalent of an EIR) must discuss any inconsistencies between the proposed project and other plans. (14 Cal. Code Regs. § 15125(d).) One such plan is the Delta Plan prepared by the Delta Stewardship Council. The Delta Plan was amended in 2022 to, among other things, incorporate additional research relating to climate change. The amended Delta Plan acknowledges that "Climate change will have major implications for the future of the Delta ecosystem. Climate change is expected to have the following four effects on the Delta ecosystem: increased temperatures, altered precipitation and runoff patterns, increased frequency of extreme weather events, and sea level rise." (Delta Plan, Amended-June 2022, p. 4-20.) The DSR's failure to incorporate the effects of climate change into its assessment of UIF violates CEQA.	Similar to the Delta Plan, the Staff Report also discusses effects of climate change in Section 4.6, Climate Change. Thus, it is unclear how the Staff Report is inconsistent with the Delta Plan as alleged by the commenter. Please see the response to comment 285-5 regarding consistency with regulatory requirements with respect to climate change and for incorporation of climate change effects into the Staff Report analyses.
285	7	Additionally, I have serious concerns over the insufficient CEQA Analysis performed as part of the staff report, including: - The draft Staff Report does not adequately evaluate water supply impacts. In over 70% of years under the 55% UIF scenario, our local water district must manage a water supply deficit. 50% of the time that water supply deficit is approximately 18TAF to 37TAF. 20% of the time, our local water district will have to address and mitigate a 40TAF to nearly 60TAF supply deficit.	As explained in Common Response 7.1, General CEQA and Approach to the Analysis, reduction in water supplies is not by itself an adverse impact to the physical environment subject to CEQA review. In addition, the project is revised as described in Common Response 1.3, Revised Proposed Plan Amendments. In addition to the proposed Plan amendments, which remain part of the project as the regulatory pathway, the revised proposed Plan amendments include water supply adjustments and relaxations to carryover storage requirements for existing water right

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			holders at the outset of Plan implementation to reduce water supply impacts and allow more water to be stored in reservoirs.
285	8	Additionally, I have serious concerns over the insufficient CEQA Analysis performed as part of the staff report, including: - Inconsistencies between the SacWAM model This uncertainty between the SacWAM model depiction of the proposed plan amendments and the DSR narrative violates CEQA. A "finite project description is indispensable to an informative, legally adequate EIR." (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192.) Moreover, an accurate and stable project description is necessary so that the lead agency and public have enough information to "ascertain the project's environmentally significant effects, assess ways of mitigating them, and consider project alternatives." (Sierra Club v. City of Orange (2008) 163 Cal.App.4th 523, 533.)	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. To the extent that this comment summarizes other comments, please see the substantive responses to those comments. The commenter has not described the uncertainty or inconsistency with the Sacramento Water Allocation Model that is referred to in this comment. Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply. Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the project description and approach to the analysis.
285	9	Additionally, I have serious concerns over the insufficient CEQA Analysis performed as part of the staff report, including: - The State Water Board's DSR analysis of Nevada Irrigation District's (NID) reservoirs violate CEQA. The DSR does not, in detail, describe the proposed change in operations for NID's facilities.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding the interpretation of impacts on individual water users using results from the SacWAM modeling presented in the draft Staff Report and the level of detail of the analysis.
285	10	I understand and support the need of the State Water Board to improve the water quality in the delta to support the fisheries that are in severe decline; however, I do not support efforts that place regulation that robs Peter to pay Paul. Instead, I encourage the State Water Board to develop solutions that not only accomplish this need but also take in consideration the other beneficial uses of water throughout the entire water system including the upper watershed area in Nevada County.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
286	2	We also submit the following comments, attached hereto, as fully bearing upon the presently proposed project as discussed in Section B of this letter: - AquAlliance comments on the Butte Subbasin's Groundwater Sustainability Plan. (Exhibit A) [See ATT 1]	Prior to SGMA's historic passage in 2014, there was no statewide regulation of groundwater basins. SGMA was passed to address ongoing unsustainable groundwater use in California's alluvial groundwater basins and the physical, societal, and environmental consequences of that over-extraction (2023 draft Staff Report Section 7.12.2, Groundwater, p. 7.12-2-9.) Under SGMA, DWR is the state agency tasked with initially reviewing

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		- AquAlliance comments on the Colusa Subbasin's Groundwater Sustainability Plan. (Exhibit B) [See ATT 2] - AquAlliance comments on the Corning Subbasin's Groundwater Sustainability Plan. (Exhibit C) [See ATT 3] - AquAlliance comments on the Vina Subbasin's Groundwater Sustainability Plan. (Exhibit D) [See ATT 4]	the sufficiency of GSPs prepared by local GSAs. (Wat. Code, §§ 10733, 10733.4.) If DWR finds the GSP or GSPs for a basin inadequate, it refers the basin to the State Water Board for a determination as to whether further state intervention is necessary. (Wat. Code § 10735.) As part of its GSP review process, DWR solicits public comments on GSPs. (Wat. Code, § 10733.4.) DWR determined the Colusa, Corning, and Vina Subbasins to be high priority and the Butte Subbasin to be medium priority but found that none of the basins was critically overdrafted. (2023 draft Staff Report, Table 7.12.2-2.) February 2022, commenters filed three validation actions in Superior Court challenging the sufficiency of the Butte, Colusa, Corning and Vina GSPs [AquAlliance et al. v. Vina Groundwater Sustainability Agency (2022), AquAlliance et al. v. Butte Subbasin Groundwater Sustainability Agency (2022) and AquAlliance et al. v. Colusa Groundwater Authority (2022)]. April 2022, commenters submitted four comment letters to DWR (GSP comment letters) during DWR's GSP comment period. Commenters assert the GSP comment letters are also "fully bearing" upon the Staff Report; however, the State Water Board released the 2023 draft Staff Report for public comment on September 28, 2023, which is one year and five months after the letters were written, creating an impossibility that the letters address the Staff Report directly. Commenters allege that their letters "demonstrate the failures of some GSAs in the Sacramento Valley" however on July 27, 2023, DWR approved the Butte Subbasin and Vina Subbasin GSPs as sufficient. On October 26, 2023, DWR found deficiencies in the Colusa and Corning Subbasin GSPs, determined those GSPs "incomplete," and provided until April 23, 2024, for the GSPs to be modified and resubmitted for review for adequacy. It is conjecture for commenters to claim that SGMA implementation is failing when DWR, the agency entrusted with such determinations, has either determined plans are sufficient or is still in the process of making evaluations. Moreover, to the extent commenters have resorted to the courts for relief, if such relief were granted, it would still be based upon SGMA's requirements as there is no other statutory scheme requiring sustainable groundwater management. This conclusion is supported by the

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			outcome in <i>AquAlliance v. Vina Groundwater Sustainability Agency</i> (2026) -- Cal.Rptr.3d --. In that case <i>AquAlliance</i> challenged the trial court's stay of their validation action pending DWR's review of the GSPs. The trial court stayed the litigation finding that the validation action overlapped with DWR's review and "would require [it] to assume the functions of an administrative agency, or to interfere with the functions of an administrative agency." The trial court later dismissed the validation action as moot after DWR approved the GSP. In upholding the trial court's stay and eventual dismissal of the validation action, the Third District Court of Appeal concluded that deference to DWR was not an abuse of discretion as the "Legislature had unambiguously granted [DWR] the authority to conduct the sustainability evaluation of plans initially and on an ongoing basis" and the "sustainability evaluation is also a highly technical analysis [DWR] is uniquely tailored to perform." Thus, the Court of Appeal concluded, DWR has primary jurisdiction to make these determinations. Commenters assert that the [draft Staff Report] assumes GSA compliance with SGMA; however, this is incorrect. The 2023 draft Staff Report acknowledges that increased groundwater pumping could exacerbate groundwater overdraft in the Sacramento River watershed and Delta eastside tributaries regions, particularly in groundwater basins where groundwater storage volumes are already in decline and that this would be potentially significant. (2023 draft Staff Report Section 7.12.2, Groundwater, p. 7.12.2-43.) The Report further concludes that decreases in groundwater levels for the valley floor of the Sacramento River watershed and Delta eastside tributaries may exacerbate existing groundwater conditions to some basins and subbasins of the regions and this impact would be potentially significant. Contrary to commenters' assertions, the State Water Board acknowledges that it can only ensure that mitigation is implemented for actions within its authority and that other mitigation measures are largely within the jurisdiction and control of other agencies or depend on how water users respond to the proposed Plan amendments. Because the State Water Board cannot guarantee that measures always will be adopted or applied in a manner that fully mitigates the impact, including SGMA, the 2023 draft Staff Report concludes that until the

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			mitigation is fully implemented, the impact remains potentially significant (2023 draft Staff Report Section 7.12.2, Groundwater, p. 7.12.2-45.) For additional discussion of SGMA and SGMA's relationship with the Staff Report, please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act.
286	3	SED Assumptions The SED is replete with assurances of oversight and implementation of laws as if the public may count on the waterboards to actually carry out these duties. However, all is not as it seems. Without even a mention of state and regional boards' failures over multiple decades, the SED seeks to guide the reader down the yellow-brick road to the Wizard who will allow more declines in water quality, species populations, groundwater, and stream flow to bolster aspirations by placating the political and corporate elite in California.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
286	4	As the SWRCB knows full well, there isn't enough water in California for all the dreams that the SWRCB has fueled through approved claims. We are pleased to see that the SED acknowledges what C-WIN, AquAlliance, CSPA, and others have presented many times to the SWRCB, DWR, and the Bureau ("Agencies"): the unimpaired runoff of the Sacramento River basin is 21.6 MAF, but the consumptive use claims are an extraordinary 120.6 MAF – 5.6 times more claims than there is available water. [Footnote 2: California Water Impact Network, AquAlliance, and California Sportfishing Protection Alliance 2012. Testimony on Water Availability Analysis for Trinity, Sacramento, and San Joaquin River Basins Tributary to the Bay-Delta Estuary.] Nevertheless, the SED is still seeking to find "new" water instead of addressing relentless demand. "In some areas, surface water, including imported surface water, has been used to alleviate declining groundwater levels through substitution, managed groundwater recharge (percolation or injection into the groundwater basin), or both." [Footnote 3: SED p. 7.12.2-1.]	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
286	5	Missing from the SED is a very real discussion of potential impacts from the creation of space for recharge by abusing an	The potentially significant environmental impacts identified for groundwater as a result of potential responses to changes in

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		aquifer with over-pumping that may harm well owners, municipal users, GDEs, streams/rivers, species, and all manner of infrastructure to the ensuing recharge that alters water rights in a groundwater basin.	Sacramento/Delta surface water supplies pertain to groundwater levels (Impact GW-b) and groundwater quality (Impact GW-a,f). These potential impacts are discussed in Section 7.12.2, Groundwater, of the Staff Report. While successful Sustainable Groundwater Management Act (SGMA) implementation is one of the mitigation measures listed to address these impacts, discussion of the potential effects on SGMA implementation was not included in the 2023 draft Staff Report as it is beyond the scope of the plan update. Please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for more discussion on the overlap between the Sacramento/Delta Bay Delta Plan update and SGMA.
286	6	The State of California, through the Agencies and the legislature, continues to abuse the commons for political and commercial gain. In the guise of helping fish, after pushing some to extinction and others ever so close, the SED is part of a distorted system that throws money at infrastructure, local governments, and susceptible people to try to game what is left of natural hydrology and land. Harken to what continues to this day in the Owens Valley over 100 years after the water thievery began: "While Owens Valley residents no longer dynamite the LA Aqueduct, the water war continues as a war of attrition. The valley continues to be relentlessly drained, and LA flaunts its colonial rule in the region. The management agreements which looked so promising contain ambiguous language and have proved arduous to enforce. With perhaps a tinge of LA envy, Inyo County government often serves as a willing enabler of LA's exploitation. Some Owens Valley Paiutes argue that Inyo County, DWP, and environmental organizations are essentially the same, differing only in the rate of devastation they would accept. All three groups arise from the same materialistic culture that would monetize the entire world." [Footnote 4: Williams, Harry, Mark Lacey, Sally Manning, and Daniel Pritchett, 2016. Abstract: They stole it fair and square: Is there hope for Owens Valley? AquAlliance conference Water For Seven Generations: Will California Squander or Protect It?] Sound familiar? This must change!	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
286	7	B. Groundwater	Please see the response to comment 286-2. Section 7.12.2, Groundwater, states that increased groundwater pumping could

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		The Groundwater Section (7.12.2) states that “Increased groundwater pumping could occur in response to reduced Sacramento/Delta surface water supplies,” but fails to acknowledge existing groundwater conditions in the Sacramento Valley groundwater basins. Obfuscating crucial and available data, clearly violates CEQA by ignoring substantial evidence in DWR mapping, numerous Groundwater Sustainability Plans (GSPs) and documents, as well as what must be available in-house at the state and regional waterboards. Section 7.12.2 also asserts that the SWRCB will deal with the GSPs later: “As additional information and data are gathered regarding groundwater pumping in the subbasins, SGMA milestones, and SGMA compliance, the State Water Board can and will revisit and analyze groundwater conditions during the periodic review of the Bay-Delta Plan.” [Footnote 5: SED. p. 7.12.2-68] This ludicrous deferral, combined with the fact that many Central Valley groundwater basins are so depleted that they already significantly diminish surface flows (discussed below), leaves the SED seriously deficient. The SWRCB simply cannot, consistent with CEQA, allow foreseeable environmental impacts to escape full analysis at the earliest feasible stage in the planning process. (See Pub. Resources Code, § 21003.1; No Oil, Inc. v. City of Los Angeles, supra, 13 Cal. 3d 68, 84.). Sundstrom, supra, 202 Cal.App.3d at 306-307.	occur in response to reduced Sacramento/Delta surface water supplies. As stated in page 7.12.2-1 of the 2023 draft Staff Report, “It is difficult to determine how much groundwater would be available or what the groundwater capacity would be to replace reduced surface water supplies.” Potentially significant impacts from the water user response or “water user shifts to increased groundwater pumping could exacerbate groundwater overdraft in the Sacramento River watershed and Delta eastside tributaries regions, particularly in groundwater basins where groundwater storage volumes are already in decline.” (2023 draft Staff Report Section 7.12.2, Groundwater, p. 7.12.2-43) The potentially significant impacts for groundwater pertaining to groundwater levels (Impact GW-b) and groundwater quality (Impact GW-a,f) are discussed in Section 7.12.2.3, Impact Analysis, and mitigation measures (MM-GW-b and MM-GW-a,f) in Section 7.12.2.4, Mitigation Measures. As discussed in Section 7.12.2.3: The State Water Board can ensure that mitigation is implemented for actions within its authority, other mitigation measures are largely within the jurisdiction and control of other agencies or depend on how water users respond to the proposed Plan amendments. The State Water Board cannot guarantee that measures always will be adopted or applied in a manner that fully mitigates the impact. Therefore, unless and until the mitigation is fully implemented, the impact remains potentially significant. (2023 draft Staff Report Section 7.12.2, Groundwater, p. 7.12.2-45) Please See Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for a status report on SGMA implementation and more information regarding state intervention. Please see Common Response 7.1, General CEQA and Approach to the Analysis for more information regarding the Staff Report meeting CEQA requirements.
286	8	1) Groundwater and Stream Interaction So how does groundwater influence streams and rivers and all the living things that are connected to surface waters? To start, groundwater and surface water are essentially one resource,	The draft Staff Report acknowledges the interconnected nature of surface and groundwater and evaluates potential impacts extensively throughout the document. Please refer to Section 7.12.2, Groundwater, of the draft Staff Report for environmental setting, potential impacts, and mitigation measures for

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		physically connected by the hydrologic cycle. Although water law and water policy often consider groundwater and surface water as separate resources, groundwater and surface water are functionally inter-dependent. Groundwater and surface water interactions are controlled by their hydraulic connection. The SED fails to disclose and analyze these complex interactions, but superficially presents potential complications: “The proposed Plan amendments would increase streamflows in some areas, which could affect groundwater in multiple ways. Increased groundwater pumping could occur in response to reduced Sacramento/Delta surface water supplies. It is difficult to determine how much groundwater would be available or what the groundwater pumping capacity would be to replace reduced surface water supplies. In addition, greater instream flows would increase natural groundwater recharge from stream-aquifer interactions (i.e., infiltration from streambeds). However, reduced surface water diversions may in turn reduce the overall irrigated acreage in the study area, which could result in a reduction in the incidental recharge that occurs when irrigation exceeds evapotranspiration and cropland consumptive use. Reduced surface water availability also may reduce opportunities for managed recharge. An increase in groundwater pumping or a reduction in incidental or managed groundwater recharge could lead to reductions in groundwater volume, which has the potential to exacerbate existing poor groundwater water quality conditions, including sources of drinking water.” [Footnote 6: Id. p. 7.12.2-1 to 7.12.2-2.] What should have been included in the SED is the scientific understanding about streamflow and groundwater use. For example, scientific modeling sought by DWR demonstrated that, “The effect of groundwater substitution transfer pumping on stream flow, when considered as a percent of the groundwater pumped for the program, is significant. The impacts were shown to vary as the hydrology of the periods following the transfer program varied. The three scenarios presented here estimated effects of transfer pumping on stream flow when dry, normal, and wet conditions followed transfer pumping. Estimated stream flow losses in the five-year period following each scenario were 44, 39, and 19 percent of the amount of groundwater pumped	groundwater effects that may result from changes in hydrology and changes in water supply, including pumping. This section provides regional descriptions of the potential for changes in groundwater pumping and changes in incidental and intentional groundwater recharge, and the resulting changes in groundwater levels that could occur as water users respond to the proposed Plan amendments using the SacWAM and SWAP models to produce results for groundwater hydrology at the regional level. Groundwater impacts from other water management actions that may be taken in response to reduced Sacramento/Delta supply, including water transfers are discussed and mitigation measures identified. Additionally, please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for responses to comments related to the groundwater analysis and SGMA in the draft Staff Report.

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		during the four month transfer period.” [Footnote 7: Lawson, Peter, 2010. Groundwater Substitution Transfer Impact Analysis, Sacramento Valley. Technical memo to DWR. p. 8. Exhibit E.] Despite this analysis, the Agencies continue to require only a 13 percent deduction for streamflow losses during groundwater substitution transfers (in rare occurrences the SWRCB has required a bit more). The SED touches on work done by The Nature Conservancy: “Areas of gaining/losing streams have been identified in the Sacramento River watershed and San Joaquin Valley regions; long- term modeling of surface water and groundwater interactions suggests a significant increase in groundwater pumping throughout the Central Valley since the 1920s, leading to most river systems in the Central Valley having transitioned from gaining stream systems to losing stream systems (TNC 2014).” [Footnote 8: SED. 7.12.2-3.] However, Dan Wendell of The Nature Conservancy presented a much more detailed picture – what should be found in the SED. Moreover, he also raised the alarm about how long it takes for streamflow losses to appear, something else that is virtually ignored in the SED: The Sacramento Valley still has water levels that are fairly shallow,” he said. “There are numerous perennial streams and healthy ecosystems, and the basin is largely within a reasonable definition of sustainable groundwater yield. However, since the 1940s, groundwater discharge to streams in this area has decreased by about 600,000 acre-feet per year due to groundwater pumping and it’s going to decrease an additional 600,000 acre-feet in coming years under 2009 status quo conditions due to the time it takes effects of groundwater pumping to reach streams. It takes years to decades, our work is showing. The interaction between groundwater and surface water rivers and streams depends on a variety of factors, including the magnitude and direction of the river/stream (through the streambed and banks), the hydraulic properties of streambed and bank material, and the hydraulic gradient (the gradient between the river stage and the nearby groundwater levels). Gaining streams are portions of a river/stream system where	

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		adjacent groundwater levels are higher than the river stage, and groundwater seeps or discharges to the river/stream. Conversely, a losing stream occurs where river stage is higher than adjacent groundwater levels, and water flows from the river or stream into the aquifer. Where subsurface materials are saturated between the streambed and water table, conditions are connected, whereas when an unsaturated zone exists between the streambed and aquifer, the two are disconnected. Where groundwater levels are lower than the elevation of the river bed, there is no direct hydraulic connection between the two, and the area separating the river bed from the groundwater becomes partially unsaturated, causing water from the river to percolate through this area to the water table (USGS 2016). Areas of gaining/losing streams have been identified in the Sacramento River watershed and San Joaquin Valley regions; long-term modeling of surface water and groundwater interactions suggests a significant increase in groundwater pumping throughout the Central Valley since the 1920s, leading to most river systems in the Central Valley having transitioned from gaining stream systems to losing stream systems (TNC 2014). [Footnote 9: Maven's Notebook, 2014. Minutes of presentation by DanWendell with The Nature Conservancy: Groundwater Management Workshop, Part 1: Sustainable Groundwater Management Panel . http://mavensnotebook.com/2014/04/28/groundwater-management-workshop-part-1-sustainablegroundwater-management-panel/ Exhibit F.] After stumbling for years to update the 1995 Water Quality Control Plan, the SWRCB has now produced a work product that is impossibly hollow. The flawed SED now before us does not even attempt to address or correct the many failures of the past. With surface water flows so crucial to public trust and countless environmental and biological resources, to provide only broad-brush information in the Groundwater section – essential for so much, especially surface flows – is obviously a violation of CEQA. The SED is so deficient it must be withdrawn.	
286	9	2) Groundwater Recharge The SED states: “The State Water Board would also continue	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not

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		efforts to expedite water right permitting for groundwater recharge.” [Footnote 10: SED. p. 5-69.] Is this a valued practice by the SWRCB? As noted in our comments here, there are numerous impacts from arriving at a point where recharge is possible as well as the shift in water rights that follow. The lack of discussion and analysis is a serious omission in the SED. Through the SGMA process for the Vina Subbasin, AquAlliance prodded the GSA and Butte County staff to complete the task of analyzing how recharge impacts water rights. To that end, Valerie Kincaid, the Vina GSA’s legal counsel, wrote a memo in 2020. [Footnote 11: Kincaid, Valerie, 2020. Legal Implications of Potential Projects and Management Actions for the Vina Subbasin’s Stakeholder Advisory Committee. Exhibit G.] Below are excerpts from the memo that should be part of the SED, easily accessible on the SWRCB web site, and part of any future water recharge project, action, or request before the SWRCB. - Does a project proponent gain water rights over recharged groundwater? Yes. A project proponent maintains the right to water that is recharged whether it results from recharge projects or groundwater demand reduction projects (e.g., conservation, recycling). If a project uses or obtains a surface water supply and recharges into the aquifer, the project proponent would have a legal right to the recharged water. Water does not legally become “common” or “native” supply available to overlying groundwater right holders unless it is abandoned by the project proponent. (Los Angeles v. Glendale (1943) 23 Cal.2d 68, 76-78; Los Angeles v. San Fernando (1975) 14 Cal.3d 199, 258-60; Stevens v. Oakdale Irrigation District (1939) 13 Cal.2d 343, 352-43; Crane v. Stevinson (1936) 5 Cal. 2d 387, 398.) - [r]echarge projects could decrease the amount of water that has previously been abandoned. In this situation, there would be a decrease in native groundwater supplies available for groundwater right holders. Groundwater users would not lose their right to divert groundwater to support beneficial uses on the overlying land, but lower groundwater elevations may increase cost or make it impracticable. It is also possible that recharge projects may underestimate the amount of water that migrates or is “lost”, which could result in allowing the recharger	raise specific economic effects of the project. The Staff Report contains extensive discussions of how groundwater and surface water interact and potential effects on both in response to the proposed Plan amendments, including storage and recovery projects. See also more general discussion of groundwater storage and recovery in Section 6.6.1, Overview. As discussed in Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, capturing surface water to recharge groundwater aquifers artificially is a method of diversion to storage and generally requires an appropriative water right that identifies how the stored water will be beneficially used. Section 7.12.2, Groundwater, includes an in-depth discussion of potential impacts from utilizing surface water rights for groundwater recharge, and mitigation measures are identified. In processing water right applications that involve groundwater storage, the Board must take into account all prior rights and the availability of water in the basin. Evaluation of injury to water rights from specific recharge projects is outside the scope of the Bay-Delta planning process.

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		to extract more water than is reasonable, which could result in decreasing the amount of water available for overlying groundwater users. [Footnote 12: Id. p. 2.]	
286	10	3) Relationship to the Sustainable Groundwater Management Act Sadly, SGMA opened the door for aquifer abuse and water rights change: “Non-residential landowners and future banking partners may find it in their common interest to interpret the legislative intent (74) [Footnote 13: Keats, Adam et al., 2016. Not All Water Stored Underground is Groundwater: Aquifer Privatization and California's 2014 Groundwater Sustainable Management Act. Footnote: 2014 Act, § 10720.1(g) (It is the intent of the Legislature “[t]o increase groundwater storage and remove impediments to recharge.”). p. 106.] and lax definitions of safe yield and overdraft provided in the Act (75) [Footnote 14: Id. Footnote: 2014 ACT, § 10721(v) (“Sustainable yield” is defined as “the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.”); 2014 ACT, § 10735(a) (“Condition of long-term overdraft” means the condition of a groundwater basin where the average annual amount of water extracted for a long-term period, generally 10 years or more, exceeds the long term average annual supply of water to the basin, plus any temporary surplus. Overdraft during a period of drought is not sufficient to establish a condition of long-term overdraft if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.”).] based on the opinion in <i>Los Angeles v. San Fernando</i>, which encourages drawing down basins to create additional storage space and prevent water ‘wasting.’(76) [Footnote 15: Id. <i>Los Angeles v. San Fernando</i> 14 Cal. 3d 199, 280 (1975) (“We agree with plaintiff that if a ground basin’s lack of storage space will cause a limitation of extractions to safe yield to result in a probable waste of water, the amount of water which if withdrawn would create the storage space necessary to avoid the waste and not adversely affect the basin’s safe yield is a temporary surplus available for appropriation to beneficial use.	Please see the responses to comments 286-2, 286-5, and 286-7.

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		Accordingly, overdraft occurs only if extractions from the basin exceed its safe yield plus any such temporary surplus.”.)] a) The SED assumes Groundwater Sustainability Agency (GSA) compliance with SGMA – a monstrous leap of faith – that does not comport with the GSPs we have reviewed and over which we are currently in litigation. SED assumptions include: “Local public agencies have been on notice since 2012 regarding State Water Board’s intention to update the Bay-Delta Plan to provide increased instream flows for the protection of fish and wildlife beneficial uses in the Sacramento River watershed and Delta (^SWRCB 2009, ^SWRCB 2012). Such notification should have informed groundwater sustainability agency (GSA) groundwater planning efforts and management assumptions regarding the amount of surface water supplies in excess of environmental needs that may be available to augment groundwater supplies.” [Footnote 16: Id. p. 7.12.2-1] “Local SGMA implementation will help mitigate the effects of the proposed Plan amendments by minimizing groundwater overdraft, protecting drinking water supplies and other high-quality water from contamination by plume migration, and protecting interconnected surface water from stream depletion caused by groundwater pumping.” [Footnote 17: Id. p. 7.12.2-66.]	
286	11	To demonstrate the failures of some GSAs in the Sacramento Valley, attached are exhibits A, B, C, and D [See ATT 1, ATT 2, ATT 3, and ATT 4, respectively] from AquAlliance’s review of SGMA plans for the Butte, Colusa, Corning, and Vina subbasins. [Footnote 18: The Butte and Vina GSPs were approved by DWR, with significant criticism. The Colusa and Corning GSPs were deemed incomplete. https://sgma.water.ca.gov/portal/gsp/all] They are examples of serious impacts in GSPs that aren’t included in the Plan’s SED, such as the four GSPs will cause: - Significant declines in groundwater elevation. -- Vina - Well thresholds are unreasonably low, including some that are approximately 200% below normal operating ranges.	Please see response to comment 286-2 and Common Response 7.1, General CEQA and Approach to the Analysis, for more information on how the Staff Report meets CEQA requirements.

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		-- Butte - Groundwater levels allowed to drop by up to 100% of historic range. - Failure of hundreds of domestic and shallower agricultural wells. -- Colusa - Failure of at least 20 percent of domestic wells, despite the requirement under SGMA that domestic wells be given priority. -- Butte - Failure of at least 7 percent of the domestic and very deep aquifer supply wells with no funding or ideas how to mitigate. -- Vina – Failed to disclose the projected number of wells that will fail. - Major stream depletion. -- Butte - Increased groundwater pumping that will result in stream flow loss from 90 to 277 percent! - Massive loss of groundwater storage. -- Colusa - The loss of almost 1,000,000 acre feet of groundwater storage by 2070. - Groundwater Dependent Ecosystem collapse under all GSPs. - Unreasonable and undesirable amounts of land subsidence in the Colusa Subbasin. Additionally, the approved Butte and Vina GSPs have an almost guaranteed plan to let groundwater plunge far beyond historic levels that will reverberate through the human and environmental communities. The GSPs require at least two monitoring wells to exceed their Minimum Thresholds (“MTs”) while at the same time requiring that the exceedances must last continuously for 2 non-dry years. Preposterous! Adding to the lax oversight, there are no explanations in all four GSPs for the length of time that Minimum Thresholds could be exceeded	

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		during dry or critically dry years and not trigger an undesirable result. The GSPs also appear to say that if groundwater in one of the monitoring wells moves above the MT elevation for any length of time during two consecutive years, the undesirable results clock starts over. The requirement that two wells must be linked also suggests that there is no maximum decline in groundwater depth at one well as long as it's companion well is above the MT elevation for at least one measurement during a 24-month period. This seems to ignore the fact that a large number of domestic wells could remain dry for years before any management action is taken. Even DWR recognizes that the Sacramento Valley GSAs are choosing to manage groundwater below historic lows without analyzing the depletion of surface water flows: "[t]he GSA does not access how the proposed minimum thresholds for the chronic lowering of groundwater levels may impact other sustainability indicators (e.g., groundwater storage, depletion of interconnected surface water, etc.). Considering the GSA is choosing to manage the Subbasin below historic lows, understanding this relationship will be important during plan implementation. Department staff recommend the GSA provide a description of the relationship between established minimum thresholds for the chronic lowering of groundwater levels and how they avoid undesirable results for each of the other sustainability indicators..." [Footnote 19: DWR, 2023. Statement of Findings for the approved Butte (p. 23) and Vina (p. 25) GSPs. https://sgma.water.ca.gov/portal/service/gspdocument/download/9923] These facts about existing GSPs are bad enough, which is why litigation was necessary. Sadly, when the SED relies on GSPs like this for mitigation for its impacts, there is no way to feign SED adequacy.	
286	12	4) Mitigation Measures Are Inadequate Table IX, the Hydrology and Water Quality impacts checklist, indicates that all impacts are potentially significant: - Violate any water quality standards or waste discharge	Please see the response to comment 286-2. The Sustainable Groundwater Management Act (Wat. Code § 10720 et seq), or SGMA, provides a framework to reach groundwater sustainability for basins or sub- basins without causing an undesirable result as defined in Wat. Code § 10721 (x). Management is conducted at the local level with the

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		requirements? - Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? - Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? [Footnote 20: SED p. 7.12.2-2] The SED illegally defers mitigation measures to DWR and the proposed mitigation measures rely heavily on SGMA to be the backstop to protect groundwater as noted above. As an example of misplaced faith in local GSPs, the SED is counting on the Butte, Colusa, Corning, and Vina plans, located in a geographic area of the Sacramento Valley that will be profoundly involved in the Plan's implementation. In 2023, two of these four GSPs were deemed incomplete and two were approved – three are in litigation. As discussed above, the vulnerabilities of the four GSPs aren't disclosed in the SED, which also leads one to wonder where else is this true within the SED's geographic scope? Mitigation Measure MM-GW-b is intended to “[m]itigate the substantial depletion of groundwater supplies or the substantial interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.” [Footnote 21: Id. P. 7.12.2-66.] The description lays out what the SWRCB expects to happen with GSPs and what DWR's role should be, but there are no assurances or timelines in the SED that any of this will happen at all, let alone in time to prevent numerous impacts, particularly as groundwater use escalates due to increased demand.	Groundwater Sustainability Agencies (GSAs) responsible for the development of Groundwater Sustainability Plans (GSPs). Once GSPs have been assessed and assigned a determination status by the Department of Water Resources, regardless of which determination status, the basin must submit annual reports in addition to their 5-year periodic evaluation by the Department of Water Resources. The short or annual reports provide a snapshot of compliance and transparency, and the 5-year evaluation allows for a deeper analysis of the GSP effectiveness. To date, Butte, Colusa, Corning, and Vina sub-basins have not been referred to the State Water Board by DWR. However, it is important to note that SGMA implementation is a non-static process. Changes in groundwater conditions from various factors will occur and adaptive management that allows for corrective actions is an important part of SGMA. The State Water Board may step in temporarily after certain triggers have been met (such as GSP inadequacies or incompleteness) and once referred to by DWR. This process is also known as state intervention (Wat. Code § 10735-10736.6). State intervention would provide the State Water Board with some authority to ensure that actions for mitigation measures on impacts to Groundwater levels (MM-GW-b) are met or implemented. Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the use of the Staff Report to meet CEQA requirements. Please also see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for a discussion on the Sacramento/Delta Bay Delta Plan update overlap with the implementation of the Sustainable Groundwater Management Act (SGMA).

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		One example of the MM-GW-b's deferral to SGMA reveals that, "In evaluating a GSP under SGMA, DWR will ensure that the GSP is likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield. The assessment may include recommended corrective actions to address deficiencies identified by the Department (Wat. Code, § 10733.4). DWR is required to review plans and issue an assessment of the plan every 5 years following submittal to DWR (Wat. Code, § 10733.8)." [Footnote 22: Id. P. 7.12.2-2] It defies CEQA's disclosure, mitigation, and monitoring requirements to believe that MM-GW-b is remotely adequate by using a conclusion that "DWR will ensure that the GSP is likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield," [emphasis added]. How will DWR do this? Once a GSP is approved with an assessment, whether or not there are corrective actions required, there are no requirements in the water code or this SED that create enforceable mitigation and monitoring for this Plan. Counting on SGMA five year reviews would never be sufficient as a mitigation measure either. Increased groundwater pumping may cause significant damage in a year, let alone in successive years. An expectation of performance does not a legal mitigation measure make. A lead agency may not wholly defer assessment of an effect to the mitigation phase, then to be overseen by the agencies with no specific proposed mitigation measures and no objective performance standards. (See, Pub Res C §21080(c)(2); 14 Cal Code Regs §§15070(b)(1), 15071(e); Sundstrom v County of Mendocino (1988) 202 CA3d 296; Save the Agoura Cornell Knoll v City of Agoura Hills (2020) 46 CA5th 665, 687-693, 791.) CEQA requires that a lead agency discuss mitigation measures that can minimize the project's significant environmental effects. First, the mitigation measure must be demonstrably effective. See Sierra Club v. Cty. Of San Diego, 231 Cal.App.4th 1152, 1168 (2014) [no evidence that recommendations for reducing greenhouse gas emissions would be enforceable or effective]; Gray v. Cty. Of Madera, 167 Cal.App.4th 1099, 1116 (2008) [impacts to adjoining groundwater users not avoided]. To be effective, the implementation of a mitigation measure also cannot be delayed beyond the start of the project activity that causes the impact in question. POET, LLC v. State Air Res. Bd., 218	

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		Cal.App.4th 681, 740 (2013). Second, mitigation measures must not be remote and speculative. Fed'n of Hillside & Canyon Ass'ns v. City of L.A., 83 Cal.App.4th 1252, 1260 (2000). A court may find mitigation measures identified in an EIR legally inadequate if they are so undefined that it is impossible to gauge their effectiveness. Pres. Wild Santee v. City of Santee, 210 Cal.App.4th 260, 281 (2012). MM-GW-b fails as a mitigation measure as it is comprised of goals without defined structure and timelines: implement SGMA, oversee SGMA, "diversify water portfolios," provide "support and approval for groundwater storage and recovery," provide "support and approval of water recycling projects," provide "oversight and approval of water transfers," and use "voluntary agreements." [Footnote 23: Id. Pp. 7.12.2-66 to 7.12.2-68.] The formulation of this so-called mitigation measure in the SED fails to disclose basic standards for mitigation and monitoring requirements and is rendered unduly imprecise, deferred, and incomplete, subject to theoretical actions taking shape at some, unknown, future time.	
286	13	Additional Questions and Comments What criteria were used to illustrate the rivers and streams in Figure 1-1a, Sacramento/Delta Tributaries? We are aware of many significant streams that are not noted such as Rock Creek, Mud Creek, and Little Chico Creek, all passing through Butte County. These streams serve as havens for juvenile salmon. [Footnote 24: Maslin, Paul, et al., 1996. Intermittent Streams as Rearing Habitat for Sacramento River Chinook Salmon. (Exhibit H)] Pine Creek in Tehama County, a stream with significant salmon passage, is also not depicted. The absences of these streams and others in the SED that not only contribute flows to the main stem rivers, but also are valuable for fish, demonstrate the inadequacy of the Project description.	The Sacramento/Delta Update to the Bay-Delta Plan proposes possible updates to narrative and numeric water quality objectives for the reasonable protection of fish and wildlife that would apply to the surface waterbodies in the Sacramento/Delta watershed shown on Figure 1-1a. The explanation of the tributaries identified in Figure 1-1a is provided in the 2023 draft Staff Report, Chapter 1, Executive Summary, Section 1.1, Introduction, which states "the narrative and numeric objectives would apply to surface waterbodies in the Sacramento/Delta watershed (Figure 1-1a). (page 1-3). Additionally, Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, Section 5.4, Proposed New and Modified Objectives and Implementation, states "Tributaries where the new inflow and cold water habitat objectives would apply include tributaries in the Sacramento River watershed (i.e., the mainstem Sacramento River, Clear Creek, Cow Creek, Bear Creek, Cottonwood Creek, Battle Creek, Paynes Creek, Antelope Creek, Mill Creek, Elder Creek, Deer Creek, Thomes Creek, Big Chico Creek, Stony Creek, Feather River, Butte Creek, Yuba River, Bear River, Cache Creek, Putah Creek, the American River) and Delta

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			eastside tributaries (i.e., the Cosumnes River, Mokelumne River, Calaveras River). The interior Delta and Delta outflow objectives would apply in the Delta. (See Figure 1-1a in Chapter 1, Executive Summary)” (page 5-9). Although there are additional surface waterbodies throughout the Sacramento/Delta watershed that are valuable for fish, the Staff Report identifies and appropriately evaluates conditions for the tributaries that would be subject to the new and modified objectives under the Bay-Delta Plan updates. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the description of the project.
286	14	2) Please explain the intended level of review with the SED. Is it a programmatic document or a project document? If it is a programmatic document, when will project level review occur?	Due to the scope and complexity of Sacramento/Delta water use, the environmental analyses of the 2023 draft Staff Report are necessarily broad. Specific and detailed discussion for every water district or diverter is neither feasible nor required. The driving purposes behind CEQA are to: (1) inform decision makers and the public about the potential significant environmental effects of proposed activities; (2) identify ways that damage to the environment can be reduced or avoided altogether; (3) prevent significant, avoidable damage to the environment by requiring, when feasible, changes in projects through the use of alternatives and mitigation measures; and (4) disclose to the public why a governmental agency approved the project in the manner the agency selected if significant environmental effects are associated with the selected project. (Cal. Code Regs., tit. 14, § 15002, subd. (a).) Pursuant to California Code of Regulations, title 23, section 3777, the State Water Board prepared the Staff Report with a sufficient level of analysis to allow decision makers to make an informed decision and to allow members of the public to make informed comments. The State Water Board was not required to conduct a site-specific analysis, but made reasonable assumptions to disclose a full range of potential impacts and considerations. Other actions taken in response to or in order to comply with the Bay-Delta Plan may be subject to further CEQA review by the entities with authority over those projects.

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			Please see Common Response 7.1, General CEQA and Approach to the Analysis, for additional discussion of the level and scope of analysis conducted in the Staff Report.
286	15	In closing, the SED is not credible and does not fulfill CEQA's requirements. It should be withdrawn, or, if the Project moves forward, revised and recirculated. Please keep AquAlliance informed of future steps for this Plan.	See Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project. To the extent that this comment summarizes other comments, please see the substantive responses to those comments.
286	16	[ATT 1: Letter from AquAlliance to California Department of Water Resources dated April 29, 2022 Re: Butte Subbasin Groundwater Sustainability Plan]	Please see the response to comment 286-2.
286	17	[ATT 2: Letter from AquAlliance to California Department of Water Resources dated April 22, 2022 Re: Colusa Subbasin Groundwater Sustainability Plan]	Please see the response to comment 286-2.
286	18	[ATT 3: Letter from AquAlliance to California Department of Water Resources dated April 23, 2022 Re: Corning Subbasin Groundwater Sustainability Plan]	Please see the response to comment 286-2.
286	19	[ATT 4: Letter from AquAlliance to California Department of Water Resources dated April 30, 2022 Re: Vina Subbasin Groundwater Sustainability Plan]	Please see the response to comment 286-2.
287	1	The MWA is a State Water Project (SWP) contractor that relies on imported water supplies from the SWP to support the communities of the arid high desert region in San Bernardino County and mitigate groundwater overdraft. While the MWA and the communities it serves, the substantial majority of which are disadvantaged or severely disadvantaged, have continued to invest in conservation and local water supply development, they are simply not enough. Thus, MWA has made significant investments in the SWP and continues to make investments to support the beneficial use of this important water supply for the region. While the MWA appreciates the SWRCB's analysis and description of the impacts associated with an unimpaired flow alternative—55 percent unimpaired flow results in a 28 percent reduction in SWP Table A deliveries (Table A1-521 & Table A1-522)—the characterization that “other water management actions” water users have or could develop to continue to meet	Please refer to Common Response 8.1, Economic Analysis and Other Considerations, for information on water replacement costs, and feasibility of alternative supplies, including water transfers. See also Common Response 1.3, Revised Proposed Plan Amendments, regarding changes the State Water Board made in response to public comments. In addition to the proposed Plan amendments, which remain part of the project as the regulatory pathway, the revised proposed Plan amendments include water supply adjustments and relaxations to carryover storage requirements for existing water right holders at the outset of plan implementation to reduce water supply impacts. Refer also to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments concerning potential effects on disadvantaged communities.

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		water supply needs with the reductions anticipated under the unimpaired flow alternative is misleading or incorrect. For example, in the MWA service area, recycled water does not represent a significant, if any, new local source of water in contrast with conventional wastewater treatment and discharge, since those discharges are not lost from the basin and have always been part of the water balance of the region. The expectation that water transfers could alleviate impacts associated with the unimpaired flow alternatives are not supported by the fact that reductions in deliveries across all regions north- and south-of-Delta would result in less available water for transfer between regions. And, while the use of groundwater storage and recovery proves critical to manage water supplies in response to climate change impacts on hydrology and water supply variability, storage does not replace supply—it helps manage supply variability. Further, the discussion of other water management actions is incomplete and falls short of considering the feasibility and affordability of alternatives, such as desalinated supplies, to replace impacted water supplies.	
287	2	The Healthy Rivers and Landscapes Agreements alternative, referred to as the Proposed Voluntary Agreements in the Draft Staff Report, represents an alternative that can be implemented immediately upon finalization of the Bay-Delta Plan update and protects all beneficial uses of water consistent with the SWRCB's mission. This alternative considers both flow and non-flow actions that are ready for implementation. This is in stark contrast to the unimpaired flow alternatives which are not fully defined and do not include a complete analysis of impacts to all beneficial uses of water.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
288	1	The Water Blueprint for the San Joaquin Valley ("Blueprint") appreciates the opportunity to provide comments on the draft Staff Report/Substitute Environmental Document in Support of Potential Updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary for the Sacramento River and Its Tributaries, Delta Eastside Tributaries, and Delta ("Draft Staff Report"). Like every region of California, the quality of life and prosperity in the San Joaquin Valley is highly dependent on adequate, affordable water supplies. But	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		unlike other regions of the State, the economy of the San Joaquin Valley is highly dependent on irrigated agriculture, and declining water supplies have resulted in a significant decline in the socioeconomic health of the 4 million Californians who call the Valley their home. Reductions in water supplies are the result of many factors, including climate change, the reallocation of water from irrigation uses to environmental uses, and regulations imposed on projects that supply water to the San Joaquin Valley. The Blueprint is a coalition of San Joaquin Valley community leaders, businesses, water agencies, local governments, and agricultural representatives working together to advance common sense water solutions and to improve socioeconomic health for the Valley's residents.	
288	2	Of particular concern to the Blueprint are potential impacts in the San Joaquin Valley related to reduced surface water supplies and associated reductions in irrigated agriculture resulting from implementation of the proposed unimpaired flow objectives ("UIF alternative" or "proposed Plan amendments") evaluated in the Draft Staff Report. Although the Draft Staff Report contains significant information on hydrology, water supply, and agricultural resources, it presents that information in a disjointed manner and is based on inaccurate or inconsistent assumptions.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
288	3	Of additional concern, adoption of the UIF alternative is inconsistent with other statewide policy objectives advanced by the Newsom Administration, including the human right to water, advancement of the coequal goals, and implementation of the Water Resilience Portfolio and Water Supply Strategy.	Please see Common Response 1.1, General Comments, for a discussion about consistency with other laws, policies and agreements.
288	4	Analysis of Existing and Resulting Water Supplies The Draft Staff Report's analysis of existing surface water supplies compared to surface water supplies under alternatives identified in the document highlight the significant undesirable impacts resulting from adopting the UIF alternative. Chapter 2 of the Draft Staff Report, entitled "Hydrology and Water Supply," is intended to describe existing conditions. (Draft Staff Report, pgs. 2-1, 2-124.) Surface water supplies for the San Joaquin Valley are highly dependent on operations of the Central Valley Project ("CVP") and the State Water Project ("SWP"), a fact acknowledged by the Draft Staff Report (Draft Staff Report, pg.	"Existing Conditions" for the analyses in the 2023 draft Staff Report are generally synonymous with the baseline conditions. The modelling baseline condition and alternatives modelling assumptions are described in Chapter 6, Changes in Hydrology and Water Supply. Changing ESA requirements for the CVP and SWP during the planning process of the Sacramento/Delta Update is an issue that is addressed extensively in the 2023 draft Staff Report and subsequent iterations of the Plan.

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		137), which are limited by application of the Endangered Species Act to the operations of the CVP and SWP. This too is acknowledged by the Draft Staff Report. (Draft Staff Report, pg. 2-101.) However, for areas served by the CVP and SWP, the surface water supplies analysis presented in Chapter 2 appears to be based on project operations under biological opinions issued in 2008 and 2009. For this reason, much of the information presented in Chapter 2 does not accurately describe “existing” water supplies because the more recent 2019 biological opinions modified restrictions imposed on operations of the CVP and SWP, in some circumstances increasing the delivery capability of the projects. Some changes in CVP and SWP operations resulting from the 2019 biological opinions are described in that portion of Chapter 6 of the Draft Staff Report, entitled “Changes in Hydrology and Water Supply,” which describes SacWAM modeling “baseline assumptions.” (Draft Staff Report, pgs.6-4 – 6-6.) However, the Draft Staff Report fails to evaluate how these changes affected existing surface water supplies, described in Chapter 2, in areas served by the CVP and SWP.	
288	5	Moreover, at least one baseline assumption is erroneous because it assumes “the 2020 Incidental Take Permit I:E export limit was assumed to apply to SWP and CVP.” (Draft Staff Report, pg. 6-6, Table 6.2-1, note c.) [Footnote 1: The 2020 Incidental Take Permit was issued by the California Department of Fish and Wildlife for long-term operations of the SWP pursuant to Fish and Game Code section 2081, subdivisions (b) and (c). By its terms, the 2020 Incidental Take Permit applies only to operations of the SWP, and it should be noted that the I:E export limit was imposed, in part, for the protection of longfin smelt (Incidental Take Permit No. 2081-2019-066-00, pg. 104), a species that is presently not listed under the federal Endangered Species Act. In addition, the Draft Staff Report does not explain why the SacWAM baseline analysis applies one of the Incidental Take Permit limits to operations of the CVP, but not others.]	Chapter 6, Changes in Hydrology and Water Supply, describes the SacWAM baseline assumptions, including those related to the San Joaquin I:E export limit. Further discussion on this topic is found in Common Response 6.2, Baseline and No Project Alternative.
288	6	Applying the 2020 Incidental Take Permit inflow-to-export (“I:E”) export limit to operations of the CVP underestimates the water supply reductions in areas of the San Joaquin Valley that	The proposed Plan amendments and other flow alternatives include interior Delta flows and fall Delta outflow provisions that were based on BiOp and ITP provisions, including additional

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		would result from implementation of unimpaired flow alternatives evaluated in the Draft Staff Report. The magnitude of this underestimation is significant; in some below normal and above normal years, it could be as much as 300,000 acre-feet. For south-of-Delta CVP agricultural contractors, this represents a potential 10-15% reduction in their contract allocation. These reductions in surface water supplies are not reflected in Chapter 6. Conversely, for areas served by the SWP, applying the 2020 Incidental Take Permit I:E export limit to operations of the CVP overestimates the water supply reductions that would result from implementation of unimpaired flow alternatives evaluated in the Draft Staff Report. For these reasons, the reductions in Sacramento/Delta water supplies resulting from implementation of the proposed unimpaired flow objectives in south-of-Delta areas served by both the CVP and the SWP are inaccurate and likely significantly underrepresent the potential socioeconomic impacts.	restrictions that changed since the 2018 Framework was released identifying the proposed Plan amendments. The most significant change related to interior Delta flows was removal of CVP export constraints as a function of San Joaquin River flows that resulted from the 2019 NMFS BiOp. The BiOps and ITP are in the process of being updated further, with anticipated possible changes to interior Delta flow requirements for OMR flows and export constraints as a function of San Joaquin River flows (referred to as spring Delta outflow in the ITP). Alternative 4a (Exclusion of Interior Delta Flow and Fall Delta Outflow Related Amendments Alternative) evaluates the effects of excluding the new interior Delta flow and fall Delta outflow components of the proposed Plan amendments and other flow alternatives that are based on BiOp and ITP provisions. Chapter 6.2, SacWAM Model Assumptions, of the draft Staff Report includes the regulatory assumptions and rationale for including the San Joaquin I:E export limit for both the SWP and the CVP. For more information, please see Common Response 6.2, Baseline and No Project Alternative, for responses to comments that raise issues about the hydrological and regulatory baseline used in the draft Staff Report. For more information, please see Common Response 6.2 for responses to comments that raise issues about the hydrological and regulatory baseline used in the draft Staff Report.
288	7	Impacts on Agricultural Resources and Potential Measures to Offset Water Supply Reductions Chapter 7.4 of the Draft Staff Report, entitled “Agriculture and Forest Resources,” describes the potential impacts for agriculture resources that may result from implementation of the proposed unimpaired flow alternatives, and it describes the conversion of prime farmland, unique farmland, or farmland of statewide importance as a “potentially significant impact.” (Draft Staff Report, pg. 7.4-2.) The Draft Staff Report correctly states “[i]f reduced water availability decreases agriculture’s profitability by increasing the price of water, reducing the land’s productivity, or both, the economic incentive to convert to urban use could grow.” (Draft Staff Report, pg. 7.4-13.) [Footnote 2: Inadequate water supplies not only increase the price of water and reduce the	The Staff Report uses a reasonable and conservative approach to evaluating the potential agricultural impacts of the flow scenarios. The analysis of potential changes in crop acreage presented in Section 7.4, Agriculture and Forest Resources, includes estimates obtained from the SWAP model. SWAP is currently the best available tool for modeling agricultural economic responses to water supply shortage. It has been peer-reviewed and applied to numerous policy analyses and impact assessments over the last two decades. The analysis presented in Section 7.4 assumes that any reduction in irrigated crop acreage is important farmland converted to nonagricultural use. As discussed in Section 7.4, this conversion to nonagricultural use would be a potentially significant impact. The Staff Report appropriately estimates potential water supply

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		land's productivity. Recent experience demonstrates that inadequate water supplies results in farmland not being cultivated at all. A comparison of fallowed acres in 2011, when surface water supplies were abundant, and 2015, when surface water supplies were significantly reduced, is illustrative. According to the NASA Ames Research Center, inadequate water supplies resulted in the fallowing of 522,000 acres in the Central Valley, compared to 2011. According to NASA, "[i]n 2015, the largest increases in idle acreage were observed along the west side of the San Joaquin Valley in Fresno, Kings and Kern counties." (Federal Agencies Release Data Showing California Central Valley Idle Farmland Doubling During Drought Landsat Science (nasa.gov) [Hyperlink: https://landsat.gsfc.nasa.gov/article/federal-agencies-release-data-showing-california-central-valley-idle-farmland-doubling-during-drought/].)] The underestimation of water supply reductions in south-of-Delta areas served by the CVP described above will undoubtedly exacerbate the "potentially significant impact[s]" identified in the Draft Staff Report.	reductions to the San Joaquin Valley and analyzes the impacts of those reductions on agriculture. Please see the response to comment 288-6 for additional information on interior Delta flow and fall Delta outflow provisions based on BiOp and ITP provisions, and changes in water supply to the San Joaquin Valley. In response to reduced Sacramento/Delta supplies, water users may further expand and modify their water portfolios by implementing groundwater storage and recovery; water transfers; water recycling; and water conservation. The use of other water management actions can reduce the magnitude of agriculture impacts associated with changes in surface water supply but could also result in environmental impacts that are also evaluated in Section 7.4, Agriculture and Forest Resources. As discussed in Staff Report Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, some potentially significant impacts can be mitigated to less-than-significant levels. Many other identified potentially significant environmental impacts could be reduced to less-than-significant levels with mitigation incorporated; however, due to the large scope of the project and wide range of possible response actions, sufficient information is not available to conclude with certainty that the mitigation measures will reduce all impacts to less-than-significant levels in all circumstances. Some mitigation activities are within the State Water Board's jurisdiction. However, other mitigation measures are largely within the jurisdiction and control of other agencies or depend on how water users respond to the project. Accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied fully to mitigate potentially significant impacts. Therefore, unless and until the mitigation is fully implemented, the impacts remain potentially significant.
288	8	Moreover, the Draft Staff Report fails to appropriately characterize the disparate impact of reductions in Sacramento/Delta surface water supply to differing regions of the San Joaquin Valley; it states: While the reductions in Sacramento/Delta surface water supply	Section 6.4.8, Sacramento/Delta Supply to the San Joaquin Valley, of Chapter 6, Changes in Hydrology and Water Supply, describes the changes to water supply to San Joaquin Valley. Susceptibility to urbanization is also discussed in Section 7.4.2.10 San Joaquin Valley.

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		represent a substantial amount of water, when compared with the total San Joaquin Valley region average annual supply of over 18.4 MAF as estimated by historical water deliveries data, the reductions are proportionally smaller. The reductions in total supply amount to 1 percent and 2 percent in the 45 and 55 scenarios, respectively (see Table 6.4-1). (Draft Staff Report, pg. 7.4-55.) This statement ignores that the impacts of reduced Sacramento/Delta surface water supply do not affect the entire San Joaquin Valley. Rather, these impacts are experienced in specific regions of the San Joaquin Valley, areas served by the CVP and the SWP. At least one of these regions - the area served by the Delta-Mendota Canal in the northern San Joaquin Valley - is particularly susceptible to urbanization because of its proximity to the San Francisco Bay area.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a discussion on the level of detail of the analysis. See also Common Response 6.3, Water Supply and Other Management Actions, for further discussion of other management actions.
288	9	Chapter 7.4 of the Draft Staff Report also describes measures that purportedly could be undertaken to mitigate some of the impacts on farmlands resulting from implementing the proposed UIF alternative. Among these is “Diversify Water Portfolios,” which includes sustainable conjunctive use of groundwater and surface water, water recycling, water conservation and efficiency upgrades, and water transfers. (Draft Staff Report, pg. 7.4-97.) However, for large areas of the San Joaquin Valley, it is unlikely the actions described could offset reductions in surface water that will result from implementation of the unimpaired flow alternatives. Sustainable conjunctive use of groundwater and surface water requires that farmers rely on surface water during wet periods and on groundwater during drought. However, because of existing constraints on operations of the CVP and the SWP, even in average and above average years, surface water supplies are inadequate to meet demands for irrigation water. As an example, the Northern Sierra Precipitation: 8-Station Index for the 2015-16 water year was 57.9, which is well above average. Yet the allocation for south-of-Delta CVP agricultural contractors in 2016 was 5%, and the allocation for south-of-Delta SWP contractors was 60%. The Northern Sierra Precipitation: 8-Station Index for the 2018-19 water year was 70.7, which at that time was the third wettest year on record. Yet, in 2019 the	Please see response to comment 288-7 and Common Response 7.1, General CEQA and Approach to the Analysis, for a discussion on the feasibility and applicability of the mitigation measures. In addition, the project has been revised as described in Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments. As discussed in Chapter 13 and Common Response 1.3, the regulatory pathway under the revised proposed Plan amendments includes new water supply adjustments that reduce water supply impacts and allow more water to be stored in reservoirs at the outset of Plan implementation.

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		allocation for both south-of-Delta CVP agricultural contractors and SWP contractors was 75%. Sound principles of conjunctive use demand that in water years like 2016 and 2019, farmers in the San Joaquin Valley rely on surface water and that surplus water be used to replenish groundwater aquifers. However, existing regulations of the CVP and SWP and limited water storage infrastructure already frustrate the implementation of “sustainable conjunctive use,” and each of the unimpaired flow alternatives evaluated by the Draft Staff Report will only further diminish the water delivery capability of the projects in every water year type. (Draft Staff Report, pg. 6-74, Table 6.4-20.) In areas of the San Joaquin Valley that rely on Sacramento/Delta water supplies, sustainable conjunctive use is not a feasible measure to mitigate impacts on water supply resulting from implementation of any of the unimpaired flow alternative analyzed by the Draft Staff Report.	
288	10	Similarly, the Draft Staff Report identifies water transfers as a water management action that may be utilized to offset reductions in surface water and mitigate farmland conversions that could result from implementation of the unimpaired flow alternatives. However, such mitigation is only feasible if the following can be identified: (1) from where will the water to be transferred come and (2) how will it be conveyed to areas in the San Joaquin Valley seeking to offset reductions in surface water? Water transfers presently are a critical tool used by water agencies in the San Joaquin Valley to offset surface water supply reductions under the existing regulatory baseline, particularly in areas that rely on Sacramento/Delta water, (Draft Staff Report, pg. 6-103), and the primary source of water for these transfers is water made available from agencies in the Sacramento Valley and American River watershed through groundwater substitution, regional water project reoperations, or conservation of surface supplies. A major impediment to the effectiveness of potential mitigation measure is conveyance of this water through the Delta because: (1) the “transfer window” extends only from July 1 through November 30, (2) capacity at the CVP and SWP Delta pumping plants is often limited, and (3) biological opinions for coordinated long-term operations of the CVP and SWP limit exports from the Sacramento River	See the response to comment 288-7. Please see Common Response 7.1, General CEQA and Approach to the Analysis, for a discussion on the feasibility and applicability of the mitigation measures. As discussed in Section 6.6.1.2, Water Transfers, it is difficult to predict with certainty how reduced Sacramento/Delta surface water supplies will affect water transfers. With new instream flow and cold water habitat requirements, overall supplies of water from the Sacramento/Delta will be reduced. This may result in less water available for transfer. At the same time, it could incentivize transfers as the value of transfer water increases, leading to transfers from lower value temporary crops to higher value municipal uses and permanent crops. Please see Common Response 8.1, Economic Analysis and Other Considerations, for further discussion on the feasibility of water transfers as an alternate supply source under the flow scenarios. The impact conclusions made in the draft Staff Report do not rely on other water management actions including increased water transfers to reduce water supply impacts from reduced Sacramento/Delta supply. The Staff Report recognizes that the availability of replacement supplies may be limited. Water users can and should diversify their water supply portfolios to the

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		watershed to 360,000 acre-feet in below normal, above normal, and wet years, the water year types when water in the Sacramento River watershed is normally available for transfer. Implementation of any of the unimpaired flow alternatives identified in the Draft Staff Report will: (1) reduce water availability in the Sacramento River watershed, (Draft Staff Report, pg. 6-57, Table 6.4-2); and (2) impose additional limitations on the operations of CVP and SWP pumping plants in the southern Delta. The Draft Staff Report provides no explanation of how water transfers could play any meaningful role in offsetting future water supply reductions resulting from implementation of any unimpaired flow alternative. Its analysis is limited to the following statement: It is difficult to predict with certainty how reduced Sacramento/Delta surface water supplies will affect water transfers. With new instream flow and cold water habitat requirements, overall supplies of water from the Sacramento/Delta will decline. This may result in less water available for transfer. At the same time, it could incentivize transfers as the value of transfer water increases, leading to transfers from lower value temporary crops to higher value municipal uses and permanent crops. (Draft Staff Report, pgs. 6-89 – 6-90.) Contrary to this statement, it is not difficult to predict with certainty how reduced Sacramento/Delta surface water supplies will affect water transfers to areas in the San Joaquin Valley presently benefiting from transfers. New instream flow and cold water habitat requirements that result in Sacramento/Delta surface water supply reductions in the Sacramento River watershed of the magnitude reflected in Table 6.4-2, (Draft Staff Report, pg. 6-57), will result in a significant decrease in water transfers to south-of-Delta areas served by Sacramento/Delta surface water.	extent possible, in an environmentally responsible manner and in accordance with the law.
288	11	Water conservation is another water management action identified by the Draft Staff Report that may be utilized to offset surface water supply reductions in in the San Joaquin Valley resulting from the proposed Plan amendments. (Draft Staff	See the response to comment 288-7. Section 7.4.3, Impact Analysis, of the Staff Report acknowledges that agriculture in parts of the western portion of the San Joaquin Valley region, notably the Westlands Water District area, is potentially more

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		Report, pgs. 7.4-75, 7.4-98.) The potential effectiveness of this measure is also doubtful. Water agencies and the farmers they serve in the San Joaquin Valley have already invested significantly in water conservation to offset water supply shortages experienced over the last two decades. For instance, Westlands Water District, an agency that is mentioned often in the Draft Staff Report, reports that the farmers it serves have achieved a water use efficiency of 96%. (Personal communication from Katarina Campbell, P.E., Supervisor of Resources, Westlands Water District.) Other agencies in the CVP area served by the Delta-Mendota Canal, the CVP's San Luis Unit, and agencies in the SWP service area have implemented similar programs, and it is uncertain to what degree additional conservation in these areas could mitigate farmland conversion impacts resulting from implementation of any of the UIF alternatives.	sensitive to reductions in Sacramento/Delta surface water supplies because of its relatively poor groundwater quality in the shallow aquifer and the high cost of developing supplies from the deep aquifer. Additionally, most of the groundwater subbasins underlying this area are in overdraft. Conversion would likely be toward the higher end of the modeled range. Also see Common Response 7.1, General CEQA and Approach to the Analysis, for a discussion on the feasibility and applicability of the mitigation measures.
288	12	Moreover, there are other areas of the San Joaquin Valley where implementation of stringent conservation measures of the type implemented with the CVP and SWP service areas would significantly reduce groundwater recharge. The Draft Staff Report does state "[w]ith higher flow requirements, there would be less applied water for irrigation of agricultural lands, which would in turn cause reductions in incidental groundwater recharge from transmission losses and deep percolation in both the Sacramento/Delta and areas that receive water from the Sacramento/Delta," (Draft Staff Report, pg. 6-81), but this generalized statement does not account for additional reductions in "incidental" groundwater recharge resulting from implementation of mitigation measures proposed by the Draft Staff Report.	Section 7.12.2, Groundwater, acknowledges that reductions in applied irrigation water, including from increased water use efficiencies, would reduce incidental groundwater recharge and could affect groundwater levels. Section 7.12.2 acknowledges that while reduction in agricultural demand can help to maximize existing water supplies, a reduction in incidental groundwater recharge from conveyance seepage and excess irrigation of agricultural fields can lead to reduced groundwater levels in some areas. Runoff from excess water application is not considered an appropriate or efficient mechanism for sustainable groundwater management. Potential impacts on groundwater levels from reduced incidental recharge would be potentially significant.
288	13	Impacts of SGMA Implementation The Draft Staff Report does contain significant information on existing groundwater conditions in various study areas, including the San Joaquin Valley, but it improperly analyzes potential impacts of implementing the proposed unimpaired flow objectives on groundwater conditions. Importantly, the Draft Staff Report is confusing because it suggests that increased reliance on groundwater pumping may offset surface water supply reductions, but it then goes on to note that the	The Staff Report adequately evaluates environmental impacts and economic effects as required by CEQA and Porter-Cologne. Staff Report Section 7.4, Agriculture and Forest Resources, acknowledges that changes in Sacramento/Delta supply could result in potentially significant impacts to agriculture, including in the San Joaquin Valley. Staff Report Section 7.12.2, Groundwater, discusses that potential impacts on groundwater primarily would result from individual water users' personal and professional decisions in response to reduced Sacramento/Delta supply. These responses likely include increased groundwater

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		implementation of the Sustainable Groundwater Management Act (“SGMA”) may restrict the use of groundwater to offset these reductions. (Draft Staff Report, pgs.6-80 – 6-81.) Herein lies one of the biggest challenges in the analysis contained within the Draft Staff Report; it fails to sufficiently evaluate the effects of simultaneously implementing the proposed unimpaired flow objectives and implementing SGMA. Standing alone, SGMA implementation will have significant socioeconomic and environmental impacts in the San Joaquin Valley. Restrictions on the extraction of groundwater will increase land fallowing, reduce crop production, and result in job losses and other economic disruption. Paired with the proposed unimpaired flow objectives described in the Draft Staff Report, these impacts will undoubtedly be exacerbated. This is evidenced through the results of a February 15, 2020, study prepared by David Sunding, Ph.D., and David Roland-Holst, Ph.D., from the University of California, Berkley, entitled “Blueprint Economic Impact Analysis: Phase One Results.” That report, which is readily available online at https://waterblueprintca.com, analyzed the economic impacts of two types of water supply restrictions on the San Joaquin Valley: (i) limitations on groundwater pumping implemented as part of SGMA, and (ii) future reductions in surface water supplies available to farmers in the San Joaquin Valley resulting from several regulatory processes initiated by the State of California and the federal government, including amending the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary through the adoption of the UIF alternative. The analysis concluded that together, these restrictions on water supply in the San Joaquin Valley would result in up to one million acres having to be fallowed, which amounts to fallowing of approximately one-fifth of all acres currently under cultivation, and farm revenue losses of \$7.2 billion per year. Total job losses would be roughly 42,000 annually and would be concentrated in Fresno, Tulare, and Kern Counties. Kern County would be especially impacted, with nearly 17,000 farm jobs lost annually. Impacts on poverty rates are also likely to be significant. A March 16, 2022, report entitled “The Economic Impact of the Westlands	pumping as a substitute supply where available and not locally restricted. Reductions in applied irrigation water, including from increased water use efficiencies, would reduce incidental groundwater recharge. The Staff Report acknowledges that impacts to groundwater could occur in the San Joaquin Valley. As discussed in Section 7.12.2, Groundwater, it is uncertain how all water users may respond to reduced Sacramento/Delta water supply regarding groundwater pumping. The dynamic between potential groundwater resources impacts and potential agricultural impacts creates a challenge for the impact analyses since the majority of groundwater pumping in many areas is for agricultural irrigation. In other words, modeling lower groundwater replacement pumping by farmers and ranchers in response to decreased surface water supplies will result in lower impact conclusions for groundwater resources, but will increase the severity of impact conclusions for agricultural resources (e.g., levels of potential permanent conversion of important farmland). Conversely, modeling higher groundwater replacement pumping by farmers and ranchers increases the severity of impact conclusions for groundwater resources but assumes that more water is available for agriculture, which reduces the severity of impact conclusions for agricultural resources. Importantly, the analysis cannot assume both “worst-case” scenarios simultaneously: there cannot be both maximum potential impacts on groundwater resources from replacement pumping and maximum potential impacts on agricultural resources. Potential agricultural economic effects and regional economic effects are evaluated and discussed in Chapter 8, Economic Analysis and Other Considerations. These analyses are fully supported by substantial evidence and available modeling tools. SWAP is currently the best available tool for modeling agricultural economic responses to water supply shortage. It has been peer-reviewed and applied to numerous policy analyses and impact assessments over the last two decades. The regional economic analysis presented in Chapter 8, Economic Analysis and Other Considerations, relies on the IMPLAN Input-Output modeling system. IMPLAN is a widely used, proprietary data and modeling software system. SWAP results for crop revenues and

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		Water District on the Local and Regional Economy: 2022 Update,” prepared by Michael A. Shires, Ph.D., associate dean for strategy and special projects and an associate professor of public policy at the Pepperdine School of Public Policy, states: Perhaps even more importantly, the overall trend of these poverty levels moves concurrently with the reductions in water deliveries from the CVP to the Westlands Water District. While certainly not proof of causality, the visual correlation is quite high over the last decade, including significant declines in poverty rates in 2016 and 2017 when surface water was abundant in Westlands. The key insight here, however, is that even with the real declines in poverty rates over the past several years, poverty persists more strongly in Fresno and Kings Counties and fluctuations in the agricultural water supply are likely important contributors to some of these changes. (The Economic Impact of the Westlands Water District on the Local and Regional Economy: 2022 Update, pgs. 17-18.) These economic impacts are particularly relevant in the context of amending the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary because as the Draft Staff Report correctly observes: “Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), the State Water Board is required to consider several factors, including economic considerations, when establishing water quality objectives for the reasonable protection of beneficial uses (Wat. Code, § 13241).”³ (Draft Staff Report, pg. 8-1.) Although Chapter 7.23 of the Draft Staff Report does contain a Cumulative Impact Analysis, its assertion that impacts of implementing SGMA are “speculative” (Draft Staff Report, pg. 7.23-16) mischaracterizes the analytical work that has been done to date to analyze these compounded impacts.	expenditures under the flow scenarios were the primary inputs to the regional economic modeling. See Common Response 8.1, Economic Analysis and Other Considerations, for additional overview information on the SWAP and IMPLAN models. Section 7.23, Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes, evaluates the cumulative impacts associated with the proposed Plan amendments that together with other projects and programs could cause related impacts. The Sustainable Groundwater Management Act is appropriately considered in Section 7.23, Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes, which discusses that implementation of SGMA could restrict the amount of groundwater for agricultural and municipal beneficial use and could result in cumulative impacts on water supply. Please refer to Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for further discussion of groundwater impacts and consideration of SGMA in the analysis. Please refer to Common Response 8.1, Economic Analysis and Other Considerations, for responses to the issues raised in the Sunding and Roland-Holst (2020) and the Shires (2022) studies cited by the commenter.
288	14	Air Quality and Valley Fever Another element of the Draft Staff Report analysis that the Blueprint finds particularly troubling involves air quality, which is contained in Chapter 7.5. The Draft Staff Report correctly concludes that implementation of the proposed unimpaired flow	The comment assertion that the draft Staff Report mischaracterizes potential exposure of sensitive receptors to naturally occurring asbestos (NOA) and Valley Fever is incorrect and not supported by the analysis in Section 7.5, Air Quality, of the Staff Report. As quoted by the commenter, the air quality analysis recognizes that regional climate, meteorology, and

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		objectives could have potentially significant impacts with respect to some aspects of air quality. (Draft Staff Report, pgs.7.5-1 – 7.5-2.) However, with respect to “[e]xpose sensitive receptors to substantial pollutant concentrations,” the Draft Staff Report concludes the impacts will be less than significant. (Draft Staff Report, pg. 7.5-2.) This mischaracterizes the public health impacts of implementation of the UIF alternative. As noted in the Draft Staff Report, because of the Coast and Sierra Nevada mountain ranges, temperature inversions occur frequently in in the San Joaquin Valley, trapping air pollutants near the surface and not allowing them to disperse upward. (Draft Staff Report, pg. 7.5-2.) The Draft Staff Report also states: Naturally occurring asbestos and Valley fever are endemic to areas within the study area (i.e., mountain counties and the Central Valley, respectively). The potential for exposure to Valley fever exists in agricultural areas, such as the southern portions of the San Joaquin Valley, where reported Valley fever cases have historically exceeded 10 per 100,000 people (CDPH 2016). Fallow land could result in exposed soils and windblown fugitive dust, which could increase the likelihood of exposure to naturally occurring asbestos and Valley fever. However, some fallowed fields would retain crop stubble cover, ultimately experience regrowth, or both. The root material and regrowth would stabilize soils to some extent and reduce their potential for increased windblown erosion. Additionally, fallowing lands may result in a reduction in windblown dust because these lands would not be in active agricultural production, which includes substantial soil disturbance from tillage, crop harvesting, and other activities (see Section 7.9, Geology and Soils). Therefore, any potential for an increase in exposure to substantial pollutant concentrations would be minimal. Furthermore, the potential for sensitive receptors to be in proximity to fallowed land would be minimal. This impact would be less than significant. Report could be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. (Draft Staff Report, pg. 7.5-13.)	topography influence the movement and concentration of pollutants and airborne particles within and between air basins. As evaluated under Impact AQ-d, NOA and spores of <i>C. immitis</i> are endemic to areas within the study area. The analysis further recognizes that disturbance of soil containing NOA or <i>C. immitis</i> through agricultural activities and fallowing of land could increase the likelihood of receptor exposure to NOA or Valley Fever, respectively. This assessment is consistent with the information presented by the commenter, which likewise recognizes historical incidence of Valley Fever in the Central Valley. As noted by the commenter, land cover and dust control are important measures for reducing the potential dispersion of NOA and <i>C. immitis</i> spores and Valley Fever infection. If land fallowing occurs with implementation of the proposed Plan amendments, some fallowed fields would retain crop stubble cover, ultimately experience regrowth, or both. The root material and regrowth would stabilize soils to some extent and reduce their potential for increased windblown erosion and disturbance of NOA and <i>C. immitis</i> spores if present in the soil. This natural regrowth will reduce NOA and Valley Fever risk. With respect to Valley Fever, it is important to recognize that the presence of <i>C. immitis</i> in the air quality study area does not guarantee that implementation of proposed Plan amendments would result in increased incidence of the infection. Propagation of <i>C. immitis</i> is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. <i>C. immitis</i> spores can be released when filaments are disturbed by earthmoving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing Valley Fever. Agriculture fields, including those that might be fallowed, are often in rural areas. Thus, the potential for sensitive receptors to be in proximity to fallowed land would be minimal. These considerations, combined with the expected natural soil stabilization following land fallowing, demonstrate that implementation of proposed Plan amendments would not expose a substantial number of people to NOA or <i>C. immitis</i> and development of Valley Fever.

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		The conclusion of this analysis, that the impact of increased incidence of Valley Fever would be less than significant, is at odds with the experience of people who live and work in the San Joaquin Valley. They observe that water supply reductions do increase land fallowing, which results in increased fugitive dust. They also observe that farmers often till their fields in preparation for planting, only to leave them fallow when the farmers learn their final water supply will not support that cultivation or that farmers will plow under a growing crop because they do not have sufficient water to finish the irrigation of their crop. And because of the persistent inversion layer described on page 7.5-2 of the Draft Staff Report, windblown dust spreads throughout the San Joaquin Valley. They have not observed that fallowing fields results in a reduction of windblown dust. The anecdotal observations of people who live and work in the San Joaquin Valley are consistent with a recent analysis conducted by Elizabeth Ann Weaver at Virginia Polytechnic Institute and State University. In her doctoral thesis, Ms. Weaver found climate and land cover variables explain up to 76% of valley fever variability in Kern County. (Investigating the Valley Fever – Environment Relationship in the Western U.S, 2019, Virginia Polytechnic Institute and State University.) In the San Joaquin Valley, among the factors that most influence ground cover is the availability of water for irrigation. Similarly, a recent study, entitled “Valley Fever: Environmental Risk Factors and Exposure Pathways Deduced from Field Measurements in California,” reported in Int J Environ Res Public Health [Hyperlink: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7432779/], August 2020, which included an analysis of Valley Fever cases at Naval Air Station Lemoore in Kings County, concluded preventing a further increase in Valley Fever incidence in California requires improved dust mitigation management. Among the most effective dust mitigation management techniques in the San Joaquin Valley is growing crops, which requires adequate water for irrigation. From the perspective of people who live and work in the San Joaquin Valley, any increase in the incidence of Valley Fever	

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		would be significant and contrary to public health goals advanced by the Newsom Administration.	
288	15	Conclusion It is clear from the Draft Staff Report that amending the Water Quality Control Plan by imposing an unimpaired flow objective would have detrimental impacts on the water supply, environment, and economy of the 4 million Californians who live and work in the San Joaquin Valley. A smarter, more feasible, approach that is more expedient to implement would be to amend the Water Quality Control Plan by adopting a new narrative objective to achieve the viability of native fish populations and implementing the actions described in the Voluntary Agreements, now referred to as the Agreements to Support Healthy Rivers and Landscapes. This alternative would provide additional outflow compared to the existing baseline. However, of greater importance, this alternative includes measures to address other factors that limit abundance of native fish species. Finally, its impacts on the water supply, environment, and economy of the 4 million Californians who live and work in the San Joaquin Valley would not be nearly as severe as those resulting from an unimpaired flow alternative.	Please see Common Response 1.3, Revised Proposed Plan Amendments, regarding the VA process and the relationship between the State Water Board's regulatory pathway and the VA pathway.
289	1	CVCWA's comments focus on the following issues. The Draft Staff Report does not confront the tensions between the proposal for unimpaired flow (UIF) objectives for the Sacramento River, Delta tributaries, and the Delta, and the state's policies encouraging recycled water use. Recycled water is mostly referenced in the context of alternative water supplies to replace surface water that will become unavailable if the State Water Resources Control Board (State Water Board) adopts the UIF proposal. There is not an adequate discussion of the impacts on recycled water projects when implementation of the proposed UIF objectives require flows from treated wastewater discharges to be maintained rather than diverted for recycled water uses. The lack of consideration of these issues is particularly stark in the case of Sacramento Area Sewer District's (SacSewer) Harvest Water Program.	Implementation of the proposed Plan amendments do not rely on discharges of treated wastewater. The Bay-Delta Plan establishes water quality objectives that are met by assigning responsibility to water right holders and water users to mitigate for the effects on the designated beneficial uses of their diversions and use of water. The State Water Board will develop an implementation methodology to determine when water is not available at water right holders' priorities of right. The implementation methodology will be developed after a public process with an opportunity to comment. Implementation of the numeric inflow and outflow requirements is accomplished by water diversion curtailment of the natural inflow in order of water right priority. Similar to released stored water, discharges of treated wastewater are not assigned responsibility to meet the flow requirements. If less water is available instream because wastewater is treated and not discharged to a water body, the responsibility would fall to the

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			next water right in order of priority. Accordingly, there would be no conflict with water recycling. As described in Section 6.6, Other Water Management Actions, and Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, implementation of the flow scenarios would reduce Sacramento/Delta water supplies at certain times and locations. In response to reduced Sacramento/Delta surface water supplies, water users may choose to modify their water supply portfolios by increasing the use of other sources of water and maximizing the use of existing water supplies, including water recycling. Other water management actions affect the overall analysis in two ways. First, environmental impacts and economic effects from reduced Sacramento/Delta surface water supplies likely would be less given these efforts. Second, other water management actions may result in their own environmental impacts that must be disclosed and analyzed. Potential impacts of increased use of recycled water are evaluated in Section 7.3, Aesthetics, through Section 7.20, Utilities and Service Systems, and mitigation measures identified. Thus, the Staff Report adequately addresses recycled water, and the revised Plan reiterates the State Water Board's policy to encourage water recycling projects wherever feasible to extend the State's limited water supplies.
289	2	Additionally, the discussion of water quality conditions in section 4.3 of Chapter 4 of the Draft Staff Report is outdated and omits monitoring, science, and other relevant information developed by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in collaboration with stakeholders like CVCWA and its members. The lack of consideration for the Central Valley Water Board's stakeholder efforts is disappointing; this information should be incorporated into a revised staff report.	The commenter raises minor suggestions for additional information to be included in the final Staff Report or small revisions to the text that are not significant to the final Staff Report analyses or the conclusions regarding impacts. These suggestions and revisions are responded to in the responses to comments 289-11, 289-12, 289-13, 289-14, and 289-15. Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
289	3	Finally, CVCWA understands that at this time in the process, the State Water Board is not proposing to designate Tribal Beneficial Uses for waterbodies covered in the Bay-Delta Plan as part of this Bay-Delta Plan update. CVCWA clarifies its expectation of the process to add tribal beneficial uses to existing water quality control plans below.	Refer to the responses to comments 289-16 and 289-17 for responses related to Tribal Beneficial Uses. Please see Chapter 13 of the Staff Report, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses.

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289	4	The Draft Staff Report Does Not Address the Conflict Between the Proposed UIF Alternatives and Potential Reductions in Flows from Treated Wastewater Discharges Diverted for Recycled Water Projects. In multiple areas of policy and financing, the State of California encourages the use of recycled water. The State Water Board specifically adopted the Water Quality Control Policy for Recycled Water (Recycled Water Policy), which it last amended in 2018 in Resolution No. 2018-0057. The first paragraph of that policy explains that its purpose “is to encourage the safe use of recycled water from wastewater sources ...” The Recycled Water Policy lists the benefits of recycled water, including supporting the sustainable use of groundwater and surface water, diversifying water supply, and mitigating the impacts of climate change. And the Recycled Water Policy sets out specific goals of increasing the use of recycled water from 714,000 acre-feet annually (afa) in 2015 to 2.5 million afa by 2030, reusing “all dry weather direct discharges of treated wastewater to enclosed bays, estuaries and coastal lagoons, and ocean waters that can be viably put to beneficial use,” and maximize the use of recycled water in areas where groundwater supplies are in overdraft. Recycled Water Policy §§ 3.1.1-3.1.3 (emphasis added). The State supports recycled water projects with funding. The California Water Commission determined SacSewer’s Harvest Water Program to be the highest ranked project for Proposition 1 and the Water Storage Investment Program (WSIP) for ecological benefits. It is the second-highest ranked for water benefits. Harvest Water is the first project funded under Proposition 1 and the WSIP, receiving final funding awards in the amounts of \$291.8 million in state funding and \$30 million in federal funding. When complete, Harvest Water will supply up to 50,000 afa of drought-resistant recycled water to 16,000 acres of agricultural lands and habitat in southern Sacramento County where declining groundwater levels are impacting water sustainability and ecosystem health. One of the goals of the Harvest Water project is to raise groundwater elevations to within 10 feet below ground surface to help support and improve groundwater-dependent ecosystems. Harvest Water will create an additional 3,500 acres of Sandhill crane habitat	Please see the response to comment 289-1. The proposed Plan amendments are not at odds with the State Water Board’s Recycled Water Policy and all the state efforts and programs to encourage and fund recycled water use. If anything, new flow requirements would relieve pressure on treated wastewater discharges to maintain instream flow conditions because the responsibility to maintain instream flows would be assigned to water diverters.

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		and an additional 353 acres of vernal pool habitat, provide for a longer migration window for fall-run Chinook salmon due to increased streamflow in the Consumnes River; improve the groundwater conditions for wetlands and riparian forests, and reduce salinity load to Sacramento and Delta waterways. These commitments were included as part of the public funding and confirmed in agreements with the California Department of Fish and Wildlife and the State Water Board. The proposal to adopt UIF objectives for the Sacramento River and other Delta waters as part of the Bay-Delta Plan update is at odds with the State Water Board's Recycled Water Policy and all the state efforts and programs to encourage and fund recycled water use. If unimpaired flows are required in the Sacramento River and other tributaries, then treated wastewater discharges to these surface waters will need to be maintained or maximized to support those flows, especially in dry and critically dry years, rather than diverted for recycled water uses. At most, the Draft Staff Report acknowledges this conflict when discussing the processing of wastewater change petitions under Water Code section 1211. For example, on pages 7.6.2-97 to 7.6.2-98, the Draft Staff Report states: "to avoid or minimize impacts associated with reduced wastewater instream, when processing wastewater change petitions pursuant to Water Code section 1211, the State Water Board will ensure that the change in wastewater discharge does not affect instream flows or water quality for special-status species." See also Draft Staff Report at pp. 7.6.1-71, 7.6.1-74, 7.6.1-82, 7.8-42, 7.12.1-102. However, if the State Water Board includes conditions requiring treated wastewater discharges to be maintained to support instream flows when processing wastewater change petitions under Water Code section 1211, then POTWs will have no incentive to pursue the planning, permitting, and funding of recycled water projects. Thus, there will be significant limitations on future, increased recycled water use.	
289	5	The result of disincentivizing recycled water projects by adopting the UIF approach is inconsistent with other parts of the Draft Staff Report that discuss the availability of recycled water as an alternative water supply and potential mitigation measure.	Please see the response to comments 289-1 and 289-2. The impact conclusions made in the draft Staff Report do not rely on the implementation of other water management actions. The Staff Report recognizes that the availability of replacement

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		There is no question that implementation of the UIF objectives will lead to the curtailment of surface water diversions for municipal and agricultural supply. The environmental analysis in the Draff Staff Report assumes “that increased use of recycled water from existing facilities could be a response to changes in water supply.” Id. at p. 7.10; see also id. at 7.4-90 (“In response to changes in water supply, agricultural water users may increase use of recycled water from existing wastewater treatment plants or use it as a source of groundwater recharge.”). It is not a reasonable assumption that recycled water supplies will be available (or increase) to replace surface water supplies when the same regulatory action of adopting and implementing the UIF alternative will require wastewater discharges to surface waters to continue, particularly in dry and critically dry years. Indeed, other parts of the Draft Staff Report explicitly state that the State Water Board will require such action as part of processing wastewater change petitions under Water Code section 1211.	supplies may be limited. That said, as explained above, treated wastewater discharges are not responsible for implementing flow requirements. If anything, implementation of the proposed Plan amendments could increase demand for recycled water if it is available in response to reduced Sacramento/Delta supply to agricultural and municipal uses.
289	6	CVCWA requests the following analysis and evaluation from the State Water Board in a revised draft staff report and response to comments: An evaluation of whether the UIF alternatives are consistent with the Recycled Water Policy given the inherent conflict between the UIF alternatives and the need for treated wastewater discharges to remain instream to meet UIF objectives;	Please refer to the responses to comments 289-1 through 289-5. The proposed Plan amendments do not conflict with the Recycled Water Policy and no additional analysis is required.
289	7	CVCWA requests the following analysis and evaluation from the State Water Board in a revised draft staff report and response to comments: An explanation of how treated wastewater discharge flows were accounted for in the modeling of the UIF alternatives and the Voluntary Agreement alternative;	Wastewater discharges are modeled as return flows from urban demands in SacWAM. If the water supplies to an urban demand are reduced, the volume of wastewater discharges is also reduced. Please see the SacWAM Documentation (available on the State Water Board’s Bay-Delta webpage) for more information on SacWAM and specific wastewater treatment plant discharges.
289	8	CVCWA requests the following analysis and evaluation from the State Water Board in a revised draft staff report and response to comments: An explanation of how approved, existing recycled water projects led by Central Valley POTWs, including Harvest Water, were considered in the modeling of the UIF alternatives and the Voluntary Agreement alternative;	Projects such as Harvest Water that were not completed by the date of the Supplemental Notice of Preparation of the Bay-Delta in January 2012 are not included for the unimpaired flow alternatives or the VA alternative in SacWAM. Please see Common Response 6.2, Baseline and No Project Alternative, for a discussion on the SacWAM baseline assumptions.

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289	9	CVCWA requests the following analysis and evaluation from the State Water Board in a revised draft staff report and response to comments: A clear statement and analysis that the impacts of the proposed Bay-Delta Plan modifications on Harvest Water and other recycled water projects led by Central Valley POTWs will not be adversely impacted by the proposed amendments.	Please refer to the responses to comments 289-1 through 289-5. The proposed Plan amendments do not conflict with the Recycled Water Policy and no additional analysis is required.
289	10	The Discussion of Water Quality Conditions Is Based on Outdated Information and Needs to Be Updated and Revised Section 4.3 in Chapter 4 of the Draft Staff Report includes a discussion of water quality conditions in the Bay-Delta watershed. This section needs to be significantly updated to reflect science, research, and management actions that have occurred over the past decade in cooperation and coordination with the Central Valley Water Board and other stakeholders. Indeed, the lack of discussion and acknowledgment of key programs led by the Central Valley Water Board with significant stakeholder engagement is disappointing. Examples of outdated references and the need for updates are provided below.	Please see the response to comment 289-2.
289	11	Delta Regional Monitoring Program The Draft Staff Report mentions the Delta Regional Monitoring Program (DRMP) on pages 5-45 and 5-49 as part of the summary of existing monitoring efforts and discussion on the need for a more comprehensive monitoring program for implementation of any Bay-Delta Plan updates. The DRMP is a stakeholder-driven program, including publicly owned treatment works (POTWs), small and large municipal storm water agencies (MS4s), irrigated agriculture coalitions, the Interagency Ecological Program, water suppliers, resource agencies, and regulatory agencies, who all participate in the DRMP. These members work through a documented governance structure to tackle Delta science questions and develop effective monitoring programs and science investigations with funding in order to answer those questions. Currently, the DRMP has active monitoring or research efforts regarding mercury, current use pesticides, nutrients, and chemicals of emerging concern. The Draft Staff Report should adequately summarize this program and incorporate the information that it has developed	The commenter states that additional information surrounding pesticides and endocrine disruptors originating from work under the Delta Regional Monitoring Program (RMP) should be incorporated and addressed as part of the summary of water quality conditions in the Delta but does not indicate the conclusions from these studies that would change the resulting information, analyses, or impacts in the Final Staff Report. As described in Section 5.6.1.3, Proposed Changes to Monitoring, Assessment, Special Studies, and Reporting, of the 2023 draft Staff Report, the Delta RMP intermittently measures contaminants at select locations throughout the Delta. However, the Delta RMP is not a comprehensive, long-term monitoring program so it does not fully fulfill that need. A more detailed description of the Delta RMP may reinforce or complement the information in the Staff Report but would not alter the conclusions. Please see Common Response 3.1, Fish Protection, for further information regarding the addition of recent scientific literature to the Staff Report.

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		over the years. For example, on page 4-12, the Draft Staff Report states: “it is recommended that a dedicated contaminant monitoring and assessment program be established in the Delta to better understand the biological effects of pesticide applications on fish and wildlife.” There is ongoing monitoring for current use pesticides occurring in the Delta under the direction of the Delta RMP, and the language should be modified to acknowledge this effort. Likewise, on page 4-13, the Draft Staff Report states that endocrine disruptors are “not commonly monitored in the environment.” The language should be revised to acknowledge the ongoing Constituents of Emerging Concern monitoring effort that is occurring in the Delta under the direction of the Delta RMP. State Water Board staff should take more care in reporting on the stakeholder efforts in the Central Valley and in collaboration with the Central Valley Water Board as part of the Bay-Delta Plan updates.	
289	12	Ammonia On page 4-14, the Draft Staff Report references a 2010 document that compares levels of ammonia against the 2013 recommended water quality criteria for ammonia published by the U.S. Environmental Protection Agency (USEPA). The Draft Staff Report fails to mention that the Central Valley Water Board and CVCWA partnered to perform studies to support the development of a Central Valley-specific recalculation of the USEPA ammonia criteria for the protection of aquatic life. The outcome from that effort, documented in Pacific EcoRisk, et al., 2019, was reviewed and supported by USEPA and found that site-specific ammonia criteria for the Central Valley are less stringent than the 2013 USEPA criteria. Comparisons to the 2013 USEPA criteria to assess the impacts of ammonia are therefore inappropriate, not based on substantial evidence, and do not reflect the best available science. The Draft Staff Report refers to “recent” studies (performed in 2006, 2007, and 2012) to suggest that ammonia has affected primary productivity in the Delta. The effect of ammonia concentrations on algal primary production and species composition in the Delta is controversial (Dahm et al. 2016; Cloern et al. 2014). Past experiments indicated that elevated	Section 4.3.1.4, Ammonia/Ammonium, of the final Staff Report has been revised to present results from more recent studies on the effects of ammonia on phytoplankton growth. This revision does not change any conclusions in Section 4.3.1.4.

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		NH₄⁺ levels might reduce algal primary production rates in water samples collected from Suisun Bay and the Delta by suppressing nitrate uptake (Wilkerson et al. 2006; Dugdale et al. 2007; Parker et al. 2012), but more recent experimental research determined that phytoplankton growth in the Sacramento River and Delta is unlikely to be impaired by ammonia concentrations (reviewed in Cloern 2021 and Kudela et al. 2023). High filtration rates of the invasive overbite clam, <i>Potamocorbula amurensis</i>, and high turbidity levels are additional factors that reduce primary production and standing algal biomass in Suisun Bay. The Draft Staff Report also refers to other studies performed in 2010 and 2011 to suggest that nutrient ratios have been a principal driver of adverse impacts in the Delta. Elevated NH₄⁺ levels have also been hypothesized to contribute to the observed shift in algal species composition from diatoms to bluegreens and greens (Brown 2010) by selecting for species less sensitive to NH₄⁺ (Glibert 2010; Glibert et al. 2011). However, investigations using the Interagency Ecological Program's (IEP) Environmental Monitoring Program (EMP) data (1975-2012) suggest that diatom decreases were more closely aligned with the establishment of the invasive clam <i>P. amurensis</i> than the gradual increase in ammonium concentrations, while cyanobacteria and green algae abundances have not changed significantly (Cloern et al. 2014b). The shift in phytoplankton community composition reported in the Glibert papers is also being questioned because of data quality issues with the initial algal cell count data on which they were based (SFEI-ASC 2016). A non-peer-reviewed reanalysis of the cell count data does not support the observation that a shift in algal species composition has occurred (SFEI-ASC 2016). In the above examples, these statements are clearly outdated. Various assessments of these hypotheses (by Ward and Paerl, 2017, Cloern et al, 2014, and others cited above) have tended to contradict the findings in these earlier papers and should be cited in a revised staff report.	
289	13	Due to the lack of direct studies evaluating ammonia impacts on invertebrates in the Delta, CVCWA requests the deletion of the following sentence located on page 4-14 in any revised staff	The Teh et al. 2011 citation was a report submitted to the State Water Board and was cited in the peer-reviewed 2017 Scientific Basis Report. The Pacific EcoRisk 2011 citation included by the

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		report: “Ammonia concentrations comparable to values measured in the Sacramento River were toxic to <i>Pseudodiaptomus forbesi</i> and <i>Hyallolella azteca</i>, important food resources for native larval fishes, including Delta smelt (Teh et al. 2011; Werner et al. 2010a, 2010b).” The Teh et al. 2011 report investigating <i>Pseudodiaptomus forbesi</i> responses to ammonia was found to contain many reporting errors and was never published in the peer-reviewed literature (Pacific EcoRisk 2011). The Werner et al. 2010a and 2010b studies discuss a negative correlation between increased <i>H. azteca</i> growth and ambient ammonia concentrations in Delta water samples, but there was no significant correlation between ammonia concentrations and 10-d <i>H. azteca</i> survival. Werner et al. 2010a also states that amphipod growth is a challenging test metric. “Amphipod growth relative to controls was not a sensitive indicator of toxicity, partially because of the variable size of the organisms, and – more importantly – the variability in food content of ambient water samples from different sites.” Additional studies would be needed to understand the past effects of ammonia on Delta invertebrates but are unlikely to be undertaken in the future due to the system-wide reduction in ammonia concentrations following operations of the BNR project at the EchoWater Facility.	commenter to refute the Teh et al. 2011 citation was not included in the reference list of the commenter’s letter, nor was it included as an attachment. The authors of Pacific EcoRisk 2011 importantly note that their review of Teh et al. 2011 is “not intended to negate Teh et al.’s general observations that ammonia is toxic to naupliar, juvenile, and/or adult <i>P. forbesi</i> at elevated concentrations.” Additionally, the Pacific EcoRisk 2011 report was not peer-reviewed. The commenter suggests minor text revisions that would not alter the Staff Report’s analysis or conclusions. The suggested revisions to the 2023 draft Staff Report are not warranted. However, Section 4.3.1.4, Ammonia/Ammonium, of the Staff Report has been revised to clarify that additional analyses are needed to fully understand the effects of ammonia on Delta invertebrates. This revision does not change the conclusions of Section 4.3.1.4. Please see Common Response 3.1, Fish Protection, for a discussion on the inclusion of best available science in the Staff Report and the use of the 2017 Scientific Basis Report to inform the Staff Report.
289	14	Relatedly, the Draft Staff Report contains outdated statements on the discharge of ammonia by SacSewer. The Draft Staff Report states that the SRWTP currently discharges 90 percent of the annual ammonia loading to the Delta. SacSewer completed construction of the its Biological Nutrient Removal (BNR) project in 2021, and construction of the Tertiary Treatment Facilities project in 2023. These upgrades, which cost \$1.7 billion, have resulted in a significant (greater than 95 percent) reduction in the discharge of ammonia from the treatment plant to the Sacramento River. Ammonia concentrations in the effluent are now regularly below the analytical method detection limit of 0.19 mg/L. CVCWA requests that the paragraph on pages 4-14 and 4-15 of the Draft Staff Report be revised as follows to reflect updated information for the treatment plant, its effluent quality, and its effect on water quality conditions:	Section 4.3.1.4, Ammonia/Ammonium, of the final Staff Report has been revised to reflect upgrades to Sacramento Regional Wastewater Treatment Plant facilities and includes information on current ammonia and nitrogen levels in wastewater discharge.

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		The [begin added text]EchoWater Resource Recovery Facility (EchoWater Facility)[end added text] [begin deleted text]Sacramento Regional Wastewater Treatment Plant (SRWTP)[end deleted text], located at Freeport on the Sacramento River, is the largest POTW discharging into the Delta [begin deleted text]and contributes about 90 percent of the Delta's annual ammonia load (^Jassby 2008)[end deleted text]. In 2010, the Central Valley Water Board issued the SRWTP an updated discharge permit (National Pollutant Discharge Elimination System Permit No. CA0077682) that required [begin deleted text]SRWTP to[end deleted text] upgrade[begin added text]s[end added text] to a tertiary treatment system [begin deleted text]to eliminate up to 95 percent of the ammonia load to the Sacramento River and approximately 65 percent of the total nitrogen. The upgrade will also add filtration and enhanced disinfection to inactivate pathogens. The upgrade will substantially reduce nutrient loads to the river system, particularly during the summer and fall. ^Healey et al. (2016) and ^Brown et al. (2016) observed that the upgrade to the SRWTP provides a unique opportunity to evaluate the effect of nutrient reductions, including ammonia, on algal primary production rates and community composition and the overall health of the Delta ecosystem Low flows in the estuary and Delta accentuate the effects of degraded water quality, such as high NH3 and NH4+ levels.[end deleted text] [begin added text]Construction of the Biological Nutrient Removal (BNR) facilities was completed in 2021, and construction of most of the Tertiary Treatment Facilities (TTF) was completed in 2023, substantially reducing nutrient loads to the Sacramento River. Ammonia concentrations in the EchoWater Facility effluent are now regularly below the analytical method detection limit of 0.19 mg/L, and the treatment process removes over 80 percent of total nitrogen.[end added text] Thus, increased [begin added text]Sacramento River[end added text] flows would dilute [begin deleted text]this contaminant[end deleted text] [begin added text]any remaining nitrogen[end added text] and enhance water quality by flushing the estuary more often. Similarly, enhanced flows may decrease [begin added text]the potential for indirect[end added text] effects of [begin added text]nitrogen loading[end added text] [begin deleted text]NH3 and NH4+[end	

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		deleted text], such as blue green algal blooms when excess nutrients are in the water (Brown 2010).	
289	15	With respect to the discussion of nutrients, the U.S. Geological Survey (USGS) has completed numerous studies and monitoring efforts in the Delta, many funded under the DRMP, which are not acknowledged in the Draft Staff Report. These efforts include multiple high-frequency water quality mapping studies performed by USGS research (Bergamaschi et al.), which have documented nutrient and phytoplankton concentrations throughout the Delta. This information should be incorporated and addressed as part of the summary of water quality conditions in the Delta. Moreover, the Central Valley Water Board has continued to implement studies to fulfill elements of its 2018 Delta Nutrient Research Program (Cooke et al, 2018) to address questions related to HAB formation, macrophyte blooms, and modeling to assess the effectiveness of nutrient load reductions on these problems, and these studies should be acknowledged in the Draft Staff Report.	The commenter states that additional information surrounding nutrients originating from work under the Delta Regional Monitoring Program and Delta Nutrient Research Plan should be incorporated and addressed as part of the summary of water quality conditions in the Delta but does not indicate the conclusions from these studies that would change the resulting information in the final Staff Report. Additionally, the 2023 draft Staff Report references work occurring under the Delta Nutrient Research Plan in Section 4.3.2, Harmful Algal Blooms. Recent research, reports, and special studies may serve to reinforce or complement the scientific knowledge found in the Staff Report, but do not significantly alter the findings or scientific basis in the Staff Report. Please see Common Response 3.1, Fish Protection, for further information regarding the addition of recent scientific literature to the Staff Report.
289	16	The Designation of Tribal Beneficial Uses Should Follow the Process Discussed During the Development of the Tribal Beneficial Uses During the Development of the Statewide Mercury Objectives CVCWA understands from the Draft Staff Report that State Water Board staff is not proposing to designate the tribal beneficial uses in the Bay-Delta Plan at this time or as part of this update process. Draft Staff Report at 4-10. Rather, State Water Board staff is seeking input on this issue. During staff’s presentation at the November 23, 2023 workshop, staff indicated that there is not yet a decision on how to move forward, that all alternatives are available for consideration, and that there may be value in “incorporating” Tribal Beneficial Uses instead of formal designation. CVCWA offers the following comments on this issue. CVCWA was heavily involved and engaged in the process and formulation of the Statewide Mercury Objectives, adopted on May 2, 2017 in Resolution No. 2017-0027. As part of that effort, there was much discussion of the process for designating Tribal Beneficial Uses compared to the process at that time, which was creating the beneficial use definitions. CVCWA understands that	As discussed in Chapter 13, Revised Proposed Plan Amendments, the revised proposed Plan amendments incorporate Tribal Beneficial Uses (TBUs), would designate Tribal Tradition and Culture (CUL) beneficial use, and include provisions for tribal outreach and engagement and incorporation of tribal feedback and Traditional Ecological Knowledge (TEK) into the Bay-Delta Plan update and implementation processes. Please see Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses.

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		the State Water Board proceeded with staff's recommendation – Option 2 as set forth on pages 107 to 111 in the final staff report [Footnote 1: https://www.waterboards.ca.gov/water_issues/programs/mercury/docs/hg_SR_final.pdf] – when it adopted the final language for the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. CVCWA expects the State Water Board to follow the process for designation that it represented to stakeholders at that time. Additionally, the Central Valley Water Board has given careful thought and attention to the process for designation of Tribal Beneficial Uses during their regional basin planning process, including hosting multiple workshops and presenting informational items during Board meetings. The Central Valley Water Board also prepared the report “Tribal Beneficial Uses Designation: A Primer to the Basin Plan Amendment Process” [Footnote 2: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/tribal_beneficial_uses/tbu_r5_bpaprimer.pdf] as part of its outreach efforts. This information should be included in a revised staff report.	
289	17	The discussion on page 11-11 of the Draft Staff Report reverses the process for designating uses of water bodies or segments and developing water quality criteria (or objectives) that are protective of the uses. For example, the Draft Staff Report states: Except in large part the health-based, consumption-related activities within the TBUs as specified in the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, activities within the CUL use may be directly supported by flow actions, including for example, navigation, gathering of natural resources, immersion ceremonies, and ceremonies that involve thriving fisheries (see Section 11.6.6.3, Importance of Flow and Water Quality to Tribal Uses of Water). Similarly, while T-SUB and SUB relate to the risks to human health from consumption of noncommercial fish or shellfish at higher rates and were not developed to in and of themselves protect aquatic life, a thriving fish population could support fishing at higher consumptive rates; therefore, flow	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for a discussion on Tribal Beneficial Uses. See Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses.

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		actions for the reasonable protection of fish and wildlife are related to the T-SUB and SUB beneficial uses on the same waters. Implementation measures for the reasonable protection of fish and wildlife also will inure to the benefit of subsistence fishing by tribes and non-tribal communities. Draft Staff Report at p. 11. This passage implies that water quality objectives proposed for the protection of aquatic life beneficial uses can justify the designation of Tribal Beneficial Uses because the Tribal Beneficial Uses are inherently related to aquatic life beneficial uses. But, this is backwards. Beneficial uses for water bodies are designated first as part of basin plans, and then water quality criteria/objectives are established to protect the uses. (Wat. Code, § 13241; 40 C.F.R. § 131.2.) Again, designation was discussed at length during the development of the Statewide Mercury Objectives, and the State Water Board should be consistent with representations made to stakeholders in that process. In this regard, CVCWA requests that the following sentence on page 11-12 be deleted from a revised staff report: Prior to formal designation of the TBUs, the State Water and the two regional boards will exercise their existing authorities to protect the TBUs on a case-by-case basis where supported by the evidence Case-by-case determinations are inconsistent with the process discussed during the Statewide Mercury Objectives development and would introduce uncertainty and confusion into basin planning. The Central Valley Water Board is proceeding thoughtfully with its basin planning process, with tribal and other stakeholder engagement. Case-by-case determinations are not appropriate or necessary at this time.	
289	18	In many cases, the State Water Board has already approved wastewater change petitions for recycled water projects in the Central Valley, and those projects have been permitted, with consideration public investment. Any decision to update the Bay-Delta Plan – whether to adopt the UIF approach or the voluntary agreement approach – must accurately account for the expected	The Staff Report adequately addresses recycled water. Please refer to the responses to comments 289-1 through 289-5. The proposed Plan amendments do not conflict with the Recycled Water Policy and no additional analysis is required.

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		changes in treated wastewater discharges due to recycled water projects, reflect current and scientifically sound information about Delta water quality, and be based on an adequate analysis that satisfies the informational requirements of the California Environmental Quality Act (CEQA). The Draft Staff Report does not provide the necessary information to allow CVCWA, its public agency members, or the State Water Board decision makers to evaluate the effects of the proposed Bay-Delta Plan Amendments or any of the alternative proposals on the ability to implement existing and future recycled water projects. In order to comply with CEQA, and its public trust duties, the State Water Board must adequately and accurately consider and describe the effects of the UIF proposal on recycled water operations and benefits. Consistent with these requirements, CVCWA requests that the State Water Board make revisions and provide the information cited above.	