

Table 4-1. Responses to Comments

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323	1	Los Molinos Mutual Water Company supports and encourages the State Water Resources Control Board to adopt the Voluntary Agreements (VA) alternative, also known as Healthy Rivers and Landscapes Agreements. The VA alternative is the only alternative analyzed in the State Water Board's Draft Staff Report (DSR) that is implementable and capable of providing reasonable protection of the multiple beneficial uses of the Bay Delta Watershed, including those served by Los Molinos.	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.
323	2	Los Molinos also writes to request a detailed, equitable, and structured process for onboarding new parties to the VAs. Los Molinos's initial attempts at negotiating a VA were derailed by the COVID-19 pandemic. Subsequent attempts to negotiate a VA have languished, in our view, because of lack of bandwidth by State parties to simultaneously advance the larger VA package while at the same time discussing and formulating VAs for other interested parties.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.
323	3	Regulatory Approaches, Such as UIF, Lead to Dispute, Litigation and Delays The State Water Board's 2014, 2015, 2021, and 2022 emergency regulations mandating instream and pulse flows in Mill Creek are, in effect, a form of unimpaired flow - requiring the first block of water to be dedicated instream. As the State Board is aware, these actions have resulted in litigation and, in the view of Los Molinos, will continue to result in litigation if the State Board continues in this heavy-handed and unlawful "emergency" regulatory approach. Los Molinos views the proposed UIF through the same lens; if adopted it will inevitably lead to dispute, litigation and delay in the fishery improvements the State Board seeks. Los Molinos has a long history of working collaboratively with State and Federal agencies and stakeholder groups for the benefit of the fishery. As one example, following the 2014 and 2015 emergency regulations, Los Molinos committed to undertake various voluntary (and uncompensated) measures to protect and improve fishery conditions on Mill Creek. Los	The State Water Board has consistently encouraged voluntary actions that are consistent with provisions included in the updated Bay-Delta Plan for their potential to provide large-scale benefits that will amplify the ecological benefit of new and existing flows beyond what may be provided by flow and water project operations alone. Please see Common Response 1.3, Revised Proposed Plan Amendments, regarding local cooperative solutions, a voluntary adaptive implementation mechanism within the regulatory pathway. See also 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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		Molinos worked closely with California Department of Fish and Wildlife staff. Such efforts included coordinating diversions with fishery needs, pulse flows, providing and adjusting base flows in Mill Creek based on real time conditions, including considering agricultural water demands and fishery needs, coordinating and implementing multiple pulse flows, enhanced monitoring of fish screens and ladders, coordinating with CDFW staff on the presence (or lack of presence) of listed species once agricultural demands increased, on Mill Creek implementing existing conjunctive use and instream flow agreements, (1990 Agreement and 2007 Agreement), to provide greater instream flow and "Chinook Flows". These voluntary measures culminated in a stunning success in 2021 (a critically dry year) where over 500 adult Spring Run Salmon returned to Mill Creek. This was an incredible achievement and success given critical drought conditions and stands in stark contrast to the poor Salmon return numbers and difficulties in other locations, including the mainstem Sacramento River and Butte Creek [Footnote 1: See, e.g., September 13, 2021 Washington Post article describing fishery conditions available at https://www.washingtonpost.com/nation/interactive/2021/california-disappearing-salmon/ and that includes quotes from employees at CDFW and NMFS. [Article accessed January 13, 2024.].] Unfortunately, despite success with voluntary measures and the benefits of collaboration and coordination, the State Water Board adopted emergency regulations later in 2021 and again in 2022. This, again, has led to litigation that is currently pending.	
323	4	Collaboration, like the VA Approach, Produces Timely and Positive Results for the Fishery Without Unduly Burdening other Beneficial uses of Water. As demonstrated by the voluntary actions taken by Los Molinos culminating in the success of 2021, collaboration is the key to timely implementing positive measures that protect and restore the fishery. Los Molinos believes that the VA approach will best and most quickly accomplish the objectives of the Bay-Delta Water Quality Control Plan Update, including providing reasonable protection of 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.

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		The VA description included in the DSR all appear to have three components: a flow contribution; habitat restoration/infrastructure improvements; and funding commitments. Applying those principles to Mill Creek, Los Molinos believes that a VA can significantly improve salmon returns, passage, and rearing. Agreed upon instream flows that reasonably balance competing needs is preferable to Los Molinos as compared to future emergency regulations or UIF which will result in additional litigation. Similarly, habitat restoration and infrastructure improvements on Mill Creek will dramatically improve conditions for the fishery. For example, all parties, including State and Federal fishery agencies, recognize the need for multi-benefit channel restoration in lower Mill Creek. Finally, Los Molinos is prepared to provide financial support to the larger VA effort on terms like other VA parties.	
323	5	Discussions with State representatives on the foregoing concepts have been positive. Unfortunately, however, time constraints have limited the State's availability to work towards a comprehensive VA for Mill Creek by the DSR's January 19, 2024 comment deadline. Consequently, Los Molinos requests that the State Board's DSR incorporate a process for onboarding new VA parties, such as Los Molinos. State representatives and other VA parties should prioritize discussions and resolution of any issues with prospective new VA parties with the goal of obtaining additional VA contributions and covered tributaries.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.
323	6	Los Molinas is prepared, willing, and able to discuss a VA covering Mill Creek. Such an approach would provide for more timely and enduring benefits to the fishery compared to the UIF alternatives.	A specific proposal for a VA for Mill Creek was not included in this comment letter.
324	1	The proposed plan amendments (55% unimpaired flow (UIF) within a 45%-65% adaptive range) to the Bay-Delta Water Quality Control Plan would cause significant and irreversible impacts to Nevada Irrigation District (NID), its watersheds, communities, family farms, recreational facilities, and local terrestrial and aquatic resources. An unimpaired flow standard is simply unworkable at NID.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the voluntary agreement pathway, which includes a Voluntary Agreement from NID.

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		NID urges the State Water Resources Control Board to accept and incorporate into its analysis NID's proposed Healthy Rivers and Landscapes Agreement. A summary of NID's proposal is transmitted under separate cover. The purpose of this letter is to summarize the devastating effects of the proposed 55% UIF standard on NID.	
324	2	Background on NID NID was formed in 1921 and includes a service area boundary of more than 287,000 acres in Nevada, Placer, and Yuba Counties. Its boundaries span from the High Sierra in the Sierra Nevada Mountain Range, down to the Sacramento Valley foothills in Lincoln and from the Middle Yuba River in the North to near Folsom Reservoir in the South. (See NID Map, attached as Exhibit A [Attachment 1].) Given its location in the headwater region, NID relies extensively on snowpack for its operations. In an average year NID counts on over 120,000-acre feet of spring and early summer runoff from snowpack. This snowpack will diminish and become less reliable annually with the effects of climate change. Given the reality that NID is in the epicenter of climate change, NID has actively been planning and undertaking actions to mitigate the effects of climate change for over a decade. NID provides drinking water to 19,800 connections (over 56,000 people) and, by contract, provides water to Nevada City, Grass Valley, and small portion of the City of Lincoln for use within their respective municipal treated water service areas. NID owns and operates six water treatment facilities to provide safe, affordable, and reliable drinking water. Average annual treated water deliveries are 9,091 acre-feet. Additionally, NID operates a network of more than 475 miles of canals and 411 miles of pipelines to transport water to its diverse agricultural customer base. These distribution facilities provide irrigation water to around 5,200 customers and support a multi-million dollar agricultural industry in Nevada, Placer, and Yuba Counties. Agricultural crops served by NID water include irrigated pasture, vineyards, orchards, other crops, and family	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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		gardens. In total, NID provides irrigation water to approximately 33,122 acres and delivers an average of 120,000 acre feet per year. NID is a leader among Northern California water agencies in the production of clean, renewable hydroelectric energy. Revenues from hydroelectricity are very important to the funding of maintenance and operation of NID's diverse and sprawling water distribution system and in keeping NID's water rates affordable. NID's seven power plants provide enough energy to supply the equivalent of more than 60,000 homes. On average, NID generates 293.9 gigawatt hours of energy per year. NID provides outstanding outdoor recreational opportunities at NID reservoirs and facilities in the Sierra Nevada, including mid-elevation recreation at Rollins Reservoir, Scotts Flat Reservoir, Combie Reservoir, and high-elevation Upper Division Reservoirs such as Jackson Meadows Reservoir and Faucherie Lake. NID owns and operates twelve separate recreation sites located throughout its service and watershed area. Popular outdoor recreational activities supported by NID include camping, fishing, swimming, sunning, boating, waterskiing, sailing, hiking, gardening, and kayaking. In total, NID's recreational facilities serve approximately 300,000 visitors per year. Many of NID's facilities and water rights originate in the early years of California's statehood and were assumed or acquired by NID upon formation in 1921. A number of NID's water rights and facilities have been in continuous use for over 150 years. NID holds and maintains some of the most senior water rights in California. Its water rights are senior to downstream water right holders and rim dam operators, including Yuba County Water Agency (operating New Bullards Bar Reservoir), South Sutter Water District (operating Camp Far West Reservoir), and the United States Bureau of Reclamation (operating Folsom Reservoir). NID relies exclusively on the capture of surface water to sustain its drinking water, irrigation water, hydropower, and recreation	

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		enterprises. Given its headwater location, there are no alternative water supplies available to NID. NID overlies fractured rock aquifers and, consequently, does not have access to alternative groundwater supplies. NID's vast and complex water storage and distribution system was designed and constructed with the reality that there are no reliable alternative supplies, except capture and storage of surface water. NID imports water from the Middle Yuba and South Yuba (and tributaries) systems for non-consumptive and consumptive uses in Nevada, Yuba, and Placer Counties. NID constructed a dispersed, but interconnected, system of nine storage facilities to convey water, generate power and serve its customers in lower elevations. Given there are no alternative water supplies, carryover storage is an extremely important tool for NID to use as a hedge against succeeding dry year(s). The UIF approach upends NID's carefully designed and operated system causing devastating impacts to all NID's enterprises and consequently its customers.	
324	3	NID's Efforts to Address the Impacts of Climate Change Regarding climate change, the Draft Staff Report (DSR) states "There is great uncertainty of how global change may affect the local climate in the study area. Changes in sea level, wind, temperature, and precipitation may have large effects on the hydrology and available water supply. SacWAM modeling of climate change is not included at this time because of the uncertainty and lack of detailed climate change information required to produce inputs to the model." (DSR, p. 6-8.) The lack of climate change hydrology incorporated into the proposed UIF scheme is improper for informed decisionmaking and public disclosure as to the actual environmental effects of the proposed plan amendments under CEQA. 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	Please see Common Response 4.2, Drought and Climate Change, for a response to comments regarding the consideration of climate change in Staff Report modeling and the Staff Report's consistency with regulatory requirements and other policies. Please also see Common Response 1.1, General Comments, regarding consistency with other laws, policies, and agreements.

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		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. As noted, NID is in the crosshairs of climate change, and is a statewide leader in undertaking planning and actions to address loss of snowpack. Unlike the State Water Board, NID does not have the luxury of simply ignoring climate change and possibly addressing it at a future date. As one example of NID's proactive efforts, in 2014 NID petitioned for assignment of a state filed water right (Application 5634) for the proposed Centennial Reservoir Project, a new 110,000 acre-foot reservoir that would be located between two existing reservoirs on the Bear River. The application described the project as "an effort to meet anticipated future demand and the effects of climate change." (Application, Attachment No. 1 [Attachment not attached], § 3.) "Predicted changes in climate and future uncertainty in the regulatory requirements demonstrate that NID is more reliant on releases from storage to meet demand and that those releases will occur earlier in the year and more frequently." Predicted warming temperatures resulting in higher snow levels and reduced snowpack, the result is that there will be less available snowmelt for NID to capture under its existing pre and post 1914 water rights." (Ibid.) NID's application received protests from various parties and the matter was assigned to the SWRCB's AHO office. Environmental review under the California Environmental Quality Act of the proposed Centennial Project and alternatives started. NID also began meeting and conferring with protesting parties to attempt to resolve protests. Several protesting parties requested, and NID agreed, to conduct a significant planning process, including development of a climate change model, to assess the need for the Centennial Reservoir Project, supplemental water supplies in general, and to develop other alternatives, including demand	

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		management measures, for additional consideration. This planning process is known as NID's Plan For Water. Plan For Water is a public collaboration process with a goal to determine the best ways to meet the community's demand for water over the coming decades. Working together as a community, Plan For Water was founded upon six objectives: (i) Assess our water situation together; (ii) Develop a deeper understanding of subsequent impacts to community interests and the community's future; (iii) Provide a forum for community members and stakeholder groups to offer their input; (iv) Focus on overarching policies and not on specific projects; (v) Understand what is really important to the community and why; and (vi) Create a 50-year plan using the best information available at this time. The process included a review of NID's available water supply and the long-term impacts on varying water demands coupled with the latest forecast of climate change hydrology. After 24 months of regular meetings and development of supporting technical data and analyses, Plan For Water is nearing completion and will show how future water supply and demand scenarios may be integrated into NID's water management practices. The State Water Board's AHO proceeding on NID's petition for assignment of the state-filed water right is currently pending, awaiting completion of NID's Plan For Water process and environmental review under CEQA. That environmental review will assess a proposed project and a reasonable range of alternatives to address NID's water supply deficits due to climate change.	
324	4	Plan For Water Stakeholders Jointly Development a Water Supply Model to Forecast Impacts of Climate Change on NID and Inform Development of Responsive Actions Plan For Water used a sophisticated water supply modeling process that included: development of projected hydrology	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River model representation and operations. Please see Common Response 1.1, General Comments, for responses to comments that make general

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		(using historical hydrology and Global Climate Models), watershed runoff modelling (using the Hydrologic Modeling System (HEC-HMS)), demand projections (using the Integrated Water Flow Model Demand Calculator), and finally reservoir operation modelling (using Hec-ResSim). The development of watershed-based hydrology relied on historical hydrology data paired with projected hydrology using Global Climate Models (GCMs) to assess climate change impacts within NID's service territory and watersheds. GCMs are three-dimensional mathematical representations of the major world-wide climate components such as the atmosphere, land surface, ocean, and sea ice. GCMs simulate how these components interact, resulting in scientifically based projections of how these climate interactions may happen. Three GCMs were selected that best represent the California climate and that could be downscaled to NID's service territory. The three GCMs selected also reflect a range of possible hydrologic scenarios (wet climate, medium climate, and dry climate). Three demand scenarios were also selected, reflecting a high increase in demand, a reduction in demand and a baseline demand. From the range of climate change and demand scenarios, three combinations of scenarios were identified to develop inputs necessary to run the reservoir operations model (Hec-ResSim). Two of the selected scenarios represent hydrological and demand bookends: the low bookend (drier hydrology, high demands) and the high bookend (wet hydrology, low demand). The third scenario represents a median condition (a middle-of-the-road hydrologic climate with baseline demand). The reservoir operations models allows NID to project future water supply needs. To ensure the accuracy of the modelling effort NID, technical consultants, local experts, and interested members of the public tested model sensitivity and groundtruthed its validity for purposes of projecting future hydrological conditions. NID's mountainous upper watershed acts as a natural reservoir, releasing historically 120,000 acre feet of snowmelt runoff during the spring and summer months. Climate change impacts	comments, do not raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		will result in less snowpack and faster melting of the snowpack. The NID system was not designed to flexibly adapt to the reality and impacts of climate change, including the loss of a significant amount of snowpack. A large portion of the NID watershed is above the 5,000-foot elevation where snow falls during winter storms. This area is and will continue to be impacted by higher winter and spring temperatures. The combination of reduced snowpack and prolonged dry periods exacerbates future water scarcity issues. More information about Plan For Water, including development of NID's Water Supply Model can be found on NID's Plan for Water webpage.	
324	5	The NID Water Supply Water Model Demonstrates Devastating Impacts to all NID Public Services and Enterprises. Attached as Exhibit B [see Attachment 2] is the Technical Memorandum prepared by NID's expert consultants summarizing key effects of the proposed 55% UIF standard using NID's Water Supply Model with three variations of climate change hydrology: "Dry," "Median," and "Wet." The analysis included in the Technical Memorandum only utilized a baseline demand scenario. Each future climate scenario demonstrates catastrophic impacts to NID compared to existing conditions and operations. The UIF standard is simply unworkable at NID.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River model representation and operations.
324	6a	Impacts to Water Supply -- Single Year Imposition of the UIF standard causes unmanageable water supply impacts to NID. Figure 10 [Exhibit 1] in the Technical Memo [Attachment 2] depicts NID's annual unmet consumptive demands: In over 70% of years under the 55% UIF scenario, NID must manage a water supply deficit. 50% of the time that water supply deficit is approximately 18TAF to 37TAF. 20% of the time, NID will have to address and mitigate a 40TAF to nearly 60TAF supply deficit.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding Yuba River model representation and operations.

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		Water Supply Impacts to Scotts Flat Reservoir -- the Primary Water Source in Nevada County These water supply impacts become even more significant when evaluated by impacted facility. For example, NID's Scott's Flat Reservoir is highly reliant on imported water supplies given its small watershed. However, Scotts Flat is essential to NID operations insofar as it supplies the water for Nevada County and is the primary source of drinking water supply for NID customers. Scotts Flat Reservoir was designed to store imported water from the Yuba River system. The UIF approach, however, constrains these longstanding interbasin water deliveries by forcing water to be kept in its native system. The DSR states that "The largest changes to interbasin diversions and associated reservoir reoperation, occur in the Yuba and Bear Rivers[]" and that "Twelve of the 43 upper watershed reservoirs have potential to see large changes in operation under each of the modeling scenarios, particularly facilities that include interbasin diversions that move water from one watershed to another." (DSR, pp. 6-30, 6-47.) This is true of Scotts Flat Reservoir; however, the SacWAM model incorrectly states that Scotts Flat Reservoir would have no change in average annual elevation because of any of the UIF flow scenarios. (See, e.g., Table A1-145 at p. A1-217; Table A1-309 at p. A1-312.) No change in Scotts Flat Reservoir elevation appears to be an error in the SacWAM modeling that hardwires Scotts Flat (and Combie Reservoir) to always be at the average monthly historical average with no deviation from average under the UIF scheme. (See, e.g., "Sacramento Water Allocation Model, Model Version 2023.06.12 Documentation, September 2023" [hereinafter "SacWAM Documentation"], Table 6-5 and §6.1.2.3.) This model rule is inconsistent with the UIF project description in the DSR, including the following:	

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		Both the narrative and numeric portions of the inflow objective are proposed to apply throughout the watershed, including on upstream tributaries, on all the Sacramento/Delta tributaries that support or contribute to the protection of anadromous fish species (Figure 1-1a). Under the proposed program of implementation, all water users on these tributaries, except those with a de minimis effect on flows (e.g., 10AF/yr or less), would have responsibility for contributing to the achievement of the objective. (DSR, p. 5-17.) All of NID's facilities, including Scotts Flat Reservoir and Combie Reservoir, are within the Delta watershed, as depicted in DSR Figure 1-1a. Consequently, contrary to the SacWAM modeling rule, Scotts Flat and Combie Reservoirs "would have responsibility for contributing to the achievement of the objective." (Ibid.)	
324	6b	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 refer to the response to comment 324-6a. Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, of the 2023 draft Staff Report provides a basic project description 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. Chapters 9, Proposed Voluntary Agreements, and 13, Revised Proposed Plan Amendments, further describe the VAs and the revised proposed Plan amendments, respectively. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the project description and approach to the analyses.
324	7	[Exhibit 1: Graph titled Figure 10: Annual Unmet Consumptive Demands Exceedance]	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.
324	8	The State Water Board's DSR analysis of NID's reservoirs violates CEQA. The DSR does not, in detail, describe the proposed change in operations for NID's facilities. This is most acutely seen with the DSR's analysis of impacts at Scotts Flat Reservoir, where [Exhibit 3] Tables A1-309 through A1-312 depict essentially no change at Scotts Flat Reservoir with the various UIF alternatives:	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River and operations and on the scope, scale and application of SacWAM. Please see Section 5.4.2.4, Implementation, of the Staff Report for details regarding the implementation of the proposed Plan amendments.

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		This fails to accurately describe the changes to NID's facilities, including Scotts Flat Reservoir, with the particularity and detail required by CEQA. On one hand, the DSR states that interbasin transfers will impact reservoir operations, including that the "largest changes to interbasin diversions and associated reservoir operation, occur in the upper Yuba and Bear Rivers." (DSR, p. 6-30.) On the other hand, once facility highly reliant on interbasin transfers from the Yuba system -- Scotts Flat Reservoir -- depicts no change as a result from the UIF regime whatsoever. In County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931 the CEQA lead agency, like the State Water Board here, attempted to claim that there would be no change in reservoir operations and referenced "A hydrologist's report [that] listed the water levels of the three impacted lakes at the end of each month over a period of many years." (Id. At p. 952.) The court found the environmental analysis inadequate because it lacked an "operational analysis," noting that: The month-end water level is only one element of the operation. Just as important to fisheries, river habitat and recreational uses is how those lake levels were determined. When were releases made and at what rate? What were the factors that determined when releases would be made? Are those factors equally applicable for purposes of power generation and inelastic consumptive use? The month-end lake level could be achieved by constant releases over a period of time or, theoretically, through one rapid and enormous release that adversely affects fisheries and habitats. Reliance on lake levels alone is insufficient to describe the current release program or to assess the impacts of the proposed project. (Id. At pp. 954-955.) The DSR's description of the project as to NID's facilities contains even less detail than the description the court in County of Amador found insufficient. Is the UIF regime imposed consistent with the water right priority system, or not? Is UIF imposed on all NID facilities and points of diversion, or not? Is Scotts Flat	In addition to the proposed Plan amendments, which remain part of the project as the regulatory pathway, the project has also been revised in response to comments received expressing concerns over potential water supply and carryover storage impacts. The inflow requirements contained in 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. Please see Common Response 1.3, Revised Proposed Plan Amendments, for a discussion of the revised proposed Plan amendments' inflow objective and its associated water supply adjustments. The revised proposed Plan amendments also allow the reservoir owner/operators subject to carryover storage requirements as part to propose carryover storage levels within an appropriate range tailored to each reservoir, with lower requirements during drought years, as part of their long term temperature management strategies. The revised proposed Plan amendments also provide for a VA pathway for an initial eight-year term that reduces flow contributions required from VA water rights, including those held by Nevada Irrigation District. Finally, the program of implementation also contains numerous flexible provisions allowing for adaptive management to minimize water supply impacts (e.g., the ability to manage numeric flow requirements as a total volume of water to shape flows) and also contains provisions allowing the State Water Board to develop and implement curtailment exceptions for human health and safety needs and other appropriate purposes.

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		Reservoir and Combie Reservoir subject to the UIF standard, or not? What are the environmental and economic effects of the exact project that is proposed by the State Water Board? How would that project be implemented to answer the questions posed by the court in County of Amador? Given uncertainties in the project description, NID modeled the UIF requirement consistent with the language of the DSR, including that “default” implementation would be imposed on all tributaries and all water rights in the Delta watershed. (DSR, p. 5-17.) If the proposed plan amendments are implemented in this manner, the UIF approach would have catastrophic impacts to NID, particularly to Scotts Flat Reservoir. [Exhibit 4 of Attachment 2] Figure 17 of the Technical Memorandum depicts end-of-April storage at Scotts Flat Reservoir under existing conditions and with a 55% UIF climate change scenario: April 30 is utilized to show typical reservoir highpoint as the season transitions into the highwater use summer months. Under the proposed plan amendments, Scotts Flat Reservoir is at deadpool in many of the drier year types. This means there is effectively no water supply for Nevada County before the high-demand Summer and Fall water seasons. Even in above normal and below normal year types, there are huge water supply impacts of 20 TAF to 30 TAF per year. The DSR contains no analysis of these catastrophic impacts to NID or the cascade of other impacts, including to other biological resources, recreation, aesthetics, increased risk of wildfire, and negative economic impacts to the regional economy. It is difficult to imagine how NID would manage such a devastating water supply impact to Nevada County. A supply reduction of this magnitude would result in the severe rationing of water supply throughout NID’s service area. Human health and safety would take priority, thereby leaving NID’s extensive irrigation system with little to no supply and dry irrigation canals. The loss of irrigation is not only catastrophic to the community from an agriculture and fire suppression perspective, but would have a detrimental effect to the environment with small streams and tributaries suffering from the lack of tailwater from NID’s canals. These environmental impacts are neither disclosed nor analyzed	

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		in the DSR. Given NID's headwater location and lack of alternative water supplies, carryover storage is a vitally important tool to prepare and manage for the potential that the following year is the start of a drought. NID typically targets a minimum carryover storage of 78,000 acre feet. Under the proposed plan amendments, NID in most years would be unable to maintain that level of minimum carryover storage. (See Technical Memorandum [Attachment 2], Figures 12, 14, 16, 18 and 20 [Attachment 2., Exhibits 20, 22, 24, 26, 28]) This creates greater risk to NID when future dry and critical years occur. As an example, Figure 18 [Exhibit 5 of Attachment 2] of the Technical Memorandum depicts November 1 Scotts Flat Reservoir storage, averaged by water year type under existing and 55% UIF scenarios: Having carryover storage at Scotts Flat Reservoir less than 5,000 acre feet in all year types except wet is not a realistic operational regime for NID. Under a 55% UIF standard, NID would have to reduce demands to ensure greater carryover storage at Scotts Flat and other NID storage facilities. These other actions would exacerbate other impact areas, such as hydroelectric generation, regional economic impacts, terrestrial species, and fallowing of agricultural land.	
324	9	[Exhibit 3. Tables A1-309 through A1-312 from Appendix A1, Sacramento Water Allocation Model Methods and Results, 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.
324	10	[Exhibit 4: Graph titled Figure 17 - Scotts Flat Reservoir April 30 Storage, Averaged 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.
324	11	[Exhibit 5: Graph titled Figure 18 - Scotts Flat Reservoir November 1 Storage, Averaged 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.

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324	12	Impacts to Water Supply -- Multi-year Drought Multi-year droughts have occurred historically in California and will happen again. The DSR notes that "climate change is already bringing . . . longer and more severe droughts that present challenges for water supplies" and includes two "modular drought alternatives" regarding curtailments and water conservation. (DSR, pp. 5-68, 7.24-46.) However, the DSR does not sufficiently analyze the impacts of multi-year droughts or assess how climate change will exacerbate already challenging drought conditions. NID's Technical Memorandum [Attachment 2] does assess storage conditions under historical hydrology and climate change hydrology with the proposed Plan amendments. The results demonstrate, again, significant, and unmanageable impacts to NID. For example, Scotts Flat Reservoir using median climate change hydrology in a multi-year drought is as follows: In a multi-year drought scenario, Scotts Flat Reservoir is effectively at deadpool during spring and summer months for the entire three-year drought. Additionally, storage levels cannot recover under the UIF requirement. Even at highpoint, Scotts Flat Reservoir storage levels are effectively unusable at less than 5 TAF. Water delivery below this elevation will compromise water quality in the canals and streams below the reservoir due to the mobilization of sedimentation that has built up behind the dam. Additionally, hydroelectric power becomes infeasible due to the loss of head pressure and flow to spin the turbine.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for responses regarding Yuba River model representation and operations. Additionally, please see Common Response 4.2, Drought and Climate Change, for responses to comments that raise issues with the analysis of multi-year droughts in the Staff Report.
324	13	[Exhibit 6. Three graphs titled Figure 33 - Scotts Flat Reservoir Operations, Median Climate 2038-2040]	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.
324	14a	Measures to Address Water Supply Impacts are Infeasible CEQA requires that the DSR propose and describe feasible mitigation measures to minimize or avoid the project's significant environmental effects. (Pub. Res. Code §§ 21002.1(a), 21100(b)(3), 21080.5(d)(2)(A); Napa Citizens for Honest Gov't v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 365.)	The impact conclusions made in the draft Staff Report do not rely on the implementation of other water management actions and the Staff Report recognizes that the availability of replacement supplies may be limited in some cases. Please see Common Response 8.1, Economic Analysis and Other Considerations, for additional information on water transfers under the proposed

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		CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." (CEQA Guidelines § 15364.) There must be evidence in the record that the mitigation measure would be effective. (League to Save Lake Tahoe Mtn. Area Preservation Found. v. County of Placer (2022) 75 Cal.App.5th 63, 121 [no evidence that mitigation measures requiring compliance with unformulated target would work].) The DSR relies extensively on a mitigation measure that encourages water users to "diversify water portfolios" as a mechanism to mitigate the water supply impacts of UIF: Diversify Water Portfolios: Water users can and should diversify water supply portfolios to the extent possible, in an environmentally responsible manner and in accordance with the law. This includes sustainable conjunctive use of groundwater and surface water, water recycling, water conservation and efficiency upgrades, and water transfers. (See, e.g., DSR, p. 7.4-97.) This same language is used throughout the DSR as a supposedly effective and feasible mitigation measure. (DSR pp. 7.4-97 [Mitigation Measure MM-AG-a,e]; 7.6.1-89 [MM-TER-a]; 7.6.2-106 [MM-AQUA-a,d], 7-8.41 [MM-EN-a-e]; 7.12.1-118 [MMSW-a,f]; 7.12.2-67 [MM-GW-b] and 7.20-50 [MM-UT-d].) In NID's case, however, this mitigation measure is not feasible. As noted, NID overlies fractured rock aquifers and does not have access to groundwater. The DSR notes that "Groundwater is not extensively utilized in these areas [meaning NID] because of the presence of fractured rock aquifer system." (DSR p. 7.4-52.) Thus, conjunctive use of groundwater and surface water is not possible in NID's case. As noted, NID is in the headwater region of the Sierra Nevada Mountain range. Unlike much of the Bay-Delta watershed, there is no upstream party from which NID could purchase transfer supplies from to mitigate impacts from significant supply reductions. Pacific Gas & Electric Company maintains facilities	Plan amendments, and a discussion of considerations specific to Nevada Irrigation District.

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		(its Upper-Drum-Spaulding Hydroelectric Project, FERC Project No. 2310) that are intermingled with NID's system and NID under a "coordinated operations agreement" with PG&E can purchase supplies from PG&E under certain circumstances. However, under an UIF scenario, those purchases from PG&E would either be significantly constrained and potentially not available to NID. At best, those purchases as well as similar PG&E water purchases by Placer County Water Agency would be significantly reduced. At worst, acquisition of water from PG&E would not be available at all given the confluence of a variety of factors, including PG&E's own water supply deficit from UIF. It is improper and entirely speculative for the DSR to assume NID can acquire transfer supplies.	
324	14b	NID currently maximizes wastewater recycling for irrigation water supplies. While NID has no authority or control over wastewater management (such services fall under the jurisdiction of the City of Grass Valley, Nevada City, and Placer County) NID does capture wastewater discharges and recycle the flows into its irrigation canals. These flows are already accounted for in NID's overall water portfolio, and included in NID Water Supply Model. It is unreasonable and without substantial evidence for the DSR to assume that NID can further "diversify" its water portfolio when it already maximizes its use of recycled water.	The impact conclusions made in the draft Staff Report do not rely on the implementation of other water management actions and the Staff Report recognizes that the availability of replacement supplies may be limited in some cases. Please see Common Response 8.1, Economic Analysis and Other Considerations, regarding alternative water supply costs and for a discussion regarding feasibility of response actions, including water recycling.
324	14c	NID operates a successful water conservation campaign that has resulted in continued reduction in water use over the last 15 years. NID's overall treated water demand has reduced by 25% yet our customer base has increased by 2%. Additionally, NID complies with the state's water audit and water loss regulations and continues to educate and encourage conservation. Even with successful conservation efforts, and a continuing commitment to conservation measures, the sheer magnitude of the water supply deficits caused by UIF cannot be overcome by conservation, and certainly not in an economically feasible manner. The DSR does not analyze whether it is feasible for NID to conserve sufficient supply to overcome the impacts of UIF.	As described in Chapter 2, Hydrology and Water Supply, many water users have made significant investments to diversify their water supply portfolios and the proposed Plan amendments could lead to further diversification beyond that which has occurred due to existing or potential population growth, drought, environmental needs, climate change, economic factors, and other reasons. California water resource management involves a myriad of individual and collective decisions, and range of foreseeable compliance actions and potential responses to the project is wide reaching and inherently cumulative in many regards. 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. Other water management

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			actions, including groundwater storage and recovery, water transfers, water recycling, and water conservation 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. The environmental impact conclusions from reduced Sacramento/Delta supply do not rely on implementation of other water management actions even though these actions could reduce supply impacts at certain times and locations. It is not possible to quantify exactly how the various water users that may experience reduced Sacramento/Delta supplies will manage their water supply portfolios in response to reduced supplies, and this type of quantification is beyond the scope of detail required in this planning process. The Staff Report recognizes that the availability of replacement supplies may be limited in some cases. Please see Common Response 7.20, Utilities and Service Systems, for a discussion regarding water use efficiency/conservation.
324	15	Impacts to NID's Hydropower Generation The DSR fails to accurately characterize impacts to NID's generation due to the significant reduction in imports to the Bear River from NID's Bowman-Spaulding Conduit. NID's Technical Memorandum [Attachment 2] summarizes the generation impacts associated with the proposed plan amendments: Today, NID's seven power plants provide enough energy to supply the equivalent of more than 60,000 homes. The proposed plan amendments, as reflected in the Table above [Exhibit 7], would result in a decrease of between about 36% and 50% of NID's annual hydroelectric energy production from its Yuba-Bear Project, or a reduction in power supply to roughly 21,600 to 30,000 homes. The DSR notes Chicago Park, Dutch Flat 1 and 2, and Rollins Powerhouses "have reduced hydropower generation caused by a reduction in interbasin diversions to the Bear River", but fails to provide detailed analysis as to the local and	Please see Common Response 7.8, Energy and Hydropower, regarding Staff Report analysis of individual facilities and commenter estimates of local effects. Local, regional, and systemwide impacts are evaluated as part of the power flow analysis described in Appendix A5 (Hydropower, Energy Grid, and Export Energy Analyses) and Section 7.8 (Energy). The TARA power flow analysis is a detailed evaluation of the entire California electrical grid, and by necessity, includes local power transmission infrastructure, including the thermal reliability and voltage stability benefits from Chicago Park and Dutch Flat 2 Powerhouses. The power flow modeling verifies that electrical energy can move through the electrical grid reliably to meet load demand where it is needed. There are some ancillary services that are provided by some generators, including hydropower facilities, that provide dynamic corrections to short-term perturbances to

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		systemwide impacts of this reduced generation. (DSR, p. A5-29.) The DSR's statement about reduction in interbasin diversions conforms with previous modeling of UIF scenarios in the FERC relicensing context that showed generation losses would be greatest at the NID's Chicago Park and Dutch Flat 2 powerhouses, which currently provide frequency and voltage ancillary services to help stabilize the California electric grid and support the addition of solar and wind energy sources into the market. With UIF, Dutch Flat 2 Powerhouse is offline during critical spring and summer months during most WY types and would not be able to continue to provide frequency and voltage support. A detailed assessment of the impact of the loss of these resources to the grid is beyond the scope of the model developed to quantify, however, an outline of the ancillary benefits is provided below. Generation from NID benefits the existing high voltage electric system in numerous ways, and the absence of this generation would degrade overall system reliability and local regional reliability, specifically. The broader benefit to the system is the presence of inertia provided by the rotating generators at Chicago Park and Dutch Flat 2 powerhouses to the rest of the grid. The rotating machines establish a baseline frequency signal to which all inverter-based renewable generators (e.g., solar photovoltaic) can set their inverters. In addition, the inertia of the above generators is what keeps the system stable after a system disturbance. Losing the frequency signal provided by the above generators and the inertia would do harm to both frequency regulation and system stability. Project generators also provide benefits to the grid immediately around the 115 kV points-of interconnection to NID's generation. The 115 kV circuit to which NID interconnects is a lengthy circuit which extends from south central Nevada County to west of Sacramento. The rating of the circuit ranges from 63 mega-volt amperes (MVA) to 119 MVA, depending on presumed weather conditions and as-built details. This lengthy 115 kV line experiences high voltage drops and requires the voltage support provided by NID's generation. The overall 115 kV circuit, which is the singular link through the Sierra Nevada, is weakened	keep the grid running at the proper frequency and voltage. The ancillary services of frequency regulation, equipment level voltage support, and transient voltage stability are not part of the steady state power flow modeling, but generally require small amounts of energy compared to what is needed for meeting grid demand, which is modeled in the power flow analysis. In order to protect health and human safety, these ancillary services would be allowed to continue if they could not be provided by other facilities and are found to be essential for grid stability. As indicated in Common Response 7.8, Energy and Hydropower; Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, and Appendix H1a3, Sacramento Water Allocation Model Results for Updated Unimpaired Flow Scenarios, storage in reservoirs, including those that supply these ancillary services, could be reduced, particularly in the spring, but would not be drained unless they are regularly drained under baseline conditions, and stored water would be available for essential and emergency purposes. Regarding Dutch Flat Powerhouse #2, it is likely that other powerplants can provide necessary ancillary services to maintain grid stability given the relatively small size of the powerplant and that it occasionally experiences outages for maintenance (NID 2025). SacWAM simulates some months with zero or very low flow through the Dutch Flat 2 and Chicago Park powerhouses under the flow scenarios. However, these are infrequent (approximately 2 percent of the time under the 55 scenario) and could be eliminated by modifying annual operations to ensure year-round flow. For an evaluation of the Plan amendment consistency with state mandates, please see the discussion for Impact EN-d: The degree to which the project complies with existing energy standards in Section 7.8, Energy. In addition, for an evaluation of GHG effects, please see Section 7.10, Greenhouse Gas Emissions, and Common Response 7.10, Greenhouse Gas Emissions and Mitigation. Please also see Common Response 7.8, Energy and Hydropower; regarding the evaluation of local effects, the continued ability of hydropower facilities to provide emergency power, and reliability of the California electrical grid.

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		without the above generators to provide local voltage support, inertia for system stability, and a baseline indication of system frequency. Importantly, this lost generation and lost ancillary benefits would be from a carbon-free source of electricity when both the President of the United States and the Governor of California have mandated the expansion of generation from such carbon free sources to advance their aggressive policies regarding reducing greenhouse gas emissions by 2030. The DSR does not analyze the impacts of loss or diminishment of NID's powerhouses on the grid and this Plan's inconsistency with state and federal mandates.	
324	16	[Exhibit 7: Table described as a summary of the generation impacts associated with the proposed plan amendments]	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.
324	17	Under the existing NID/PG&E power purchase contract, any revenue impacts associated with the reduction in energy production resulting from the imposition of the UIF as compared to baseline would be the subject of negotiations between PG&E and NID. However, for the purposes of a coarse estimate the reductions shown above in Table 8 would be expected cause a revenue loss of 36-49% or \$8,000,000 to \$12,000,000 annually. Currently, power revenue subsidizes NID's water rates. Without the power revenue subsidy, NID's rates would significantly increase, affecting the regional economy and affordability of water. The DSR does not analyze the cascading economic impacts of NID's loss of power revenue.	The Staff Report includes an extensive economic analysis in Chapter 8, Economic Analysis and Other Considerations. The Staff Report's analysis of economic effects is appropriate for the large scope of the project and wide range of possible response actions. Chapter 8, Economic Analysis and Other Considerations, analyzes the economic effects of changes in hydrology and water supply under the proposed Plan amendments on agricultural and municipal use. In addition, Chapter 8, Economic Analysis and Other Considerations, considers other economic effects that could occur as a result of the Sacramento/Delta update to the Bay-Delta Plan, including to energy production. Section 8.6.5, Energy, in the 2023 draft Staff Report (Section 8.7.4, Energy, in the final Staff Report) appropriately discloses that changes in the timing of hydropower generation, including an increase of hydropower generation in the spring and a decrease in summer, could affect hydropower generation revenues. In response to comments received on the 2023 draft Staff Report, changes in hydropower generation revenues were estimated using a representative monthly price series. Please see Common Response 8.1, Economic Analysis and Other Considerations, for the results of this analysis and additional discussion related to changes in hydropower generation revenues, and show that changes in hydropower generation revenues would be relatively small on an annual basis. These results presented in Common Response 8.1, Economic Analysis and Other Considerations, do

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			not change the conclusions of the Staff Report. Please also see Common Response 8.1, Economic Analysis and Other Considerations, for further discussion on economic effects from reduced revenue from hydropower production and water sales, including a focused discussion about NID. Many of NID's comments are based on an analysis by Western Hydrologics that draws conclusions based on modeling and analysis that overstates the effects of the proposed Plan amendments on NID's operations. See Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for discussion on Yuba River model representation and operations and response to NID's comments based on analysis by Western Hydrologics. In addition, the project has been revised. Please see Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for a description of the revised proposed Plan amendments. As discussed in Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, 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.
324	18	The impacts to NID's Recreational Campgrounds and Facilities would be substantial. NID would see a loss in revenue from a lack of camping, boating, and fishing. Lakefront campsites would not be "lakefront." Given that UIF lowers the water level of NID's reservoirs where its recreation facilities are located, boat launches, mooring and boat slips would be affected. Lower lake levels would cause safety hazards for boaters with more debris and hazards in the lake.	Recreational impacts of the Sacramento/Delta reservoirs, including economic effects, from implementation of the flow scenarios are evaluated in the 2023 draft Staff Report. Potential changes in reservoir storage and elevation are identified in Chapter 6, Changes in Hydrology and Water Supply, Section 6.3.2, Reservoir Storage and Elevation and Appendix A1, Sacramento Water Allocation Model Methods and Results, and incorporated into the recreation and economic effects analyses. The SacWAM results presented in Chapter 6 and Appendix A1 indicate that most of the changes in reservoir elevations resulting from changes in hydrology would be within the historical ranges. Under existing conditions, Sacramento/Delta reservoir elevations fluctuate throughout the year and upper watershed reservoirs, such as the reservoirs in the Nevada Irrigation

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			District's service area, historically experience substantial changes in water elevation and with implementation of the flow scenarios, most of the changes in reservoir elevations would stay within historical ranges. Upper watershed reservoirs have potential to see large changes in operation under each of the modeling scenarios, particularly facilities that include interbasin diversions that move water from one watershed to another. Section 7.18, Recreation, states that changes in reservoir water elevations could affect access to the water from established recreational facilities (e.g., boat ramps, piers) or reduce the reservoir surface area. During the recreation season (May through September), the water elevation could be lower in some reservoirs, which could affect recreational opportunities in some locations. These impacts could be particularly significant during critical and dry water years. Because recreation is considered a beneficial use of water in the Bay-Delta Plan and other basin plans, and is an important public use of these reservoirs, this impact would be potentially significant. 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. Mitigation measures are also identified to reduce or avoid impacts on recreation.
324	19	In 2016, the State Water Board adopted a Human Right to Water Resolution making the Human Right to Water (HR2W), as defined in Assembly Bill 685, a primary consideration and priority across all programs of the State Water Board and the nine Regional Water Quality Control Boards. The DSR does not accurately identify economic impacts associated with UIFs and will result in a higher affordability burden for all water systems and especially NID's. UIF reduces the available water supply which will result in significantly reduced revenue derived from hydropower sales. The loss of hydro revenue is then compounded with a decreased amount of water supply to sell to	Many of NID's comments are based on an analysis by Western Hydrologics that that overstates the effects of the proposed Plan amendments on NID's operations. See Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for discussion on Yuba River model representation and operations and response to NID's comments based on analysis by Western Hydrologics. Section 7.8, Energy, appropriately acknowledges and discloses the potential energy impacts that could occur as a result of the proposed Plan amendments. Section 7.8, Energy, concludes the

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		current NID customers. Together, these compounding factors will result in significant increases in water rates for NID customers. Based on the anticipated reduction in annual hydropower generation identified in Section E due to UIF, NID will annually generate up to 144.2 less GWhs compared to today. This reduction in annual hydropower revenue would result in a reduction of \$8 to \$12 million annually in hydropower revenue that is used to offset water rates, and complete watershed improvement projects. Water rates will be further increased by UIF due to anticipated unmet demands which will result in less water supply available to be sold. The reduction in revenue associated with reduced raw water sales is estimated to generate \$1.5 M less revenue per year during an average year and the reduction in treated water revenue is estimated to be approximately \$4 M per year. The total reduction in revenue that would result from UIF would be estimated to raise NID customer rates between \$520 to \$700 per year. This increase in water rates would be on top of increases associated with other regulatory costs, capital costs and general inflation. Water would no longer be affordable for the communities served by NID.	changes in hydrology would result in a decrease in hydropower generation in the summer which could be significant for an individual project or community. However, the results presented in Figure 7.8-14 in Section 7.8, Energy, show that the estimated average change in hydropower generation for the 55 scenario at individual hydropower facilities would be expected to result in a smaller change in hydropower generation than NID estimates. Please see Common Response 7.8, Energy and Hydropower, for additional information regarding the Staff Report analysis of individual facilities and commenter estimates of local effects as well as response to comment 324-15 regarding NID hydropower effects. Section 8.6.5, Energy, in the 2023 draft Staff Report (Section 8.7.4, Energy, in the final Staff Report) acknowledges that changes in the timing of hydropower generation, including an increase of hydropower generation in the spring and a decrease in summer, could affect hydropower generation revenues. In response to comments received from multiple commenters requesting that these effects be quantified, Common Response 8.1, Economic Analysis and Other Considerations, provides supplemental information on hydropower generation revenues, including estimates of the potential effects of the flow scenarios (35 through 75 scenarios) on hydropower generation revenues. This additional information on changes in hydropower revenues presented in Common Response 8.1 is provided in the interest of transparency and does not alter the conclusions of the Staff Report's economic analysis. Also see Common Response 8.1, Economic Analysis and Other Considerations, for additional information on the economic effects from reduced revenue from hydropower production and water sales on NID, and a discussion on water rates. In addition, the project has been revised. Please see Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for a description of the revised proposed Plan amendments. As discussed in Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, the regulatory pathway under the revised proposed Plan amendments includes new water supply adjustments that reduce water supply impacts

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			and allow more water to be stored in reservoir at the outset of Plan implementation. Overall, changes in hydropower generation and hydropower generation revenues are expected to be less under the starting point for the regulatory pathway compared to the 55 scenario.
324	20	Indirect economic impacts will also occur because of UIF that are not defined in the DSR. In a multi-year drought scenario, it is likely that many of NID's reservoirs will be drawn to deadpool which will cease irrigation water deliveries to many areas within NID, reduce or eliminate recreation opportunity, and cause revenue impacts much greater than those noted above (which were calculated based on average annual increases in unmet demands). These impacts will adversely affect property values, revenue generated from agricultural activities, and the local economies.	Many of NID's comments are based on an analysis by Western Hydrologics that draws conclusions based on modeling and analysis that overstate the effects of the proposed Plan amendments on NID's operations. See Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for discussion on Yuba River model representation and operations and response to NID's comments based on analysis by Western Hydrologics. SacWAM results in the Staff Report are presented as worst case scenarios that do not utilize flexibility in the Plan for adaptive implementation and local cooperative solutions. Water right holders may propose local cooperative solutions for individual tributaries, two or more tributaries, or for regions, including the Delta. If a local cooperative solution is developed for two or more tributaries, the tributaries may work together to meet the combined numeric inflow requirements provided that the narrative inflow and cold water habitat objectives are met on each individual tributary. Please refer to Common Response 8.1, Economic Analysis and Other Considerations, for additional information regarding potential economic effects to NID.
324	21	Enhanced Risk of Wildfire NID's service area is extremely prone to wildfires. Over 75% of NID's service area is in the State's "Very High" fire hazard severity zone, which is the state's highest risk designation. The DSR observes anticipated "primary effects of climate change" including "[i]ncreased frequency and severity of wildfire events." (DSR, p. 7.10-3.) Changes in hydrology may result in changes to reservoir operations such that water levels are lower during the fire season (roughly summer through early fall). However, it is	As noted in the comment, the 2023 draft Staff Report examines the potential for effects on wildfire suppression associated with changes to reservoir operations during the fire season (roughly summer through early fall) in Section 7.11, Hazards and Hazardous Materials. As explained in Section 7.11, fire hazards are considerable in highly vegetated areas containing wildlife habitats and in foothills and mountainous watershed areas in the Sacramento/Delta. The number of homes and overall footprint of the wildland-urban interface, where homes meet or intermingle with undeveloped forests and grasslands, have expanded from 1990 to 2010, which increases the exposure of people or structures to a significant risk of loss, injury, or death from

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		unlikely that lower water levels would prevent access to water for such use, thus impeding fire suppression and exposing people or structures to increased risk of loss, injury, or death from wildland fire. (DSR, p. 7.11-11.) This DSR statement is not accurate in NID's case. As noted above [see Exhibit 5], Scotts Flat Reservoir is at deadpool in numerous single dry year and multiyear drought scenarios with the proposed plan amendments. Those drier year types enhance risk of wildfire due to drier fuel loads and coincide with the same year types where Scotts Flat is at deadpool. Scott's Flat is the main source of water supply for the Nevada County communities within NID's Service area including the Cities of Grass Valley, Nevada City, and Smartsville as well as the large unincorporated areas of development. The reservoir is key to supplying NID's irrigation canals that supply Nevada and Yuba Counties water for fire prevention and suppression. Scotts Flat Reservoir is the primary source of water supplied to the CAL FIRE Air Attack Base at the Nevada County Airport. It is used as a water source to suppress wildfire. Moreover, the community of Cascade Shores is located on the southerly side of Scotts Flat Lake. Scotts Flat would be utilized in fire suppression efforts in the event of a wildfire affecting Cascade Shores. The DSR should analyze the impacts of the lack of such water for future firefighting efforts under an UIF regime.	otherwise natural and sometimes ecologically beneficial fire regimes. Climate change, insect pests, and diseases have contributed to the increases in the number, size, intensity, and duration of wildfires under existing conditions. The hydrologic and water supply modeling presented in the 2023 draft Staff Report was not used to evaluate potential impacts regarding wildland fires. Ultimately, impacts regarding wildland fires were found to be less than significant due to several factors including that (i) most reservoirs have minimum storage volumes well over 1,000 acre-feet; (ii) implementation of the cold water habitat objective requires reservoir operators to develop and implement long-term strategies and annual operations plans to minimize reservoir drawdown; (iii) reservoirs would remain available for fire suppression even at or below the minimum storage level at which water can be released through dam outlet works; and (iv) water is not the only mechanism for combatting wildfires as firefighters use a variety of methods, including flame retardant, firebreaks, backfires, etc. Please refer to Impact HAZ-h in Section 7.11, Hazards and Hazardous Materials, for the full analysis of this impact. The Nevada Irrigation District (NID) may be over constraining operations in its own modeling efforts in a manner that mischaracterizes the actual change in hydrology that would result from Plan implementation. Furthermore, NID appears to not utilize any of the flexibilities provided in the program of implementation, which results in overstating the actual changes in hydrology that would result from Plan implementation. The program of implementation provides an adaptive range between 45 and 65 percent unimpaired flow and allows for two or more tributaries to work together to meet the flow requirements downstream, so long as narrative objectives are met on the upstream reaches. Utilizing these flexibilities can help minimize water supply impacts, as can voluntary water management actions on the part of NID such as reducing water deliveries from storage to conserve water for fire suppression. 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. Further, Plan provisions will

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			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 such as emergency firefighting. Finally, the revised proposed Plan amendments provide for a voluntary agreement pathway for an 8-year term with the possibility of extension that reduces the required flow contributions for NID. For more information, see Common Response 1.3, Revised Proposed Plan Amendments.
324	22	Irrigated pasture and other farmland are important fire avoidance and suppression tools. NID water irrigates over 33,000 acres including pastures, orchards, nurseries, vineyards, gardens, and parks and golf courses. These irrigated areas throughout NID have multiple benefits in terms of diminishing already high wildfire risk. First, irrigated acreages have lesser fuel loads compared to non-irrigated acres. Second, irrigated lands help to prevent the ignition of dangerous wildfires due to the reality that crops are wetter fuel. Third, in the event of wildfire, irrigated lands act as green firebreaks to help contain and assist in fire suppression. The proposed plan amendments, particularly in Nevada County, would result in the conversion of huge swaths of currently irrigated acreage to dry land. This would enhance wildfire risk and the difficulty of suppression. The DSR does not analyze this reality whatsoever.	The analysis in Section 7.4, Agriculture and Forest Resources, of the 2023 draft Staff Report concludes that changes in water supply could lead to removing farmland from irrigation in the Sacramento/Delta; however, the conversion of huge swaths of irrigated acreage to dry land in the Nevada Irrigation District's (NID) service area is unlikely, as would be any associated increases in wildland fire risk and the difficulty of wildland fire suppression. As explained in Section 7.4, the conversion of irrigated crop acreage in the upper watersheds, which encompasses most of the NID's service area, represents a very small (<1 percent) addition to the total reduction in irrigated acreage for the Sacramento/Delta. Impacts related to conversion of farmland in the Sacramento/Delta will be avoided or reduced with implementation of Mitigation Measures MM-AG-a,e: 1 through 6. In addition, it is reasonable to presume that not all farmland receiving reduced water supplies would be converted to non-agricultural uses because growers often adopt measures to keep land in agricultural production. Agricultural irrigators (water suppliers and growers) may take actions such as water use efficiency strategies to respond to water supply shortages. For more information on responses to water supply shortages, please refer to Section 7.4.
324	23	Impacts to Fish & Wildlife The DSR acknowledges, generally, that changes in reservoir water levels can result in a host of terrestrial and aquatic resource impacts. For example, the DSR states that "The largest changes in reservoir water levels are expected in the upper watershed reservoirs that are associated with interbasin diversions . . ." (DSR, p. 7.6.1-59.) The DSR notes impacts to bald eagles, American white pelican, western pond turtle, amphibian species (e.g., foothill yellowlegged frog). (Id., pp. 7.6.1-59 to	The modeling performed by the Nevada Irrigation District is inadequate in part because the effects of climate change and changing demand are not distinguished from the effects of complying with a 55% of unimpaired flow requirement. Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding SacWAM flow scenario assumptions. Also see Common Response 7.1, General CEQA and Approach to the Analysis, for a discussion about the level and scope of the analysis presented in the 2023 draft Staff Report.

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		7.6.1-61.) Impacts to bald eagle and pelican are considered less than significant, however, because "water elevations generally would be expected to be similar to baseline conditions during fall and winter." (Id., p. 7.6-1-60.) However, in NID's case, as demonstrated in the Technical Memorandum [Attachment 2], NID's reservoir levels in the fall and winter, particularly in drought sequences, do not recover to baseline conditions. Moreover, impacts to amphibians like foothill yellow-legged frog (FYLF) are supposedly mitigated to less than significant levels by implementation of mitigation measure Impact TER-b, c, which relies on water portfolio "diversification" that is infeasible in NID's case given NID cannot implement groundwater storage and recovery, undertake water transfers, or engage in further water recycling. (DSR, pp. 7.6.1-81 to 7.6.1-83.) Consequently, significant adverse impacts to FYLF would occur in the Middle Yuba River, primarily due to colder and spikey flows in spring and warmer water temperatures in the summer and fall. The DSR does not correctly capture this impact, or properly mitigate its significance.	The 2023 draft Staff Report acknowledges in Section 7.6.1.4, Impact Analysis (TER-a), that changes in reservoir levels may occur in reservoirs that contain shallow shorelines with riparian habitat and wetlands that provide habitat for sensitive amphibians. In addition, effects of changes in reservoir levels on riparian and wetland habitats are evaluated under Impact TER-b and Impact TER-c. Diversifying water portfolios is not part of TER-b,c, but is identified and included (MM-TER-a) as a mitigation measure to mitigate potential impacts on terrestrial resources from reduced water supplies for agricultural uses. Mitigation Measure MM-TER-b,c: 1 is identified and included to reduce potential impacts on riparian and wetland habitat by incorporating Mitigation Measure MM-AQUA-a,d: 1 for reservoir management to reduce impacts of changes in reservoir levels and related impacts on terrestrial biological resources. (See Sections 7.6.1.5, Mitigation Measures, and 7.6.2.5, Mitigation Measures, for more information). Reservoir operations in the plan area would be addressed through implementation of the cold water habitat objective and other provisions in the program of implementation, such as the ability for several tributaries to work together to meet flow objectives and cold water habitat; however, the environmental analysis acknowledges that it is not certain what specific actions reservoir operators and other parties would take to implement the objectives and whether it will be possible to fully mitigate potential impacts on associated riparian habitat and wetlands in all affected areas.
324	24	Regarding impacts to aquatic species, the DSR acknowledges that "some upper watershed reservoirs might experience substantial effects, especially those involved with interbasin diversions and those that need to release additional water to meet inflow requirements for the rim reservoirs downstream . . ." (DSR, p. 7.6.2-55.) Moreover, the DSR acknowledges "Changes in flow and reservoir storage under the proposed Plan amendments could affect temperatures and the availability of cold water." (Id., p. 7.6.2-56.) However, the DSR does not properly analyze these	SacWAM modeling for the 2023 draft Staff Report includes 43 upper watershed reservoirs. Although most show no significant change in storage in any of the flow scenarios, the 2023 draft Staff Report acknowledges that 12 have the potential of large changes in operation under each of the modeling scenarios, particularly facilities that include interbasin diversions. Please see Section 6.3.2.2, Upper Watershed Reservoirs, and Appendix A1, Sacramento Water Allocation Model Methods and Results, for more information. The 2023 draft Staff Report Section 7.6.2,

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		impacts. Rather, it states the following: For upper watershed reservoirs, specific cold water storage assumptions were not included in the modeling because there is not enough available information, and the focus of the analysis is on the anadromous reaches of the tributaries with the cold water habitat. As described in Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, cold water habitat measures could be required for these upper watershed reaches if water temperature concerns exist or become problematic as a result of implementation of the proposed Plan amendments. (Id., p. 7.6.2-57.) This is improper under CEQA. The State Water Board is obligated to assess the whole of the action and the likely environmental effects of the proposed plan amendments. On one hand, the DSR acknowledges temperature impacts associated with both lower reservoir storage and future effects of climate change. Yet, on the other hand, the DSR defers describing and assessing that impact to a future date. CEQA requires that such impacts be assessed now, at time of circulation of the DSR, which is the functional equivalent to a draft environmental impact report under CEQA. The proposed UIF standard would result in significant adverse impacts on rainbow trout in the Middle Yuba River and South Yuba River primarily due to higher than optimum and very spikey flows in spring and warmer water temperatures in the summer and fall. Moreover, NID notes that if the State Water Board attempted to address temperature impacts in the same manner as done with other facilities (imposition of a carryover storage/buffer storage requirement) that such action would exacerbate already critical water supply impacts at NID. The whole of the action, including this possibility, must be analyzed to inform both the State Water Board and the interested public. (See, e.g., Pub. Res. Code § 21005.).	Aquatic Biological Resources, evaluates changes in streamflows in upper water watersheds and effects on cold water pool volume, water temperatures, fish species, and interbasin transfers (see pp. 7.6.2-88 through 7.6.2-90) The 2023 draft Staff Report acknowledges that higher spring flows could result in a reduction in reservoir storage at the end of spring and a smaller cold water pool volume in summer and fall months in some upper watershed reservoirs and that fish species such as rainbow trout could be affected by such changes in reservoir levels and downstream temperatures. See the pages referenced above for more information. See also Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, regarding implementation of the cold water habitat objective.
324	25	Impacts to Agriculture in NID's Service Area The DSR correctly observes that changes in supply because of UIF will result in reduced crop acreages and fallowing:	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. The impact conclusions made in the 2023 draft Staff Report do not rely on other water management actions to reduce water supply impacts from

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		Reduced flows in some streams in the upper watersheds that are interconnected by interbasin diversions could occur in the Upper Yuba and Bear Rivers. Crops grown in these areas include alfalfa and pasture, vine crops, rice, and deciduous orchards (NID 2016). Groundwater is not extensively utilized in these areas because of the presence of a fractured rock aquifer system. Changes in supply could result in reductions in crop acreage and increased fallowing. (DSR, p. 7.4-52, emphasis added.) However, the DSR claims that "Implementation of Mitigation Measures MM-AG-a,e: 1 through 6 will avoid or reduce the amount of agricultural conversion as a result of the proposed Plan amendments." (Id., p. 7.4-54.) Mitigation Measure MM-AG-a,e is not feasible in NID's case. As noted, NID cannot simply "diversify" its water portfolio given its unique circumstances (discussed supra). The other aspects of Mitigation Measure MM-AG-a,e are either not applicable to NID, infeasible, or deferred to a yet-to-be released program of implementation. CEQA requires a specific analysis of the impacts to NID's agriculture and feasibility (or not) of mitigation measures.	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 extent possible, in an environmentally responsible manner and in accordance with the law. Please note that as discussed in Common Response 7.1, the quoted language is followed by a discussion of the scope and limits of the State Water Board's authority to mandate the mitigation measures, and by the conclusion that "[w]hile 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. Accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied to fully mitigate potential agricultural impacts. Therefore, unless and until the mitigation is fully implemented, the impacts remain potentially significant."
324	26	The Proposed Plan Amendments Are Not Implemented in Order of Water Right Priority, as Claimed in the DSR and As Required by Law Concerning implementation of the proposed plan amendments (55% UIF), the DSR states: 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. In some year types when water may not be available for all users, shortages would be borne in order of priority, starting with the most junior water rights. (DSR, p. 5-17.) However, SacWAM does not model implementation of the proposed plan amendments consistent with the priority system. This conclusion is reached based on the	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 inflow objective applies throughout the Sacramento/Delta watershed to protect water quality in upstream reaches and contribute to Delta outflow. Compliance points in upper watershed reaches are important to protect water quality in those reaches and ensure comprehensive watershed contribution to Delta outflows. The State Water Board will develop an implementation methodology to determine when water is not available at water right holders' priorities of right. In implementing curtailments, the Board will consider and accommodate as appropriate relevant court decrees, settlement agreements, and other arrangements that affect water diversion and use to the extent consistent with the water right priority system. Note that the Board is not a party and is not bound by private agreements and stipulations. The 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

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		model output and the SacWAM Documentation that fails to account for implementation by water right priority. (See, e.g., SacWAM Documentation, Table 7-62, pp. 7-74 to 7-75.) Moreover, the law requires that "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 the priority system is the "first concern" of the State Water Board in the exercise of its power. (Id. at p. 961, quoting Meridian Ltd v. San Francisco (1939) 13 Cal.2d 424, 450.) The DSR fails as an informative document under CEQA by failing to model and disclose the impacts of the proposed plan amendments consistent with the priority system. Moreover, the same deficiency violates the law because the State Water Board must make "every effort" to exercise its powers consistent with the priority system. These omissions are particularly significant to NID given, generally, its senior water right status vis-à-vis downstream parties. For example, NID and Yuba County Water Agency entered into a November 13, 1961 stipulation that allowed for the eventual construction of Yuba's water storage and related facilities and issuance of associated water rights. A copy of the stipulation is attached as Exhibit C [see Attachment 3]. Generally, it acknowledges NID's water rights "shall be considered prior in time and right to the rights" sought and thereafter acquired by Yuba and that NID's diversions from the Middle Fork, South Fork, and tributaries would continue in operation and priority compared to Yuba's rights. The DSR should be recirculated with the proposed plan amendments implemented in reverse order of water right priority where junior water right holders, including Yuba Water Agency, are curtailed prior to NID.	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. Please see Common Response 1.2, Water Quality Control Planning Process, and Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for discussion of the planning-level analysis in the draft Staff Report and the use of modeling to evaluate potential effects of the proposed Plan amendments.
324	27	Modular Alternative 6a is Infeasible and Inconsistent with NID's Pending Application for Assignment of State Filed Application 5634 As noted above, an essential component of NID's comprehensive efforts to address climate change is its pending application for	The CEQA and economic analysis of Alternative 6a can be found in Section 9.9, Modular Alternatives for Proposed VAs, of the 2023 draft Staff Report. As explained in that section, the environmental and economic impacts and effects are not evaluated further because there would not be a change from baseline, but it could constrain future surface water

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		assignment of state-filed application 5634 and the accompanying water-right application 5634X01 [Attachment 1 not attached]. The DSR correctly observes that these statefiled water rights are "To provide for growth and development in the areas that were not yet built out in the Bay-Delta watershed . . ." (DSR, p. 2-122.) In NID's case, assignment of this water right was incorporated into its Plan For Water process, including addressing impacts of climate change, and the development of alternatives for review under CEQA. Modular Alternative 6a would "protect the base upon which the VA flows are intended to be added from new or expanded water diversions. Specifically, 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 time 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." (DSR, p. 7.2-16.) As an initial note, a detailed description of this alternative and an analysis of its impacts, including modeling the alternative under SacWAM, is not included in the DSR or supporting documentation. This alone violates CEQA. In addition, Modular Alternative 6a is not feasible because it does not conform to Water Code section 10500 et seq. "Feasible" under CEQA means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." (CEQA Guidelines § 15364.) The State Water Board with Modular Alternative 6a is attempting to effectively supersede and revoke the Legislature's enactment of Water Code section 10500 et seq., and more specifically terminate NID's pending application sua sponte. This exceeds the State Water Board's legal authority and, consequently, Modular Alternative 6a is not feasible.	development and limit future economic growth to some extent. The VA flow commitments are intended to be additive to baseflow. The VA MOU requests 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 term of the VA MOU is the purpose of Alternative 6a. A state-filed application is an application filed by a state agency for the appropriation of water that may be required as part of implementation of a general or coordinated plan for the development of water resources of the state, as stipulated by Water Code section 10500 et seq. The Water Code provides that state-filed applications are to be held in trust by the State Water Board until they are assigned. (Wat. Code, § 10504.) Parties with projects that do not conflict with the general or coordinated plan described in a state filed application or with water quality objectives established pursuant to law may petition the State Water Board for assignment of all or part of that application. If the petition for assignment is granted, ownership of all or part of the state filing is transferred to that party. State-filed applications have priority over all subsequent applications, except as to applications for which a release from priority has been granted. Since the Bay-Delta Water Quality Control Plan establishes water quality objectives and a program of implementation to achieve them, it is the appropriate location for a provision such as Alternative 6a and an adoption of Alternative 6a would thus not supersede or revoke Water Code section 10500 et seq. The decision to assign any portion of any state-filed application is subject to a public hearing and the State Water Board has discretion based on the evidence in any hearing to deny an application, alter the priority date of the application on file, or join other parties to ensure consistency with the water right priorities and the Water Code.
324	28	The DSR is Uncertain and Lacks a Stable Project Description Concerning Whether the Cold Water Habitat Objective is Proposed to be Implemented at NID	Please see Common Response 7.1, General CEQA and Approach to the Analysis regarding the adequacy of the project description and the level and scope of the analysis. Contributing to the cold water habitat objective in upper watershed reservoirs may look

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		The cumulative impact of the UIF requirement and the potential for a cold water habitat objective (effectively a carryover storage obligation) should be analyzed specific to NID. The DSR implies that NID, as a reservoir operator in upstream tributaries, would be subject to the objective: The narrative cold water habitat objective is proposed to apply throughout the watershed, including upstream tributaries and distributaries, on all the Sacramento/Delta tributaries that support or contribute to the protection of native cold water fish species. Under the proposed program of implementation, all water users on these tributaries, except those with di minimis effect on temperature management, would bear responsibility for contributing to the achievement of the objective. (DSR, p. 5-23.) However, neither the DSR nor the SacWAM modeling analyzes the effects of this requirement on NID. This is significant because the cold water narrative can exacerbate water supply impacts, which in NID's case are already catastrophic without a cold water narrative obligation expressly required or analyzed. The SacWAM documentation includes a "buffer pool" requirement for Bowman, Jackson, and Rollins Reservoirs, but the buffer pool is set to the average monthly historical storage for those facilities, meaning that the SacWAM model operates between the monthly storage and full pool and will only draw down below average monthly storage to meet 55% UIF. (SacWAM Documentation, Table 6-5.) This is not consistent with how buffer pools or the cold water objective is implemented on other tributaries. (See, e.g., DSR, pp. A1-14 [Table A1-5. Shasta Buffer Pool for Each Scenario (TAF)]; A1-15 [Table A1-8. Oroville Reservoir Buffer Pool for Each Scenario (TAF)].) This lack of analysis and uncertainty violates CEQA. The DSR observes that UIF impacts reservoir storage and the "balance between meeting current and future demands for water supply and retaining cold water pool in the reservoir." (DSR, p. 6-48.) However, the DSR defers analysis of this balance entirely for NID facilities, instead suggesting that the "balance" will be analyzed in the future: "This balance could be further refined in	like bypassing more inflow than just unimpaired inflow. Buffer pools in upper watershed reservoirs work as rule curves and follow the rule curve if they have supply available. Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply regarding carryover storage targets and SacWAM buffer pools and for response to comments related to the Yuba River and operations. Further, in addition to the proposed Plan amendments, which remain part of the project, the project has also been revised in response to comments received expressing concerns over potential carryover storage impacts, and now provides for a VA pathway for various parties including Nevada Irrigation District (NID). Under the VA pathway, NID's responsibility for meeting the cold water habitat objective would be satisfied by NID providing flow, habitat, and related HRL commitments, subject to continuation, modification, or termination of the VA pathway as described in Section 13.3.4.10, Continuation, Modification, or Termination of the VA Pathway, of the 2025 partially recirculated Staff Report.

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		the future as a result of further analysis." (Ibid.) Deferring analysis of such an important subject, particularly given NID's reservoirs are already significantly impacted by the imposition of the UIF standard, is improper and violates CEQA.	
324	29	The DSR Contains No Analysis of the Facility Upgrades Necessary to Implement a UIF Standard To meet an increased percent of UIF requirement, it would be necessary for NID to increase the low-level outlet release capacities at Jackson Meadows Dam and Rollins Dam. It is estimated that Jackson Meadow's low-level outlet would need to be increased from its current 760 cfs capacity to approximately 1,125 cfs. Rollins Dam would need to be increased from its current 2,850 cfs to approximately 4,860 cfs. At Jackson Meadows Dam, the existing low-level outlet would need to have at minimum two 42-inch pipes; achieved by replacing the existing second smaller 24-inch pipe with a new 42-inch-diameter pipe and operating both combined to release a flow of 1,125 cfs at full pool. At Rollins Dam, the existing low-level outlet would need to be increased in size from 72 inches in diameter to at least 84 inches in diameter to release a flow of 4,860 cfs at full pool. Additionally, tunnel concrete work, a steel liner and other upgrades would be required at the downstream portion of the Rollins Dam tunnel to protect the concrete surfaces from scour potential resulting from the higher velocity releases. In addition, all new automated valves would be required at both sites. NID has grave concerns that these increases might compromise dam safety and is unsure whether FERC and the California Division of Dam Safety would allow this work. However, assuming they would, NID estimates the cost (in 2021 dollars) to enlarge the existing low-level outlets and replace the existing valves at Jackson Meadows Dam and Rollins Dam is \$20,000,000. The DSR observes that "The State Water Board would need to develop provisions for ensuring that water right holders are bypassing water and other actions to meet the proposed plan amendments, including monitoring, reporting, accounting, and other provisions." (DSR, p. 5-57.) The DSR, however, does not	These comments request detailed economic analysis of a highly speculative contingency based on a worst-case scenario that greatly exaggerates supply impacts to NID under the Plan amendments. That said, Section 7.22, New or Modified Facilities, addresses actions that entities may take that would involve construction to modify or build new facilities and infrastructure to supplement or conserve surface water supplies and other construction projects that may result from implementation of the Sacramento/Delta updates to the Bay-Delta Plan. Table 7.22-1 details potentially significant impacts and less-than-significant impacts from construction of new or modified facilities. Section 8.8, Costs Associated with New or Modified Facilities, in the 2023 draft Staff Report addresses potential economic effects of these actions. Please see final Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for information on the implementation methodology. There will be additional opportunities to consider comments related to implementation in subsequent processes. See Common Response 1.2, Water Quality Control Planning Process, for Board consideration of factors under Water Code section 13241. Also see Common Response 7.1, General CEQA and Approach to the Analysis, for discussion on the approach to the analysis, including level and scope of the analysis. Also see Common Response 8.1, Economic Analysis and Other Considerations, for information on water replacement costs, supplies, and feasibility of implementation.

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		specifically identify how this would be accomplished, or the environmental effects and economic cost of such measures. NID believes that to operate and demonstrate compliance with a UIF objective, nine new or modified gages would be required at the following locations: (i) Middle Yuba River upstream of Jackson Meadows Reservoir; (ii) Canyon Creek upstream of French Lake Dam; (iii) Canyon Creek upstream of Faucherie Lake Dam; (iv) Canyon Creek upstream of Sawmill Lake Dam; (v) Canyon Creek upstream of Bowman Lake; (vi) Jackson Creek upstream of Jackson Lake; (vii) Jackson Creek upstream of Bowman Lake; (viii) Bear River upstream of Rollins Reservoir; and (ix) Greenhorn Creek upstream of Rollins Reservoir. Each gage would be telemetered and connected in real-time to NID's SCADA system so that NID could back-calculate UIF each day, and subsequently calculate the previous seven-day average. Given the magnitude of inflows (e.g., some would range from a low of tens of cfs to over 6,000 cfs), the gages would need to be very substantial. Each would require power to measure inflow reliably and accurately. Given their likely size, permits would be needed. Taken together, NID estimates (in 2021 dollars) the cost for gaging alone is roughly \$12,000,000. Under a UIF regime, NID literally will not know what the flow requirement is for the day until midnight of the previous day when it calculates the average flows for the previous seven days. Therefore, valves will need to be adjusted as soon as that calculation is completed. This will require automating all release valves. As part of the overall low-level outlet increased flow capacity project, all new valves are required and power would be required at each valve. NID estimates the added cost (in 2021 dollars) to automate all new release valves is \$7,000,000. Modifications are required to pass stream diversions along NID's Bowman-Spaulding Canal, along with gaging of these locations with power, telemetry, and connection real-time to NID's SCADA system so NID can back-calculate its UIF obligation. The best estimate of this cost (again in 2021 dollars) is \$2,000,000. Finally, NID would incur additional periodic costs, including enhanced maintenance and repair of all this new infrastructure. NID's best estimate (in 2021 dollars) is \$400,000 annually, or \$12,000,000 over the 30-year estimated lifespan of these	

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		facilities. Taken together, NID estimates in 2021 dollars that the capital cost of UIF is \$41,000,000 and the incremental annual/periodic cost over a 30-year period is \$12,000,000, for a total cost over 30 years of \$53,000,000. NID emphasizes that these are rough costs at this time and could be considerably higher. The DSR does not describe the CEQA impacts associated with these facility modifications, nor does the DSR economic analysis consider this added cost.	
324	30	Conclusion The State Water Board's proposed plan amendments involving UIF are simply unworkable at NID. To the extent the State Water Board wishes to continue its consideration of UIF alternatives (as opposed to the VA alternative), the DSR must be modified to address the issues raised in this comment letter and the DSR must be recirculated.	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.
324	31	[Att. 1. NID Sphere of Influence]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to comments; therefore, no additional response is required.
324	32	[Att. 2:] As requested, Western Hydrologics has completed a series of studies simulating the proposed Sacramento / Delta Update to the Bay-Delta Plan (proposed plan). The purpose of this effort is to evaluate NID water supply impacts from the proposed plan. The proposed plan amendments include year-round flows of 55% of unimpaired inflows with an adaptive range from 45% – 65% that would apply to salmon bearing tributaries of the Sacramento River and Delta. The plan also includes a cold-water habitat objective and implementation measures. The State Water Resources Control Board modeled the proposed plan amendments with the Sacramento Water Allocation Model (SacWAM). The assumptions used in SacWAM include year-round bypass flows of 55% of the unimpaired flows for the salmon bearing tributaries. The compliance points for these instream flow requirements are at the mouths of each major tributary to the Sacramento River and the Delta. The	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River model representation and operations. 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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		assumptions also include all baseline scenario assumptions. Baseline scenario assumptions include existing reservoir operations and stream flow requirements, including current regulatory requirements and historic hydrology. The Staff Report lists all the locations of the proposed SWRCB Instream Flow Requirements in SacWAM. For NID, locations of interest are: Bear River above confluence with Feather River Middle Yuba River above confluence with North Yuba River South Yuba River above Englebright Reservoir Yuba River above confluence with Feather River Feather River above confluence with Sacramento River In addition to the Instream Flow Requirements, the proposed changes to the Bay-Delta Plan include end of September carryover storage targets at rim reservoirs to maintain cold water pool targets. These storage targets do not include any NID Reservoirs but do include Camp Far West and New Bullards Bar. Key ResSim Modeling Assumptions Key modeling assumptions focused almost entirely on setting the instream flow requirements. Minimum flow requirements in the modeling studies are the greater of 55% of unimpaired flow or the existing FERC license requirements. A model rule was placed at each reservoir in the model, setting a minimum release to the river of the maximum of the current FERC License requirement or 55% of the unimpaired flow at that location. Low level outlet capacities were increased as needed to allow the reservoirs to be able to pass 55% of unimpaired flow. At Drum Afterbay and Dutch Flat Afterbay, rules were not added to keep 55% of unimpaired flow in the river, and the unimpaired flow was permitted to flow through the powerhouse penstocks and return to the rivers to preserve generation while still moving the water downstream. Below each point of diversion the existing FERC License requirements were used so that flows	

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		were maintained in the bypass reaches. Flows in excess of the powerhouse capacities remained in the river channels. The drought contingency plan was also removed allowing the model to use all available storage to meet demands as much as feasible. Studies Performed The following studies were performed and analyzed:	
324	33	[Exhibit 1 of Att. 2: Table titled Table 1 - Scenarios Modeled]	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.
324	34	[Att. 2:] Diversions Annual Average Diversions at several NID facilities are shown in Tables 2 through 6 [Exhibits 2, 4, 6, 8, and 10 of Att. 2] and shown graphically in Figures 1 through 5 [Exhibits 3, 5, 7, 9, 11 of Att. 2].	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.
324	35	[Exhibit 2 of Att. 2: Table titled Table 2 - NID Diversions into Milton-Bowman Conduit]	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.
324	36	[Exhibit 3 of Att. 2: Graph titled Figure 1 - NID Diversions into Milton-Bowman Conduit]	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.
324	37	[Exhibit 4 of Att. 2: Table titled Table 3 - NID Diversions into Bowman-Spaulding Conduit]	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.
324	38	[Exhibit 5 of Att. 2: Graph titled Figure 2 - NID Diversions into Bowman-Spaulding Conduit]	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.
324	39	[Exhibit 6 of Att. 2: Table titled Table 4 - NID Diversions into Bear River Canal]	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.
324	40	[Exhibit 7 of Att. 2: Graph titled Figure 3 - NID Diversions into Bear River Canal]	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.
324	41	[Exhibit 8 of Att. 2: Table titled Table 5 - NID Diversions into Chalk Bluff Canal]	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.
324	42	[Exhibit 9 of Att. 2: Graph titled Figure 4 - NID Diversions into Chalk Bluff Canal]	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.
324	43	[Exhibit 10 of Att. 2: Table titled Table 6 - NID Diversions out of Lake Combie]	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.
324	44	[Exhibit 11 of Att. 2: Graph titled Figure 5 - NID Diversions out of Lake Combie]	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.
324	45	[Att. 2:] River Flows Annual average flow in the River below NID Facilities are shown in Table 7 [Exhibit 12 of Att. 2]. Average daily flow in a few selected reaches for the Median Climate Change Hydrology scenarios are shown in Figures 6 through 9 [Exhibits 13, 14, 15, and 16 of Att. 2].	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.
324	46	[Exhibit 12 of Att. 2: Table titled Table 7 - Average Annual Flows, AF]	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.
324	47	[Exhibit 13 of Att. 2: Graph titled Figure 6 - Daily Average Flow in Middle Yuba below Milton]	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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324	48	[Exhibit 14 of Att. 2: Graph titled Figure 7 - Daily Average Flow in Canyon Creek below Bowman]	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.
324	49	[Exhibit 15 of Att. 2: Graph titled Figure 8 - Daily Average Flow in Bear River below Rollins]	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.
324	50	[Exhibit 16 of Att. 2: Graph titled Figure 9 - Daily Average Flow in Bear River below Lake Combie]	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.
324	51	[Att. 2:] Figures 6 and 7 [Exhibits 13 and 14 of Att. 2] show that the resulting flows below Milton and Bowman of the proposed plan with median hydrology are generally higher than the existing scenario flows in the January through April period until the historical spill season causes existing scenario flows to be higher on average in May through June. Summer flows are equal in both scenarios when 55% of unimpaired flow falls below the existing FERC flow requirements in July through September. Figures 8 and 9 [Exhibits 15 and 16 of Att.] show that the resulting flows below Rollins and Combie are almost always lower than the existing scenario, with the general exception of November through December. This is due to a reduction in Middle and South Yuba exports to the Bear River. Under the proposed flow regime, more of the unimpaired flow stays in the native rivers. This results in significantly less generation in the Bear River watershed and less water available for delivery.	Changes in streamflows and interbasin diversions such as those from the Yuba River to the Bear River are described in Section 6.3, Changes in Hydrology, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	52	[Att. 2:] Deliveries An exceedance of unmet consumptive demands is shown in Figure 10 [Exhibit 17 of Att. 2]. Unmet consumptive demands are defined here as a reduction in diversions into NID canals below what would be needed to make full deliveries to customers.	Changes in surface water supply for each of the alternatives is presented in Section 6.4, Changes in Surface Water Supply, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	53	[Exhibit 17 of Att. 2: Graph titled Figure 10 - Annual Unmet Consumptive Demands Exceedance]	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.
324	54	[Att. 2:] Storage Figures 11 through 20 [Exhibits 18 through 27 of Att. 2] illustrate storage differences by year type between the historic operations and the climate change projected hydrology coupled with the 55% flow bypass requirements. Figure 11 [Exhibit 18 of Att. 2] shows the average April 30th storage at Jackson Meadows Reservoir by year type for each scenario. The existing storage levels illustrate a slightly lower storage level than the climate change scenarios in wet years and higher storage level in non-wet years. For wet years this is due to the runoff patterns within the hydrology datasets. The climate change hydrology provides a greater percentage of the annual volume before April 30th than the historic hydrology used in the existing condition scenario. The result is that the climate change scenarios tend to have more storage on April 30th. However, in drier years the previous year's lower carryover level results in lower April 30th storage level.	Changes in reservoir storage for each alternative is presented in Chapter 6.3.2, Reservoir Storage and Elevation, of the draft Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River and operations.
324	55	[Exhibit 18 of Att. 2: Graph titled Figure 11 - Jackson Meadows Reservoir April 30 Storage, Averaged 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.
324	56	[Att. 2:] Figure 12 [Exhibit 19 of Att. 2] shows the Jackson Meadows November 1 storage. Because the runoff pattern in the historic hydrology dataset provides water supply later into the water year, the reliance of storage into the late spring and early summer is less in the existing study than in the climate change scenarios. This generally results in a higher November 1 storage in the existing scenario. Additionally, the scenarios with a 55% unimpaired flow requirement draw Jackson Meadows Reservoir down to minimum pool more often to maintain water supply.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River and operations.
324	57	[Exhibit 19 of Att. 2: Graph titled Figure 12 - Jackson Meadows Reservoir November 1 Storage, Averaged 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.

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324	58	[Att. 2:] Figure 13 [Exhibit 20 of Att. 2] illustrates the Bowman Lake April 30th storage. As with Jackson Meadows, the largest factors in the storage shifts are the lower carryover levels in the previous year.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for response to comments related to the Yuba River and operations.
324	59	[Exhibit 20 of Att. 2: Graph titled Figure 13 - Bowman Lake April 30 Storage, Averaged 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.
324	60	[Att. 2:] Figure 14 [Exhibit 21 of Att. 2] shows the Bowman Lake November 1 storage. Like Jackson Meadows, the runoff pattern in the historic hydrology dataset provides water supply later into the water year. There is less reliance on storage into the late spring and early summer in the existing study than in the climate change scenarios. This generally results in a higher November 1 storage in the existing scenario.	Changes in reservoir storage for each alternative are presented in Section 6.3.2, Reservoir Storage and Elevation, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	61	[Exhibit 21 of Att. 2: Graph titled Figure 14 - Bowman Lake November 1 Storage, Averaged 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.
324	62	[Att. 2:] Figure 15 [Exhibit 22 of Att. 2] illustrates the Upper Mountain Division storage as a total. The April 30th storage levels are lower with the 55% unimpaired scenarios due to lower carryover storage levels in previous years. Figure 16 [Exhibit 23 of Att. 2] illustrates the November 1 Upper Mountain Division storage.	Changes in reservoir storage for each alternative is presented in Section 6.3.2, Reservoir Storage and Elevation, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	63	[Exhibit 22. of Att. 2: Graph titled Figure 15 - Upper Mountain Division Storage (French, Faucherie, Sawmill, and Jackson Lakes) April 30 Storage, Averaged 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.
324	64	[Exhibit 23. of Att. 2: Graph titled Figure 16 - Upper Mountain Division (French, Faucherie, Sawmill, and Jackson Lakes) November 1 Storage, Averaged 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.

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324	65	[Att. 2:] Figure 17 [Exhibit 24 of Att. 2] illustrates Scott's Flat April 30th storage. The proposed plan impacts Scott's Flat operations more than any other reservoir. The impacts are due to a large reduction in imports from the Yuba River. The proposed plan results in 55% of the unimpaired inflow staying in the native streams rather than being imported through the Bowman Spaulding Conduit and delivered to Scott's Flat. This results in a significant decrease in storage and consumptive deliveries along Deer Creek.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	66	[Exhibit 24 of Att. 2: Graph of Scotts Flat Reservoir April 30 Storage, Averaged 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.
324	67	[Att. 2:] Figure 18 [Exhibit 25 of Att. 2] illustrates the same decrease in storage on November 1.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	68	[Exhibit 25 of Att. 2: Graph titled Figure 18 - Scotts Flat Reservoir November 1 Storage, Averaged 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.
324	69	[Att. 2:] Figure 19 [Exhibit 26 of Att. 2] illustrates the NID portion of Rollins Reservoir Storage. Rollins April 30th storage is impacted by runoff patterns, and in the case of the proposed plan scenarios, the reduction in imports to the Bear River and 55% of unimpaired bypass flows on the Bear River. In addition, Rollins reservoir operations are primarily for meeting consumptive deliveries and the model is attempting full deliveries in each year. The deliveries, bypass requirements, and the Mountain Division releases influence Rollins Reservoir storage.	Changes in reservoir storage for each alternative are presented in Section 6.3.2, Reservoir Storage and Elevation, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	70	[Exhibit 26 of Att. 2: Graph of Rollins Reservoir April 30 Nevada Irrigation District Only Storage.]	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.
324	71	[Att. 2] Figure 20 [Exhibit 27 of Att. 2] illustrates the November 1 NID storage at Rollins Reservoir. The model is making full deliveries each year with less imported water than in the existing condition, resulting in less storage on November 1 in the 55% unimpaired flow condition.	Changes in reservoir storage for each alternative are presented in Section 6.3.2, Reservoir Storage and Elevation, of the Staff Report. Additionally, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water

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			Supply, for a response to comments related to the Yuba River and operations.
324	72	[Exhibit 27 of Att. 2: Graph titled Figure 20 - Rollins Reservoir November 1 NID Only Storage, Averaged 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.
324	73	[Att. 2:] Generation Table 8 [Exhibit 28 of Att. 2] and Figure 21 [Exhibit 29 of Att. 2] illustrate the impacts to generation. Most of the impacts are due to a significant reduction in imports to the Bear River from the Bowman-Spaulding Conduit. If the compliance point for the proposed plan is at the mouth of each river (Middle Yuba, Canyon Creek, South Yuba & Bear River), there will be a significant impact to both water supply and generation.	Please see Common Response 7.8, Energy and Hydropower, regarding compliance points and commenter simulations of local effects. Please also see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding Yuba River model representation and operations for a discussion regarding Western Hydrologics modeling for NID.
324	74	[Exhibit 29 of Att. 2: Table titled Table 8 - Monthly Average Generation]	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.
324	75	[Exhibit 29 of Att. 2: Graph titled Figure 21 - NID Monthly Average Generation]	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.
324	76	[Att. 2:] Operations Examples -- Three-Year Drought Sequence -- Dry Climate Change Scenario Below is a series of plots showing the modeled project operations during a three-year drought sequence with the dry climate change scenario, both with and without the unimpaired flow requirements. Figure 22 [Exhibit 30 of Att. 2] shows operations at Jackson Meadows Reservoir. Compared to the existing condition, the 55% unimpaired flow requirement causes more releases earlier in the season, resulting in lower storage levels at the end of the fill season and less releases for diversion into the system in the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	77	[Exhibit 30 of Att. 2: Two graphs titled Figure 22 - Jackson Meadows Reservoir Operations, Dry Climate 2028-2030]	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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324	78	[Att. 2:] Figure 23 [Exhibit 31 of Att. 2] shows operations at French Lake. The releases in the winter and spring cause lower fill levels and reduced ability to release water for downstream diversion during the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	79	[Exhibit 31 of Att. 2: Two graphs titled Figure 23 - French Lake Operations, Dry Climate 2028-2030]	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.
324	80	[Att. 2:] Figure 24 [Exhibit 32 of Att. 2] shows operations at Bowman Lake. Bowman Lake storage is highly affected by the combination of increased releases in the winter and spring due to the 55% unimpaired flow requirements and less imports from the Middle Yuba from Jackson Meadows Reservoir. This lower fill level results in less water available for diversions into the NID system.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	81	[Exhibit 32 of Att. 2: Three graphs titled Figure 24 - Bowman Lake Operations, Dry Climate 2028-2030]	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.
324	82	[Att. 2:] Figure 25 [Exhibit 33 of Att. 2] shows operations at Rollins Reservoir. With 55% unimpaired flow requirements and reduced imports from the Yuba River, Rollins does not necessarily fill in Dry Years. This results in less ability to make diversions into the Bear River Canal and less ability to move water down to Lake Combie to maintain Lake Combie reservoir elevations.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	83	[Exhibit 33 of Att. 2: Three graphs titled Figure 25 - Rollins Reservoir Operations, Dry Climate 2028-2030]	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.
324	84	[Att. 2] Figure 26 [Exhibit 34 of Att. 2] shows operations at Lake Combie. With reduced imports into the Bear River and 55% unimpaired flow requirements while attempting to make full deliveries, Lake Combie cannot maintain a full pool and may not fill in dry years. Here Combie is prioritizing deliveries over maintaining a full storage pool.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	85	[Exhibit 34 of Att. 2: Three graphs titled Figure 26 - Lake Combie Operations, Dry Climate 2028-2030]	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.
324	86	[Att. 2:] Figure 27 [Exhibit 35 of Att. 2] shows operations at Scotts Flat Reservoir. Scotts Flat Reservoir is highly dependent on imports from the Yuba River. The reduction of these imports resulting from loss of supply at upstream reservoirs results in the Reservoir going empty in most dry years which then reduced the ability for the reservoir to make deliveries downstream.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	87	[Exhibit 35 of Att. 2: Three graphs titled Figure 27 - Scotts Flat Reservoir Operations, Dry Climate 2028-2030]	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.
324	88	[Att. 2:] Operations Examples -- Three-Year Drought Sequence -- Median Climate Change Scenario Below is a series of plots showing the modeled project operations during a three-year drought sequence with the median climate change scenario, both with and without the unimpaired flow requirements. Figure 28 [Exhibit 36 of Att. 2] shows operations at Jackson Meadows Reservoir. Compared to the existing condition, the 55% unimpaired flow requirement causes more releases earlier in the season, resulting in lower storage levels at the end of the fill season and less releases for diversion into the system in the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	89	[Exhibit 36 of Att. 2: Three graphs titled Figure 28 - Jackson Meadows Reservoir Operations, Median Climate 2038-2040]	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.
324	90	[Att. 2:] Figure 29 [Exhibit 37 of Att. 2] shows operations at French Lake. The releases in the winter and spring cause lower fill levels and reduced ability to release water for downstream diversion during the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	91	[Exhibit 37 of Att. 2: Two graphs titled Figure 29 - French Lake Operations, Median Climate 2038-2040]	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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324	92	[Att. 2:] Figure 30 [Exhibit 38 of Att. 2] shows operations at Bowman Lake. Bowman Lake storage is highly affected by the combination of increased releases in the winter and spring due to the 55% unimpaired flow requirements and less imports from the Middle Yuba from Jackson Meadows Reservoir. This lower fill level results in less water available for diversions into the NID system.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	93	[Exhibit 38 of Att. 2: Three graphs titled Figure 30 - Bowman Lake Operations, Median Climate 2038-2040]	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.
324	94	[Att. 2:] Figure 31 [Exhibit 39 of Att. 2] shows operations at Rollins Reservoir. With 55% unimpaired flow requirements and reduced imports from the Yuba River, Rollins does not necessarily stay full in Dry Years. This results in less ability to make diversions into the Bear River Canal and less ability to move water down to Lake Combie to maintain Lake Combie reservoir elevations.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	95	[Exhibit 39 of Att. 2: Three graphs titled Figure 31 - Rollins Reservoir Operations, Median Climate 2038-2040]	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.
324	96	[Att. 2:] Figure 32 [Exhibit 40 of Att. 2] shows operations at Lake Combie. With reduced imports into the Bear River and 55% unimpaired flow requirements Lake Combie cannot maintain a full pool and may not fill in dry years. Here Combie is prioritizing deliveries over maintaining a full storage pool.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	97	[Exhibit 40 of Att. 2: Three graphs titled Figure 32 - Lake Combie Operations, Median Climate 2038-2040]	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.
324	98	[Att. 2:] Figure 33 [Exhibit 41 of Att. 2] shows operations at Scotts Flat Reservoir. Scotts Flat Reservoir is highly dependent on imports from the Yuba River. The reduction of these imports resulting from loss of supply at upstream reservoirs results in the Reservoir going empty in most dry years which then reduced the ability for the reservoir to make deliveries downstream.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.

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324	99	[Exhibit 41 of Att. 2: Three graphs titled Figure 33 - Scotts Flat Reservoir Operations, Median Climate 2038-2040]	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.
324	100	[Att. 2:] Operations Examples -- Three-Year Drought Sequence -- Wet Climate Change Scenario Below is a series of plots showing the modeled project operations during a three-year drought sequence with the wet climate change scenario, both with and without the unimpaired flow requirements. Figure 34 [Exhibit 42 of Att. 2] shows operations at Jackson Meadows Reservoir. Compared to the existing condition, the 55% unimpaired flow requirement causes more releases earlier in the season, resulting in lower storage levels at the end of the fill season and less releases for diversion into the system in the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	101	[Exhibit 42 of Att. 2: Two graphs titled Figure 34 - Jackson Meadows Reservoir Operations, Wet Climate 2033-2035]	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.
324	102	[Att. 2:] Figure 35 shows operations at French Lake. The releases in the winter and spring cause lower fill levels and reduced ability to release water for downstream diversion during the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	103	[Exhibit 43 of Att. 2: Two graphs titled Figure 35 - French Lake Operations, Wet Climate 2033-2035]	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.
324	104	[Att. 2:] Figure 36 [Exhibit 44 of Att. 2] shows operations at Bowman Lake. Bowman Lake storage is highly affected by the combination of increased releases in the winter and spring due to the 55% unimpaired flow requirements and less imports from the Middle Yuba from Jackson Meadows Reservoir. This lower fill level results in less water available for diversions into the NID system.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	105	[Exhibit 44 of Att. 2: Three graphs titled Figure 36 - Bowman Lake Operations, Wet Climate 2033-2035]	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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324	106	[Att. 2:] Figure 37 [Exhibit 45 of Att. 2] shows operations at Rollins Reservoir. With 55% unimpaired flow requirements and reduced imports from the Yuba River, Rollins does not necessarily fill in Dry Years. This results in less ability to make diversions into the Bear River Canal and less ability to move water down to Lake Combie to maintain Lake Combie reservoir elevations.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	107	[Exhibit 45 of Att. 2: Graph of Rollins Reservoir Operations, Wet Climate 2033-2035.]	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.
324	108	[Att. 2:] Figure 38 [Exhibit 46 of Att. 2] shows operations at Lake Combie. With reduced imports into the Bear River and 55% unimpaired flow requirements Lake Combie cannot maintain a full pool and may not fill in dry years. In a severe dry sequence such as 2033-2035, the combination of hydrology and 55% unimpaired flow requirements prevent Combie from any refill while still maintaining deliveries.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	109	[Exhibit 46 of Att. 2: Graph of Lake Combie Operations, Wet Climate 2033-2035.]	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.
324	110	[Att. 2] Figure 39 [Exhibit 47 of Att. 2] shows operations at Scotts Flat Reservoir. Scotts Flat Reservoir is highly dependent on imports from the Yuba River. The reduction of these imports resulting from loss of supply at upstream reservoirs results in the Reservoir going empty in most dry years which then reduced the ability for the reservoir to make deliveries downstream.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	111	[Exhibit 47 of Att. 2: Graph of Scotts Flat Reservoir operations, Wet Climate 2033-2035.]	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.
324	112	[Att. 2:] Operations Examples -- Three-Year Drought Sequence -- Historic Climate Below is a series of plots showing the modeled project operations during a three-year drought sequence with historic inflows, both with and without the unimpaired flow requirements. Figure 40 [Exhibit 48 of Att. 2] shows operations	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.

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		at Jackson Meadows Reservoir. Compared to the existing condition, the 55% unimpaired flow requirement causes more releases earlier in the season, resulting in lower storage levels at the end of the fill season and less releases for diversion into the system in the summer.	
324	113	[Exhibit 48 of Att. 2: Two graphs titled Figure 40 - Jackson Meadows Reservoir Operations, 1990-1992]	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.
324	114	[Att. 2:] Figure 41 [Exhibit 49 of Att. 2] shows operations at French Lake. The releases in the winter and spring cause lower fill levels and reduced ability to release water for downstream diversion during the summer.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	115	[Exhibit 49 of Att. 2: Two graphs titled Figure 41 - French Lake Operations, 1990-1992]	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.
324	116	[Att. 2:] Figure 42 [Exhibit 50 of Att. 2] shows operations at Bowman Lake. Bowman Lake storage is highly affected by the combination of increased releases in the winter and spring due to the 55% unimpaired flow requirements and less imports from the Middle Yuba from Jackson Meadows Reservoir. This lower fill level results in less water available for diversions into the NID system.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	117	[Exhibit 50 of Att. 2: Three graphs titled Figure 42 - Bowman Lake Operations, 1990-1992]	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.
324	118	[Att. 2:] Figure 43 [Exhibit 51 of Att. 2] shows operations at Rollins Reservoir. With 55% unimpaired flow requirements and reduced imports from the Yuba River, Rollins does not necessarily fill in Dry Years. This results in less ability to make diversions into the Bear River Canal and less ability to move water down to Lake Combie to maintain Lake Combie reservoir elevations.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	119	[Exhibit 51 of Att. 2: Three graphs titled Figure 43 - Rollins Reservoir Operations, 1990-1992]	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.
324	120	[Att. 2:] Figure 44 [Exhibit 52 of Att. 2] shows operations at Lake Combie. With reduced imports into the Bear River and 55% unimpaired flow requirements Lake Combie cannot maintain a full pool and may not fill in dry years.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	121	[Exhibit 52 of Att. 2: Graph of Lake Combie Operations, 1990-1992.]	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.
324	122	[Att. 2:] Figure 45 [Exhibit 53 of Att. 2] shows operations at Scotts Flat Reservoir. Scotts Flat Reservoir is highly dependent on imports from the Yuba River. The reduction of these imports resulting from loss of supply at upstream reservoirs results in the Reservoir going empty in most dry years which then reduced the ability for the reservoir to make deliveries downstream.	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for a response to comments related to the Yuba River and operations.
324	123	[Exhibit 53 of Att. 2: Three graphs titled Figure 45 - Scotts Flat Reservoir Operations, 1990-1992]	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.
324	124	[Attachment 3: Document titled Stipulation by Yuba County Water Agency and Nevada Irrigation District]	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.
324	125	[Exhibit 2 of comment letter inadvertently skipped]	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.
325	1	Nevada Irrigation District supports and encourages the State Water Resources Control Board to adopt the Voluntary Agreements (VA) alternative, also known as Healthy Rivers and Landscapes Agreements. The VA alternative is the only alternative analyzed in the State Water Board's Draft Staff Report (DSR) that is implementable and capable of providing reasonable protection of the multiple beneficial uses served by NID, including municipal and domestic, agricultural, hydropower and recreation.	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses.

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		As set forth in NID's separate comment letter, the unimpaired flow alternatives, including the proposed plan amendments, cause devastating impacts to NID. UIF is simply unworkable and is not capable of implementation at NID. The purpose of this letter is to encourage the State Water Board to incorporate NID's proposed VA into the DSR's analysis and to encourage the State Water Board to adopt the VA alternative.	
325	2	Extensive Collaboration, Analysis, and Agreement Concerning New Instream Flows as Part of NID's FERC Relicensing NID owns and operates the Yuba-Bear Hydroelectric Project (FERC Project No. 2266). In anticipation of relicensing of the Yuba-Bear Project, NID began meeting with Federal and State agencies (including the State Water Board) and stakeholder and advocacy groups beginning in 2009. Over the course of the next 14 years, NID participated in hundreds of meetings and countless hours of discussion, development of comprehensive technical studies analyzing alternatives, and consensus building around the terms of relicensing. A key focus of those discussions were new instream flows for the Yuba Bear Project that would carefully balance the needs of instream resources with other competing uses, including domestic and agricultural deliveries, power generation, recreation, economic considerations, and preventing harm to other aquatic and terrestrial species. These considerable efforts culminated in agreed upon instream flows, variable based on year type, for the Yuba-Bear Project. The new instream flows regime was incorporated into and analyzed in an Environmental Impact Statement prepared under the National Environmental Policy Act. These agreed upon new instream flows, along with all other relicensing terms, will be implemented upon FERC's issuance of a new license. NID's Proposed VA Focuses on Environmental and Habitat Improvements in the Interim Period Between Today and FERC's Issuance of a New License NID's proposed VA contains three commitments: new flow contributions, continued implementation of habitat restoration	Please see Staff Report Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		projects, and NID's participation with other participants in funding the larger VA effort. New Flow Contributions: To support enhanced Delta inflow and outflow, NID proposes to contribute 5,600 acre-feet via reservoir reoperation in Dry, Below Normal, and Above Normal year types from Rollins Reservoir; thence the Bear River. In addition, NID will redirect flows from the Bear River to Auburn Ravine in an amount not to exceed 40 cubic feet per second from approximately March 1 to on or about April 15 in Dry, Normal, and Above Normal year types. This flow is designed to pair with other projects, including the Hemphill Dam Removal Project, and ongoing actions to restore Auburn Ravine for salmonids and will enhance juvenile salmonid emigration to the Feather River. As noted above, NID's Bear River and Auburn Ravine flow contributions are for the interim period between the State Water Board's adoption of the Vas and FERC's issuance of a new license for the Yuba-Bear Project. NID's Bear River and Auburn Ravine flow contributions would discontinue upon FERC's issuance of a new license, at which time NID would implement those new flows as detailed in the new FERC license. Habitat Restoration Commitments: Under NID's proposed VA, NID will continue its commitment to protect and improve the quality and health of our watersheds and environment. For example, in 2023, NID completed the Hemphill Dam Removal Project to remove a fish passage impediment and opening up an additional six miles of spawning habitat for salmonids and Pacific Lamprey.	
326	1	Stanford Vina Ranch Irrigation Company supports and encourages the State Water Resources Control Board to adopt the Voluntary Agreements (VA) alternative, also known as Healthy Rivers and Landscapes Agreements. The VA alternative is the only alternative analyzed in the State Water Board's Draft Staff Report (DSR) that is implementable and capable of providing reasonable protection of the multiple 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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		of the Bay Delta Watershed, including those served by Stanford Vina.	
326	2	Stanford Vina also writes to request a detailed, equitable, and structured process for onboarding new parties to the Vas. Stanford Vina's initial attempts at negotiating a VA were derailed by the COVID-19 pandemic. Subsequent attempts to negotiate a VA have languished, in our view, because of lack of bandwidth by State parties to simultaneously advance the larger VA package while at the same time discussing and formulating Vas for other interested parties.	See Common Response 1.3, Revised Proposed Plan Amendments, regarding the incorporation of new parties into the VA pathway.
326	3	Regulatory Approaches, Such as UJF, Lead to Dispute, Litigation and Delays The State Water Board's 2014, 2015, 2021, and 2022 emergency regulations mandating instream and pulse flows in Deer Creek are, in effect, a form of unimpaired flow - requiring the first block of water to be dedicated instream. As the State Board is aware, these actions have resulted in litigation and, in the view of Stanford Vina, will continue to result in litigation if the State Board continues in this heavy-handed and unlawful "emergency" regulatory approach. Stanford Vina views the proposed UIF through the same lens; if adopted it will inevitably lead to dispute, litigation and delay in the fishery improvements the State Board seeks. Following the 2014 and 2015 emergency regulations, Stanford Vina committed to undertake various voluntary (and uncompensated) measures to protect and improve fishery conditions on Deer Creek. Stanford Vina worked closely with California Department of Fish and Wildlife staff. Such efforts included coordinating diversions with fishery needs and pulse flows. These voluntary measures culminated in a stunning success in 2021 (a critically dry year) where over 500 adult Spring Run Salmon returned to Deer Creek. This was an incredible achievement and success given critical drought conditions and stands in stark contrast to the poor Salmon return numbers and difficulties in other locations, including the mainstem Sacramento River and Butte Creek [Footnote 1: See, e.g., September 13, 2021 Washington Post article describing fishery conditions available at https://www.washingtonpost.com/nation/interactive/2021	The State Water Board has consistently encouraged voluntary actions that are consistent with provisions included in the updated Bay-Delta Plan for their potential to provide large-scale benefits that will amplify the ecological benefit of new and existing flows beyond what may be provided by flow and water project operations alone. Please see Common Response 1.3, Revised Proposed Plan Amendments, regarding local cooperative solutions, a voluntary adaptive implementation mechanism within the regulatory pathway. See also 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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		/california-disappearing-salmon/ and that includes quotes from employees at CDFW and NMFS. [Article accessed January 13, 2024.]] Unfortunately, despite success with voluntary measures and the benefits of collaboration and coordination, the State Water Board adopted emergency regulations later in 2021 and again in 2022. This, again, has led to litigation that is currently pending.	
326	4	Collaboration, like the VA Approach, Produces Timely and Positive Results for the Fishery Without Unduly Burdening other Beneficial uses of Water. As demonstrated by the voluntary actions taken by Stanford Vina culminating in the success of 2021, collaboration is the key to timely implementing positive measures that protect and restore the fishery. Stanford Vina believes that the VA approach will best and most quickly accomplish the objectives of the Bay-Delta Water Quality Control Plan Update, including providing reasonable protection of all beneficial uses of water. The VA description included in the DSR all appear to have three components: a flow contribution; habitat restoration/infrastructure improvements; and funding commitments. Applying those principles to Deer Creek, Stanford Vina believes that a VA can significantly improve salmon returns, passage, and rearing.	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.
326	5	Agreed upon instream flows that reasonably balance competing needs is preferable to Stanford Vina as compared to future emergency regulations or UIF which will result in additional litigation. Similarly, habitat restoration and infrastructure improvements on Deer Creek will dramatically improve conditions for the fishery. For example, all parties, including State and Federal fishery agencies, recognize the need for multi-benefit channel restoration in lower Deer Creek. Finally, Stanford Vina is prepared to provide financial support to the larger VA effort on terms like other VA parties. Discussions with State representatives on the foregoing concepts have been positive. Unfortunately, however, time constraints	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 1.3, Revised Proposed Plan Amendments, regarding the incorporation of new parties into the VA pathway.

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		have limited the State's availability to work towards a comprehensive VA for Deer Creek by the DSR's January 19, 2024 comment deadline. Consequently, Stanford Vina requests that the State Board's DSR incorporate a process for onboarding new VA parties, such as Stanford Vina. State representatives and other VA parties should prioritize discussions and resolution of any issues with prospective new VA parties with the goal of obtaining additional VA contributions and covered tributaries.	
327	1	To that end, RWA members worked with the Water Forum to develop the 2017 Modified Flow Management Standard ("MFMS"), the essential temperature and flow components of which are incorporated into the 2019 Biological Opinion of the National Marine Fisheries Service ("2019 NMFS Biological Opinion") governing the long-term operations of the Central Valley Project and the State Water Project. The 2017 MFMS is implemented cooperatively through a Memorandum of Understanding between the Water Forum and Reclamation; this means that the American River region already has an operational and functional flow regime designed to protect the cold water fishery in the lower American River. (See Weaver, J., "Minimum Flows," Attachment 9. [Attachment 9]) Reclamation and the Water Forum also cooperate to fund and undertake habitat restoration and construction projects in the river, which have a long-proven track record of success.	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.
327	2	Understandably, RWA's members are particularly concerned about the Plan amendments' potential impacts on Folsom Reservoir and the lower American River. As set forth in more detail below, the Draft Staff Report ("DSR") indicates the Plan amendments would not only increase summer and fall temperatures in the Lower American River but also deplete water supplies upon which our municipal water suppliers rely, thereby causing multiple direct and indirect impacts. Decades of research confirm that temperatures in the Lower American River are the key limiting factor for steelhead, which, as noted above, are protected under the federal Endangered Species Act. Actions that reduce cold water pool at Folsom Reservoir are, therefore, concerning to our members. Likewise, our members are troubled by the impacts the Plan amendments would have on municipal water supplies and the resulting challenges this will present for regional economic development and construction of needed	Please see the response to comment 327-4 regarding temperature impacts on steelhead. Also, please see the responses to comments 327-20 and 327-21 regarding municipal water supplies and associated effects on economic development and housing. To the extent that this comment summarizes other comments, please see the substantive responses to those comments.

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		housing units. Each of these issues is addressed in more detail in the comments included below.	
327	3	The Draft Staff Report's Discussion of the Plan Amendments Is Not Adequate to Satisfy CEQA As Confirmed by the Draft Staff Report's Temperature Modeling, None of the Unimpaired Flow Scenarios Constitutes a Feasible Project Because They All Deplete the Reservoirs' Cold Water Pools and Therefore Cannot Be Implemented without Violating the NMFS Biological Opinion. None of the unimpaired flow scenarios is feasible because none of them is capable of being implemented consistent with the terms of the Incidental Take Statement in the 2019 NMFS Biological Opinion. The DSR discloses that all of the unimpaired flow scenarios would result in temperatures that exceed 69°F (7DADM) at Watt Avenue. (DSR, at p. A6-406.) While the temperatures would be much worse with the higher scenarios, such as 75% or 65%, even the lowest range evaluated (35%) would exceed 69°F (7DADM) at Watt Avenue. (DSR, at p. A6-406.) Under CEQA, an alternative that is not "capable of being accomplished in a successful manner within a reasonable period of time, taking into account . . . legal . . . and [other specified] factors" cannot be deemed "feasible." (See State CEQA Guidelines, Cal. Code Regs., tit. 14 ("State CEQA Guidelines"), § 15364 [defining "feasible"]. The Draft Staff Report acknowledges that the 2019 Biological Opinion is an applicable legal requirement imposed on the water operations of the federal Bureau of Reclamation and on certain aspects of the water operations of the State Water Project. (DSR, at pp. A1-4, 1-16, 6-5 to 6-6.) One of the species covered by the 2019 NMFS Biological Opinion is California Central Valley steelhead, a coldwater salmonid species which inhabits the American River. For this species, the 2019 NMFS Biological Opinion treats temperature as a surrogate for "take" because "Reduced survival is anticipated at	Temperature management on the American River is challenging under existing conditions. The 2024 NMFS BiOp (NMFS 2024) states that "take will be exceeded if daily average [emphasis added] water temperatures at Watt Avenue [or Hazel Avenue, depending on water year type] exceed 68°F from May 15 to October 31 for more than 7 consecutive days...". Exceedances of 68°F (daily average) occur under baseline conditions in approximately 20% of days between May 15 and October 31. Please see Section 7.6.2, Aquatic Biological Resources, for more information. If the BiOp requirements are often exceeded under current conditions, it is unclear how implementation of the inflow objectives would result in a new inconsistency with the BiOps. In addition, implementation of the cold water habitat objective could result in lower temperature impacts than modeled and presented in the Staff Report. The State Water Board does not agree that the flow scenarios are legally infeasible due to potential conflicts with various endangered species act requirements. The fact that NMFS exercises jurisdiction over a project pursuant to the ESA does not prevent the State from exercising its independent jurisdiction to regulate diversions of water for the reasonable protection of beneficial uses in the Bay-Delta watershed. Alleged consistency with FESA or even CESA is not a determination, legal or otherwise, of what species need for their reasonable protection and adopting standards under Porter-Cologne that differ from agreements reached among entities under FESA. Please see Common Response 1.1, General Comments, regarding consistency with other laws, policies, and agreements and for a general discussion of federal and state ESAs, and see Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, regarding integration with existing temperature-related requirements. The cold water habitat objective is narrative in order to provide sufficient flexibility for implementation options, and is intended to be complementary with other existing requirements to the extent possible. Generally, if requirements contained in the Bay-Delta Plan differ

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		temperatures at or above 68°F" (2019 NMFS BiOp, Attachment 10 [Attachment 10] at p. 805.) Consequently, the 2019 Biological Opinion includes the following term to protect California Central Valley steelhead on the American River: The ecological surrogate to define the amount or extent of take of CCV steelhead juvenile life stage is daily average temperature at Watt Avenue May 15 to October 31. The anticipated level of take will be exceeded if temperatures at Watt Avenue exceed 68°F from May 15 to October 31 for more than seven consecutive days [7DADM] unless it is a critical year based on the Sacramento Valley index or a year following one or more critical years. In critical years, and years immediately after a critical year, anticipated level of take is exceeded if temperature exceeds 68°F at Hazel Avenue. (2019 NMFS BiOp, Attachment 10 [Attachment 10], at pp. 805-806.) Under the federal Endangered Species Act, the Incidental Take Statement of a biological opinion "constitutes a permit authorizing the action agency to 'take' the endangered or threatened species so long as it respects the Service's 'terms and conditions.' The action agency is technically free to disregard the Biological Opinion and proceed with its proposed action, but it does so at its own peril (and that of its employees), for 'any person' who knowingly 'takes' an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment. See [Endangered Species Act, 16 U.S.C.] §§ 1540(a) and (b) (authorizing civil fines of up to \$ 25,000 per violation and criminal penalties of up to \$ 50,000 and imprisonment for one year). . . ." (Bennett v. Spear (1997) 520 U.S. 154, 170.) Consequently, Reclamation's employees must comply with the terms of the 2019 NMFS Biological Opinion's Incidental Take Statement, or they will put themselves at risk of violating the law. It is legally infeasible for Reclamation to operate Folsom Dam in a manner that 'disregards' these terms of their Incidental Take permit. As shown by the DSR's temperature modeling results, all of the unimpaired flow scenarios would result in temperatures at Watt	from those contained in any water right order or water quality certification, the more stringent requirement would control. 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. Adaptive implementation may be allowed on a seasonal, annual, or long-term basis as part of local cooperative solutions or may be required by the Executive Director or State Water Board. Adaptive implementation may also be used to integrate, as appropriate, Bay-Delta Plan requirements with other existing environmental requirements including the federal ESA. Please refer to Common Response 7.24, Alternatives Analysis, for a general discussion of feasibility of alternatives. Please see Chapter 13, Revised Proposed Plan Amendments, and Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, for discussion of implementation of the cold water habitat objective and carryover storage requirements that prevent draining reservoirs as well as a discussion of sensitivity of the Folsom reservoir temperature target used in the HEC-5Q modeling. The sensitivity analysis shows potential that modeled effects from scenarios could be lowered by changing the release temperature target. CEQA impact determinations are the most conservative but in many instances can be reduced or avoided with tailored operations. Additional operational effectiveness could be gained by further refining release targets and cold water management, leading to a reduction in temperature effects. Appendix H1b, Water Temperature Modeling and Fish Assessment for the Sacramento, Feather, American, and Yuba Rivers, also shows that in many instances there are favorable results, and improved temperatures.

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		Avenue that are higher than 69°F on a seven-day average daily maximum (7DADM). In other words, all the unimpaired flow scenarios, from 35% to 75%, would exceed the 68°F 7DADM set as the upper temperature bound by the 2019 NMFS Biological Opinion's Incidental Take Statement. Thus, the proposed Plan amendments (with a range of 45% - 65% unimpaired flows), the Low Flow Alternative (with a range of 35%-45% unimpaired flows), and the High Flow Alternative (with a range of 65%-75%unimpaired flow) would all violate the terms of the 2019 NMFS Biological Opinion's Incidental Take Statement. Accordingly, each of these proposals is legally infeasible.	
327	4	None of the Unimpaired Flow Scenarios Is Capable of Satisfying the Stated Project Objective of Providing Cold Water Habitat for Fish. Alternatives must be capable of feasibly attaining most of the basic objectives of the project. (We Advocate Thorough Env'tl. Review v. Cty. of Siskiyou (2022) 78 Cal.App.5th 683, 691; Save Our Access etc. v. Watershed Conservation Auth. (2021) 68 Cal.App.5th 8, 32.) For this reason, the lead agency's statement of project objectives defines the scope of the alternatives to be analyzed in the EIR. (The Flanders Found. v. City of Carmel-by-the-Sea (2012) 202 Cal.App.4th 603, 623 ["The entire purpose of the alternatives section in an EIR is to consider environmentally superior alternatives that would 'accomplish most of the project objectives.'"]; State CEQA Guidelines, § 15124 [lead agency must use statement of project objectives to define the scope of alternatives to be analyzed in the EIR]; see also <i>ibid.</i> at 15126.6, subd. (c) [alternatives that fail to "feasibly accomplish most of the basic objectives of the project" are not properly included in the range of reasonable alternatives analyzed by the lead agency].) The DSR defines the "project objectives" to include "Cold water habitat provisions that would require reservoirs to be operated in a manner that provides needed cold water habitat for salmonids or other measures to provide cold water habitat." (DSR, at p. 7.1-1; see also DSR, at p. 7.24-52 [primary purpose of the project is to improve and protect fish and wildlife beneficial uses].)	The 2023 draft Staff Report, Section 7.6.2, Aquatic Biological Resources, analyzed temperature impacts of the proposed Plan amendments. As described in Section 7.6.2, implementation of the narrative cold water habitat objective and the flexibility provided in the inflow requirements are expected to generally improve water temperature conditions in the Sacramento/Delta watershed for native fish species; however, it is possible that temperatures could increase in some instances on some streams, particularly while the specific cold water habitat implementation measures are refined. Please see 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 see Common Response 7.24, Alternatives Analysis, on the range of alternatives analyzed in the Staff Report. Also, as analyzed in Section 7.6.2, temperature conditions in the American River are often impaired under current conditions (exceedances of 68°F daily average occur under baseline condition in approximately 20% of days between May 15 and October 31). In addition, 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 implementation of the cold water habitat objective.

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		As noted above, in addition to the proposed Plan amendments (with an unimpaired flow range of 45% - 65%), the DSR considers a Low Flow Alternative with a range from 35% - 45% of unimpaired flow and a High Flow Alternative with a range from 65% - 75%. None of these three alternatives is capable of meeting the stated project objective of providing habitat for cold water fish. As shown above, the analysis included in the appendices to the DSR confirms that, on the American River, even a 35% unimpaired flow release would actually reduce available cold water habitat for the fish in the stream during the summer and fall. The temperature modeling results for the American River also show that implementation of the Plan amendments at 55% of unimpaired flow would significantly increase the amount of time that lower American River water temperatures exceed temperature standards for juvenile steelhead. (DSR, p. 7.6.2-12, Appendix A6, Tables A6-208, A6-210 to A6-213.) Since steelhead rear in the river year-round (as the DSR acknowledges in Appendix A6 and elsewhere), the increased summer and fall temperatures impair cold water fish habitat. Both the Draft Staff Report and the Delta Flow Criteria Report recognize that carryover storage is needed to maintain cold water habitat, and that "it may not be possible to attain all of the identified flow criteria in all years and maintain adequate storage for temperature management for the various runs of Chinook salmon and other sensitive species" such as steelhead. (DSR, at p. 7.24-24 – 7.24-25.)	
327	5	The DSR acknowledges the undisputed scientific fact that release of unimpaired flows in the winter and spring months will interfere with development of the cold water pool in many reservoirs: The Delta Flow Criteria Report acknowledged that the identified flow criteria should be tempered by the additional need to maintain cold water resources in reservoirs on tributaries to the Delta until improved passage and other measures are taken that would reduce the need for maintaining cold water supplies in	Please see the response to comment 327-4.

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		reservoirs. . . Without adequate carryover storage, there would be significant challenges in maintaining suitable downstream water temperatures to support native cold water fish species such as Chinook salmon and steelhead. Temperature modeling results presented in Appendix A6, Water Temperature Modeling and Fish Assessment for the Sacramento, Feather, and American Rivers, specifically suggest significant challenges in maintaining suitable water temperatures on the Sacramento, Feather, and American Rivers under the High Flow Alternative. DSR, at p. 7.24-26.) The DSR even admits that the unimpaired flow regime could pose particular challenges for managing Folsom Reservoir operations: "[S]ome valley floor reservoirs that are subject to more heating and have other challenging temperature management characteristics, such as Camp Far West, Folsom, New Bullards Bar, and Camanche, could particularly be impacted by higher instream flow requirements and the ability to maintain cold water supplies, while still providing for water supplies for other uses." (DSR, at p. 7.24-28.) In fact, these results reflect laws of physics which simply cannot be overcome. Simply put, inflows to Folsom Reservoir are colder in the winter and early spring than they are in the summer and early fall. The proposed Plan amendments would release large volumes of water in the late winter and early spring. See, e.g., DSR, at p. 7.24-27 ["[T]he new instream flow requirements necessitate bypassing reservoir inflow during the winter and spring runoff period. . . ."]. If large volumes of water are released in winter and early spring, much of the cold water will be lost. If the cold water from winter and early spring is not stored, Folsom will not have a cold water pool sufficient to maintain juvenile steelhead or fall-run Chinook salmon that are in the system holding through the warm summer months, nor will it be able to support suitable fall and winter temperatures for salmon and steelhead spawning. Successful fall spawning is especially dependent on suitable water temperatures provided by carried over cold water storage from the previous water year. (See "Reservoir Coldwater Pool Development and Utilization", Attachment 11. [Attachment 11]) Thus, in 2021, when actual releases from Folsom Reservoir averaged 55% of unimpaired flow from February through May,	

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		the volume of cold water remaining was not sufficient to provide suitable temperatures for cold water fish through the summer months. (See id., Attachment 11. [Attachment 11]) By June 2021, temperatures at Watt Avenue were over 70°F; they remained above 70°F through nearly the end of September. (Id.) This actual data is entirely consistent with the results of the DSR's temperature modeling, which predicts that even the 35% unimpaired flow releases would result in temperatures exceeding the 68°F 7-day average daily maximum (7 DADM) threshold set by the 2019 NMFS Biological Opinion. [Footnote 1: Unsurprisingly, this data is also consistent with the modeling that the Water Forum performed in 2015, which became the basis of the 2017 Modified Flow Management Standard. That technical report considered a "high flow" alternative to determine whether it would improve conditions for the cold water fish in the lower American River, but rejected it due to the fact that high outflows would deplete the cold water pool and elevate temperatures to a point where they were not suitable for steelhead spawning and rearing in the river. (The Water Forum, "The Lower American River Modified Flow Management Standard: A Drought Buffer for the Environment and Local Water Supplies," (2015) included as Attachment 17 [Attachment 17], at p. iv.)) (See Section 1.A, above.)	
327	6	Since the Plan amendments, High Flow Alternative and Low Flow Alternative all impair cold water fish habitat on the American River, none of these alternatives can be found capable of meeting the stated project objective to "provide[] needed cold water habitat for salmonids. . . ." (See DSR, at p. 7.1-1.) And because CEQA requires valid alternatives to be capable of attaining most of the basic objectives of the project, none of these alternatives is properly included in the DSR. (See We Advocate Thorough Env'tl. Review, supra, 78 Cal.App.5th at p. 691; Save Our Access etc., supra, 68 Cal.App.5th at p. 32; State CEQA Guidelines, § 15126.6, subd. (c).)	Please see the response to comment 327-4. Also, see Section 7.1.3, Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan, of the Staff Report for a description of how the proposed Plan amendments would meet the purpose and goals of the Sacramento/Delta update to the Bay-Delta Plan, and see Section 7.24, Alternatives Analysis, for achievement of project purpose and goals of the Low Flow and High Flow alternatives.
327	7	The Modeling Used to Analyze the Temperature Impacts of the Objectives Improperly Presents Results That Incorporate Mitigation Intended to Reduce Temperature Impacts, Thereby Failing to Disclose the Full Scope of the Effect. The EIR must disclose the full magnitude of the project's impacts	Carryover storage is a long-term temperature management strategy to meet cold water habitat objectives of the proposed Plan amendments rather than a mitigation measure. Section 6.2.2, Unimpaired Flow Scenario Assumptions, of the 2023 draft Staff Report discusses carryover storage in adequate detail for the purposes of the analysis. Chapter 5, Proposed Changes to the

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		before imposing mitigation that reduces them. (Lotus v. Dep't of Transportation (2014) 223 Cal.App.4th 645, 657-658.) When mitigation is incorporated into the analysis of the proposed project's impacts, the result is a "structurally defective" EIR. Id. at 657. If the environmental document "fail[s] to discuss the significance of the environmental impacts apart from the proposed 'avoidance, minimization and/or mitigation measures,'" it necessarily "fail[s] to consider whether other possible mitigation measures would be more effective." Id. The DSR's temperature modeling violates this disclosure requirement of CEQA. The temperature modeling results do not disclose the impacts of the Plan amendments absent the carryover storage targets and buffer pools; all the temperature modeling assumes not only the instream flow releases but also carryover storage targets and buffer pools. Thus, the DSR has improperly confused the analysis of the project's temperature impacts with the measures the State Board proposes to employ to mitigate those impacts. "[T]his shortcutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decisionmaking and informed public participation. It precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of the sufficiency of measures to mitigate those consequences." (Lotus, supra, 223 Cal.App.4th at p. 658.)	Bay-Delta Plan for the Sacramento/Delta, of the 2023 draft Staff Report describes cold water habitat objectives in sufficient detail for the purposes of the analysis. Also see Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, regarding the cold water habitat objective and how it is an integral part of the revised proposed Plan amendments, not a mitigation measure.
327	8	The Draft Staff Report Fails to State an Adequate Project Description and Consequently Fails to Analyze the Full Scope of the Impacts of the Plan Amendments. As set forth in greater detail in the comments submitted by the Northern California Water Association ("NCWA"), the DSR fails to state an adequate project description for the Plan amendments because the proposed objectives are so vague, and the DSR attempts to reserve so much undefined discretion to the State Board and its staff in how they would be implemented, that the scope of the project is unclear. And as a result, the DSR does not adequately analyze the impacts of implementing the Plan amendments, even under the more lenient standards applicable to program EIRs.	The revised proposed Plan amendments would require that any adjustment to the numeric inflow requirement would be subject to public review and comment prior to a decision by the Executive Director of the State Water Board, in conjunction with the annual and periodic review processes. Any decision would also be informed by best available scientific information. The revised proposed Plan amendments also include provisions for minimum human health and safety water supplies. The proposed Plan amendments were described in detail in Chapter 5, Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta, of the 2023 draft Staff Report. The impacts on municipal water supply were analyzed in Section 7.20, Utilities and Service Systems. That analysis is fully supported by substantial evidence.

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		The DSR's discussion of how the Plan amendments will impact municipal water supplies in the Sacramento region amply illustrates these defects. The DSR indicates that, within the Sacramento River watershed, 58% of the municipal water supply derives from Sacramento/Delta streams that would be subject to the Plan amendments. (DSR at p. 7.20-26, Table 7.20-4.) But the magnitude of the water supply impacts to the region cannot be discerned from the DSR based on the project as described. The Inflow Objective proposed as part of the Plan amendments is stated as a default of 55% of unimpaired flow with an "adaptive range" from 45% to 65%. The wide variation included within this range makes it unclear how the project will be implemented, which in turn makes us unsure what the impacts of the project on regional water purveyors actually will be. With the "adaptive range," the State Board staff could decide in February of any given year whether to require 45% or 65% of unimpaired flows, or any point in between. As the DSR indicates, the "average" water supply reductions, in acre-feet, to municipal water suppliers in the Sacramento watershed would be 29,000 acre-feet under the 45% scenario, 52,000 acre-feet under the 55% scenario, and 83,000 acre-feet under the 65% scenario. Thus, on average, municipal water suppliers within the Sacramento region would be facing water supply deficits of 29,000 acre-feet to 83,000 acre-feet – but they would not know which scenario they faced until the State Board decided which range to apply. Table 7.20-9 highlights the difficulties that this situation could pose for municipal water suppliers in the Sacramento region under different types of hydrology. This table reads, in pertinent part, as follows: [see Exhibit 1] (DSR, at p. 7.20-32.) Thus, in a critically dry year, when water supplies are most tight, water suppliers in the Sacramento region would not know until February whether they would be facing a deficit of 116,000 acre-feet or 76,000 acre-feet, based on the State Board's discretionary decision. In dry years or "below normal" years, the volume differences would be even greater – 58,000 acre-feet and 71,000 acre-feet, respectively.	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 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. Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis, of the 2023 draft Staff Report 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. Significant or potentially significant adverse environmental impacts are adequately discussed in Section 7.3, Aesthetics, through Section 7.20, Utilities and Service Systems, of the 2023 draft Staff Report. See Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the project description and the approach to the analysis.

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		This 40,000 acre-foot, or greater, difference would be imposed at the discretion of State Board staff without any governing standards or criteria. To put this volume of water in context to show how much it would affect regional municipal supplies, the City of Roseville serves a population of more than 140,000 people for one year with about 39,172 acre-feet (35,353 acre-feet of potable, raw, and other non-potable water and 3,819 acre-feet of recycled water). [Footnote 2: This figure reflects "unconstrained demand," which is the amount of demand without any water supply or usage restrictions but with conservation practices imposed on new construction. (City of Roseville 2020 Urban Water Management Plan, Attachment 4 [Attachment 4], p. 4-10.) (City of Roseville 2020 Urban Water Management Plan, pp. 3-7, 4-10, included as Attachment 4 [Attachment 4].)] In other words, the Inflow Objective is written so loosely that it gives the State Board discretion to decide, at the beginning of the year, whether to increase that year's municipal water supply deficit by an amount sufficient to leave an entire city without water.	
327	9	[Exhibit 1: Excerpt from Table 7.20-9, Sacramento/Delta Supply for Municipal Use in the Sacramento River Watershed: Change from Baseline (thousand acre-feet per year), 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.
327	10	The Draft Staff Report Fails to State an Adequate Project Description and Consequently Fails to Analyze the Full Scope of the Impacts of the Plan Amendments. Moreover, as noted in the MBK Report submitted with the NCWA comments, the DSR fails to conduct any multi-year drought analysis, so there is no evaluation of the cumulative impacts to municipal water supplies that would result from multiple dry years occurring back-to-back.	Please see Common Response 7.1, General CEQA and Approach to the Analysis, for a response to comments that raise questions about the adequacy of the project description. Additionally, please see Common Response 4.2, Drought and Climate Change, for responses to comments that raise issues with the analysis of multi-year droughts in the Staff Report.
327	11a	In the American River region, this error is further compounded because SacWAM appears to significantly overstate the level of existing surface water diversions, which disguises the magnitude of the surface water reductions that the region would experience under the 55% UIF scenario. (Weaver, J., "Water Supply," Attachment 19. [Attachment 19])	Please see Common Response 7.1, General CEQA and the Approach to the Analysis regarding the adequacy of the project description. In the Staff Report, SacWAM is used for an incremental analysis that displays relative changes from the baseline, and the assumptions for demand are the same under all the scenarios. If the modeled demand differs from reality, it is because water management relies on time-dependent factors. Please see Common Response 6.1, Sacramento Water Allocation

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			Model and Changes in Hydrology and Water Supply regarding the scope, scale and application of SacWAM. 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 for existing water right holders at the outset of Plan implementation to reduce water supply impacts.
327	11b	Including multi-year drought analysis is crucial because, for some water users in the American River region, the SacWAM modeling results include some results that appear to be counter-factual and suggest serious challenges with the ability to withstand prolonged dry periods. For example, the City of Folsom has a very senior surface water right dating back to the 1850s, and, as indicated in its 2020 Urban Water Management Plan, the City does not have significant groundwater supplies. To serve the water needs of its nearly 70,000 water customers, which normally total just under 20 TAF, on average, the City relies primarily on its pre-1914 water rights, which total 27 TAF. (City of Folsom 2020 Urban Water Management Plan, at pp. 3-4, 4-3, 6-1 – 6-6, 6-7, Attachment 3. [Attachment 3]) However, the SacWAM modeling results show that the 55% UIF scenario would reduce the City of Folsom's diversions by an average of 12 TAF compared to Existing Conditions. (Weaver, J., "Water Supply," Attachment 19. [Attachment 19]) This would equate to a 72% reduction in Folsom's surface water diversions in dry conditions such as were experienced in 2015. Even in an average year, when the City's unconstrained demand is about 20 TAF, a 12 TAF reduction would equate to a loss of about 60% of the City's available water supplies. (See City of Folsom 2020 Urban Water Management Plan, at p. 6-1 – 6-7, Attachment 3. [Attachment 3]) Obviously, if the Plan amendments impose losses of this magnitude, this could pose serious challenges for the City's ability to provide reliable water service through a multi-year drought. We agree with MBK's conclusion that the SED must undertake this evaluation of the project's impacts.	The Staff Report analyzes a wide range of potential impacts in Chapter 6, Changes in Hydrology and Water Supply, and Appendix A1, Sacramento Water Allocation Model Methods and Results. Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding SacWAM's scope, scale and application for a response to comments that refer to modeling results for an individual diversion. Additionally, please see Common Response 4.2, Drought and Climate Change, for responses to comments that raise issues with the analysis of multi-year droughts in the Staff Report. Lastly, please see Common Response 7.20, Utilities and Service Systems, for responses to comments about changes in municipal water supply.
327	12	The DSR's Mitigation Measures Fail to Commit the State Board to Implementing Enforceable Performance Standards to Reduce or	Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the mitigation

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		Avoid the Impacts of Its Plan Amendments on Municipal Water Supplies. To comply with CEQA, the DSR must propose and describe feasible mitigation measures to minimize or avoid the project's significant environmental impacts. (Pub. Res. Code §§ 21002.1, subd. (a), 21100, subd. (b)(3), 21080.5, subds. (d)(2)(A), (d)(3)(A); POET, LLC v. State Air Resources Bd. (2013) 218 Cal. App. 4th 681, 734-735.) At a minimum, the EIR's mitigation measures must: "(1) commit [the lead agency] to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identif[y] the type(s) of potential action(s) that can feasibly achieve that performance standard and that will [be] considered, analyzed, and potentially incorporated in the mitigation measure.'" (East Oakland Stadium Alliance v. City of Oakland (2023) 89 Cal.App.5th 1226, 1254-1255 [citing State CEQA Guidelines § 15126.4, subd. (a)(1)(B)].) "Mitigation" includes: (a) Avoiding the impact altogether by not taking a certain action or parts of an action. (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment. (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements. (State CEQA Guidelines, § 15370.) Consistent with these requirements, mitigation measures cannot	measures and the role of the State Water Resources Control Board.

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		merely state generalized goals. (King & Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814, 856.) A mitigation measure that only identifies vague or unspecified protocols for achieving compliance is therefore inadequate. (Sierra Watch v. County of Placer (2021) 69 Cal.App.5th 86, 110.) CEQA requires sufficient specificity to ensure "a reasonably clear and objective measure of compliance." (East Oakland Stadium Alliance, supra, 89 Cal.App.5th at 1274.) For the same reason, "mere expressions of hope" do not constitute valid mitigation measures. (Golden Door Properties, LLC v. County of San Diego (2020) 50 Cal.App.5th 467, 506.)	
327	13	The DSR's mitigation measures for impacts to municipal water supplies violate these standards. First, none of these mitigation measures commits the State Board to taking any specific actions or adopting any performance standards. (DSR, at pp. 7.20-50 – 7.20-52.) While the State Board has the power to take actions such as funding new groundwater storage and recovery infrastructure to help municipal water users offset the impacts of the State Board's adoption of the proposed Plan amendments, the DSR neither proposes nor considers any such actions. The DSR's mitigation measures miss the mark because its analysis of impacts to municipal water supplies aims at the wrong question. The DSR states that it "provides a regional-level assessment of how a reduction in Sacramento/Delta water supplies could affect municipal deliveries, whether additional water supplies may be needed, and whether impacts could be avoided by relying on existing supplies from other sources or more intensive use of demand management measures." (DSR at p. 7.20-25, emphasis added.) The DSR then concludes, "although some communities appear to have reserve supply from other sources that could replace Sacramento/Delta supply reductions, other communities do not have enough reserve supplies. These communities would need to intensify demand management and/or look for other water supplies, either through accelerating existing planned acquisitions or initiating the planning process for additional water supplies." (DSR, at p. 7.20-25.) Thus, the DSR acknowledges that its discussion of the potential mitigation for loss of municipal water supplies focuses on	Please see Common Response 7.1, General CEQA and Approach to the Analysis, for the Staff Report approach to CEQA requirements, and standards for mitigation measures for environmental impacts. The Staff Report focused on and disclosed the potential environmental impacts resulting from actions entities may take to procure alternative water supplies in response to reduced surface water supplies. Among the proposed mitigation measures are actions that the State Water Board has the authority to take, such as Mitigation Measures MM-UT-d: 2.i and MM-UT-d: 2.ii, and measures within the authority of other entities. Water conservation and water use efficiency can and should be implemented by service providers. The State Water Board acknowledged, however, that it cannot guarantee that measures will always be adopted or applied to fully mitigate potential impacts, concluding that the impacts would remain potentially significant. Please see Common Response 7.20, Utilities and Service Systems, for an explanation of how the Staff Report considered availability of municipal water, alternative water supplies and potential response actions to reduced surface water supply. Municipal water suppliers may choose any approach, or a combination of approaches, or they may identify another as-yet unknown approach to meet their own unique needs. In addition to the proposed unimpaired flow requirements, the Staff Report considered several alternatives for the Bay-Delta Plan update, including a No Project Alternative (Alternative 1), a Low Flow Alternative (lower flows than the proposed 55 percent

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		whether the affected municipalities have access to other supplies or are able to "intensify" measures to reduce water demand. In other words, the DSR posits that the State Board can "mitigate" the impacts of its project on affected municipal water suppliers by telling the water suppliers to use other sources of water or reduce their water demand. Neither of these approaches is consistent with CEQA's definition of mitigation. (Cf., State CEQA Guidelines, § 15370.) For the State Board's mitigation to be adequate under CEQA, the State Board must commit itself to take action to: (1) avoid the impacts by not taking certain actions, such as by reducing the rate of the unimpaired flow releases, or the duration when they would be in effect; (2) minimize the impacts by limiting the degree or magnitude of the action and its implementation, likely in the same manner; or (3) compensate for the impact by replacing or providing substitute resources. [Footnote 3: types of mitigation that may be feasible for other types of CEQA projects, rectifying (through repair, rehabilitation, or restoration) and reducing or eliminating over time by preservation and maintenance, are infeasible in the specific context of a project that proposes to create water supply impacts by releasing water for instream flows. While new forest or wetland habitat can be created, and some types of habitat can be repaired or restored, it simply is not possible to create new water, and flows, once released to the river, are no longer available for diversion and consumptive use.] Here, the DSR has failed to consider either of the first two options, and it has impermissibly assigned the responsibility for the third to the affected water users. This abdication of responsibility is significant because it effectively transfers the cost of finding and securing replacement sources of water from the party that created the impact – the State Board – to the parties that are affected by it.	unimpaired flow requirement) (Alternative 2), and proposed Voluntary Agreements (described and analyzed in Chapter 9, Proposed Voluntary Agreements) (Alternative 6). Section 7.24, Alternatives Analysis, provides information and an evaluation of all of the alternatives except the proposed unimpaired flow requirements and proposed VAs, including the environmental impacts and economic effects of each of these alternatives. Please also see Common Response 8.1, Economic Analysis and Other Considerations, regarding regional economic analysis, estimates of potential effects, and funding opportunities.
327	14	Second, these mitigation measures are also defective because they contain no specific performance standards. For example, mitigation measure UT-d.2 provides: Water users can and should diversify their water supply	Please see Common Response 7.20, Utilities and Service Systems, for information on how the Staff Report identifies the significant environmental impacts of potential response of water users to reductions of water supply to municipal use on the environment and proposes measures to mitigate those effects, and a discussion of feasibility of response actions to reduced municipal

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		portfolios to the extent possible, in an environmentally responsible manner and in accordance with the law. This includes sustainable conjunctive use of groundwater and surface water, water transfers, water conservation and efficiency upgrades, and increased use of recycled water. (DSR, at p. 7.20-50.) Essentially, mitigation measure UT-d.2 does nothing more than urge water users to diversify their water supply portfolios: it is, as the Golden Door court rejected, a "mere expression of hope." It does not define or establish any objective criteria for what is meant by "in an environmentally responsible manner and in accordance with the law" or "sustainable conjunctive use." (DSR at p. 7.20-50.) Nor does mitigation measure UT-d.2 include any specific performance standards or objective measures of compliance to demonstrate how the mitigation measure will effectively reduce the impacts to municipal water supplies. For example, in the discussion of groundwater storage and recovery, the mitigation measure merely states that the State Board will make "efforts to encourage and promote environmentally sound recharge projects that use surplus surface water, including prioritizing the processing of temporary and long-term water right permits for projects that enhance the ability of a local or state agency to capture high runoff events for local storage or recharge." (DSR at p. 7.20-50.) The mitigation measure contains no objective performance standard by which to judge whether the State Board's "efforts to encourage and promote" have fulfilled its mitigation obligation. Moreover, the mitigation measure contains no criteria for determining whether a project qualifies as "environmentally sound" or what standards State Board staff will use to determine whether a project "enhances" a water user's ability to capture high runoff.	water supply and the need for performance standards for the response actions.
327	15	Further, as noted in the NCWA comments, there is no substantial evidence to support the conclusion that water transfers, or any of the other means that mitigation measure UT-d.2 lists as a way of diversifying water portfolios, would be feasible or effective to reduce the water supply impacts of the proposed Objectives. For example, in the American River region, there is no historical	The impact conclusions made in the Staff Report do not rely on the implementation of other water management actions. The Staff Report recognizes that the availability of replacement supplies may be limited in some cases. CEQA does not prohibit the identification of feasible mitigation just because it may not be feasible in all cases.

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		basis to conclude that regional water purveyors would be able to manage shortages in the volumes shown in the SacWAM modeling results, nor is there any basis to support a conclusion that the region could increase groundwater pumping in the volumes needed to offset the reduction in surface water supplies resulting from the 55% UIF scenario. (Weaver, J., "Water Supply," Attachment 19. [Attachment 19])	As discussed in Section 8.3, Costs Associated with Other Water Management Actions, there is a suite of reasonably foreseeable actions that affected entities may undertake to address possible surface water supply reductions. Water transfers and groundwater pumping were considered in the Staff Report analysis because urban water management plans indicated that such transfers had been or were being considered as part of the overall water supply planning.
327	16	Mitigation measure UT-d.3 merely restates water suppliers' existing obligation to promote sound conservation practices, stating, inter alia, that "All municipal water suppliers and agricultural water users have an obligation to maximize water use efficiency and utilize conservation to the extent possible in conformance with the prohibition against waste and unreasonable use in the California Constitution." (DSR, at p. 7-20.50.) Similarly, mitigation measure UT-d.5 provides, in its entirety, "Entities that are already implementing local water shortage policies should prioritize water supplies for health and safety, if not already doing so." While this may be "good neighborly advice," it offers nothing to mitigate the impacts of the Plan amendments on municipal water supplies. In fact, these mitigation measures do not even offer any suggestions that RWA's members are not already implementing to try to ensure water supply reliability: for example, the City of Roseville's Urban Water Management Plan discusses the City's extensive investments in surface water (including purchased water to supplement its Central Valley Project contract supplies), groundwater (including its aquifer storage and recovery program), and recycled water (including stormwater recapture and opportunities for desalination). (City of Roseville 2020 Urban Water Management Plan, Attachment 4 [Attachment 4], pp. 6-1 – 6-19.)	Please see the response to comment 327-13 regarding the effects of changes in the Sacramento/Delta surface water on municipal water suppliers, and mitigation of potential environmental impacts resulting from actions entities may take to procure alternative water supplies in response to reduced surface water supplies. Municipal water suppliers may choose any approach, a combination of approaches, or they may identify another as-yet unknown approach to meet their own unique needs.
327	17	Collectively, the DSR's mitigation measures amount to mere expressions of hope that water users – the impacted parties – will find a way to reduce or avoid the water supply impacts that would result from the State Board's adoption of the proposed Objectives. These mitigation measures lack not only specific performance standards and enforceable metrics, but also any commitment by the State Board to take actions to mitigate the	Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the adequacy of the mitigation measures and the role of the State Water Resources Control Board.

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		water supply impacts of its own project. Consequently, the mitigation measures set forth in the DSR fall far short of the minimum standards required by CEQA.	
327	18	The Plan Amendments Cannot Be Adopted Consistent with the Requirements of the Porter-Cologne Water Quality Control Act. The Plan Amendments Cannot Be Found to Reasonably Protect Instream Beneficial Uses When They Claim to Protect Cold Water Fish Habitat But Actually Would Impair It. Water quality objectives adopted under Porter-Cologne must "ensure the reasonable protection of beneficial uses and the prevention of nuisance . . ." (United States v. State Water Resources Control Bd. (1986) 182 Cal.App.3d 82, 115-116, 119-120 ("Racanelli"), interpreting Water Code, § 13241.) Further, when the State Board adopts a water quality objective, it must demonstrate "a rational connection" between the relevant factors, "the choice made, and the purposes of the enabling statute." (Id. at p. 113.) In Racanelli, the court found that the water quality objectives adopted by the State Board violated Porter-Cologne because the Board had adopted them for another purpose and had not found they were needed for reasonable protection of beneficial uses. Based on the DSR, the State Board cannot show the required rational connection between the Plan amendments and the reasonable protection of beneficial uses. As discussed above, the Plan amendments include both a proposed Inflow Objective and a proposed Cold Water Habitat Objective. But the DSR admits that implementation of the Plan amendments likely would cause a "potentially significant" impact on "native fish species" by adversely affecting water temperatures. In fact, the DSR proposes measures to mitigate the significant impacts the Plan amendments will have on those fish. (DSR, pp. 7.6.2-56, 7.6.2-93 to 7.6.2-94, 7.6.2-103 to 7.6.2-105; see also DSR p. 5-19 [noting potential need to "refine" implementation of proposed Objectives to "avoid[] redirected impacts" to fish].) Nor is this consistent with the Central Valley Regional Water Quality Control Board's "Water Quality Control Plan for the	The commenter is incorrect that the State Water Board has failed to demonstrate a rational connection between the Bay-Delta Plan amendments and reasonable protection of beneficial uses. Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of reasonable protection of fish and wildlife beneficial uses, the State Water Board's consideration of different beneficial uses during the water quality control planning process, and the State Water Board's consideration of the factors listed under Water Code section 13241. The 2023 draft Staff Report Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, contains extensive analysis of the benefits of flow and its role as a critical element of protection and restoration. The 2023 draft Staff Report Section 5.4.3, Cold Water Habitat, contains a discussion of a narrative cold water habitat objective intended to prevent redirected impacts on cold water habitat from the new inflow and Delta outflow objective, and to address other existing and future temperature management concerns. As described in the 2023 draft Staff Report, this narrative objective would apply throughout the watershed, and be implemented through long-term temperature management strategies formulated by reservoir owners/operators to meet default carryover storage levels (or propose alternative levels for Board approval) and evaluate measures to improve temperature management including temperature control devices, cold water bypasses, passage, riparian reforestation, and operational changes. A cold water habitat objective is included in the revised proposed Plan amendments, as further discussed in Common Response 1.3, Revised Proposed Plan Amendments. Further, in response to comments expressing concern that unimpaired flow requirements identified in the 2023 draft Staff Report could result in depletion of reservoir storage and thereby have deleterious temperature impacts on native fish species, the inflow requirements contained in the 2025 draft Bay-Delta Plan were revised to include water supply adjustments for existing

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		Sacramento River Basin and the San Joaquin River Basin" (5th ed., Feb. 2019) ("2019 Central Valley Basin Plan"), which recognizes that cold water fish habitat, migration and spawning are existing beneficial uses of the lower American River below Folsom Dam. (See Attachment 1 [Attachment 1] at p. 2-10.) To protect these beneficial uses, the 2019 Central Valley Basin Plan includes the following water quality objective: "The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses." (Id. At p. 3-14.)	water right holders at the outset of plan implementation to allow more water to be stored in reservoirs and thereby reduce negative temperature impacts. Relatedly, the revised proposed Plan amendments allow reservoir owner/operators, as part of their development of long-term temperature management strategies, to propose their own carryover storage levels within an appropriate range tailored to each reservoir, thereby helping ensure the availability of cold water to avoid temperature impacts to fish caused by low storage levels. Lastly, the State Water Board and the nine regional water quality control boards administer the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) to achieve an effective water quality program for the state and are responsible for the regulation of activities and factors that may affect the quality of the waters of the state. The Bay-Delta Plan, adopted and implemented by the State Water Board, supplements both the Central Valley Basin Plan and San Francisco Bay Basin Plan, which were adopted and implemented by the Central Valley Regional Water Quality Control Board and the San Francisco Bay Regional Water Quality Control Board, respectively. These plans are intended to work in harmony, but the Bay-Delta Plan supersedes the regional water quality control plans to the extent there is any conflict.
327	19	The Plan Amendments Cannot Be Found to Reasonably Protect Instream Beneficial Uses When They Claim to Protect Cold Water Fish Habitat But Actually Would Impair It. Porter-Cologne does allow the State Water Board to adopt a Water Quality Control Plan that overlaps and supersedes a conflicting provision in an existing Basin Plan. However, the State Board cannot show a rational basis for adopting objectives with the stated purpose of protecting cold water fish habitat, [Footnote 4: The DSR suggests that the State Board's motivation for adopting the Plan amendments actually may be a desire to spread the responsibility for contributing water to improve Bay-Delta conditions to water users other than Reclamation and the Department of Water Resources. (DSR, p. 5-57.) Under Racanelli, this is not a legally valid reason for adopting a water quality objective. (Racanelli, supra, 182 Cal.App.3d at pp. 115-116, 119-	This commenter's assertion that there is no rational basis for adopting objectives to protect cold water habitat is unfounded. Please see the response to comment 327-18 for a discussion of the basis for adopting water quality objectives, the cold water habitat objective and implementation measures described in the 2023 draft Staff Report, and revisions to the proposed Plan made in response to comments raising cold water habitat concerns. The Staff Report acknowledges potential temperature increases could occur in some streams under some circumstances and managing these factors to protect cold water habitat for fish is complex and challenging. However, the implementation of the narrative cold water habitat objective and the flexibility provided in the inflow requirements would be expected to improve water temperature conditions for native cold water fish. The cold water habitat objective is intended to bolster existing legal protections

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		120.)) when those objectives override the Basin Plan's existing protection for this very use – but the new objectives actually impair that habitat. Moreover, the Plan amendments' Inflow and Cold Water Objectives cannot be legally implemented; the appendices to the DSR include water temperature modeling results confirming that implementation of the Plan amendments would cause temperatures in the lower American River to exceed the level set by the Incidental Take Statement in the 2019 NMFS Biological Opinion, in violation of the federal Endangered Species Act. (DSR, p. 7.6.2-12; DSR Appendix A6, Tables A6-208, A6-210 to A6-213.) Thus, the undisputed evidence in the DSR reveals that the Plan amendments would impair cold water fish habitat, in direct contravention of their stated purpose to protect it. Under these circumstances, it is impossible for the State Board to determine that the Plan amendments would "reasonably protect" beneficial use of the water by cold water fish. Consequently, the State Board cannot make the necessary "rational connection" between the Plan Amendments and Porter-Cologne's legal standards, and the DSR is not adequate to support the State Board's adoption of the Plan amendments.	to ensure comprehensive temperature protection over time. For additional discussion on this subject, see also Common Response 7.6.2, Aquatic Biological Resources and Cold Water Habitat, regarding implementation of the cold water habitat objective. In the past, most water users in the watershed have not had any limitations on their diversions to ensure that the Bay-Delta Plan objectives are met, and water quality objectives have been implemented primarily by the Projects (the collective term for CVP and SWP). The State Water Board has long signaled that other entities outside of the Projects may be required to help meet water quality objectives. As explained in Chapter 5 of the Staff Report, new objectives and flow requirements would apply throughout the watershed, including on upstream tributaries, and all water users on these tributaries, except those with a de minimis effect on flows, would have responsibility for contributing to achievement of the objective. Protecting the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta) watershed and its many beneficial uses is one of the State Water Board's primary responsibilities and top priorities. 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 watershed. The revised proposed 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). Implementation of the revised proposed Plan amendments is expected to improve watershed functions and to provide associated benefits to the aquatic ecosystem and biological resources within the tributaries, the Delta, and the Bay.
327	20	The Draft Staff Report Does Not Adequately Consider and Weigh the Effects on the Housing and Economic Development of the Communities That Will Lose Municipal Water Supplies as a Result of the Plan Amendments. When the State Board is considering adoption of a water quality	Section 13241 of the Porter-Cologne Act identifies certain factors that must be evaluated when establishing water quality objectives. The Staff Report appropriately accounts for and balances these factors. These factors are an inherent part of the analysis presented for decision-makers to understand the impacts; not only on the environment but also on other

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		objective to amend a water quality control plan, Water Code section 13241 compels the Board to weigh the following factors: (a) Past, present, and probable future beneficial uses of water, (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto, (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area, (d) Economic considerations, (e) The need for developing housing within the region, and (f) The need to develop and use recycled water. The DSR fails to account for and properly balance these factors because: (1) it understates the impact that the loss of municipal supplies due to the Plan amendments would have on the affected economies, and, (2) by assuming that the municipal suppliers will be able to offset their water losses, it downplays how the water losses will preclude municipalities from being able to develop housing despite California's intense and well-documented housing crisis. [Footnote 5: A 2015 report by the California Legislative Analyst's Office, "California's High Housing Costs - Causes and Consequences" estimates that from 1980-2010, the amount of housing failed to keep pace with demand by 90,000 units per year, resulting in an estimated shortage of 2.7 million housing units (20%) statewide by 2010. (Attachment 7 [Attachment 7].)] According to the modeling summarized in the DSR, and as summarized above, the Plan amendments will result in "average" reductions to municipal water supplies in the Sacramento watershed of 52,000 acre-feet under the 55% scenario, and up to 83,000 acre-feet under the 65% scenario. Regardless of which of these unimpaired flow scenarios is selected, the modeling demonstrates that the Plan amendments will cause deficiencies in municipal water supplies that are large enough to supply an	beneficial uses, economics, and other important considerations like the human right to water. Section 1.2, Organization of the Staff Report, in the 2023 draft Staff Report provides a list of the primary locations where this information can be found in the 2023 draft Staff Report. Section 13.6.2, Water Code Section 13241 Analysis, also provides a list of the primary locations where this information can be found in the Staff Report. 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. Chapter 8, Economic Analysis and Other Considerations, includes details on population projections, socioeconomic profiles, and municipal water supply costs. Most municipalities 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. Section 7.20.4, Mitigation Measures, of the 2023 draft Staff Report, provides a range of options that various entities can adopt or utilize to mitigate the potential negative effects of the proposed Plan amendments, including conservation and efficiencies. The mitigation measures may not be applicable to every location or for every action within the State Water Board's authority. Some mitigation measures are largely within the jurisdiction and control of other agencies; accordingly, the State Water Board cannot guarantee that measures will always be adopted or applied to fully mitigate all potential impacts. In addition, the project has been revised. Please see Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for a description of the revised proposed Plan

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		entire community, such as the City of Roseville, with more than 140,000 residents. (See, above, Section 1.D.) Deficits of this amount will in turn cause serious economic impacts because affordable and reliable water supplies in adequate quantities are essential to support both regional economic development and housing. The Central Basin Water Quality Control Plan recognizes that "the protection and enhancement of beneficial uses require that certain quality and quantity objectives be met for surface and ground waters." (2019 Central Valley Basin Plan, at II-1.00, emphasis added.) Certainly, this applies to the designated "municipal" beneficial use of the American River water. In fact, before many types of new development are approved, cities and counties must make findings that there is sufficient water to support those uses. See, e.g., Cal. Water Code §§ 10910, et seq. And for any project approved under CEQA, the approving land use agency must consider whether there is adequate water available to serve it. (State CEQA Guidelines, App. G.) In short, adequate water supplies are a prerequisite to municipalities' ability to support economic development, including their legally mandated fair-share of the regional housing needs allocation).	amendments. As discussed in Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, 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. In addition, the revised draft Plan includes human health and safety and other appropriate provisions to address human health and safety needs and other possible reasons for short-term and long-term exceptions to curtailments associated with implementation of the Bay-Delta Plan for specific purposes. Those purposes include provisions to allow continued diversions for minimum human health and safety water supplies where alternate supplies are not available. 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.
327	21	As experts from the Sacramento Water Forum's business caucus explained to the State Board at the public hearing on December 11, 2023, the unimpaired flow scenarios will significantly impede the region's development and building industry. For example, Jim Ray, a civil engineer with significant experience in construction of homes in the region, explained that "reliable water supply is extremely important and inextricably linked to the ability to provide new opportunities to house our growing population." (See Transcript of the State Water Board Public Hearing [Attachments 14, 15, and 16]—Sacramento Delta Draft Staff Report, December 11, 2023, Attachment 15 [Attachment 15], at p. 205:2-5.) The affordability of housing, especially for disadvantaged communities, is impacted if there is a lack of a "reliable and consistent water supply." (Id. at p. 205:6-9.) This reliability cannot be met by merely shifting to other sources of water as the Sacramento region has already implemented that shift over the past 20 years to manage and maintain a reliable and affordable source of water. (Id. at pp. 205:18-207:10.)	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.

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		Within the Sacramento region, population has grown 67 percent in the last 20 years and this has resulted in a significant unmet demand for housing. (Id. at p. 208:2-16) In fact, according to the Sacramento Metropolitan Chamber of Commerce, the need for housing is the largest problem that employers in this region are facing. (Id.) The testimony these experts presented to the State Board at its hearing on this matter emphasized what the construction industry already knows (and is obvious to most Californians): new housing structures are critical to help solve California's housing crisis. (Id. at pp. 209:21-210:11.) However, as demonstrated above, new housing cannot be developed without a reliable supply of water. Thus, regulatory requirements that significantly impact available water supplies in the Sacramento region will interfere with decades of work that have been done to manage regional water resources to, among other things, meet housing needs. (See id. at pp. 211:18-213:17.) To satisfy Porter-Cologne, the SED must consider these effects of the Plan amendments.	
327	22	Comments on Draft Staff Report's Analysis of Voluntary Agreement The Metric for Calculating Fall-Run Chinook Salmon Spawning Habitat on the American River Is Overly Restrictive and Does Not Reflect Actual Observed Spawning Conditions. The approach used in the Staff Report to estimate suitable fall-run Chinook salmon spawning habitat is overly restrictive and incorrect, which leads to a significant underestimate of existing habitat as well as the additional spawning habitat that is proposed with the VA. The SWRCB takes an all-or-nothing approach, considering habitat to be suitable only if water temperatures are below 13 °C (55.4 °F). Numerous studies have investigated the impacts of water temperature on survival of early life stages (fertilized eggs and pre-emergent fry) of Chinook salmon. A graphical comparison of daily temperature-related mortality rates from these studies is	Please see Common Response 3.1, Fish Protection, for a discussion of temperature effects on salmonid fish.

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		provided below [see Exhibit 2]. These are the relationships available in the SacPAS. The most restrictive of these studies does indicate that small amounts (not complete unsuitability) of mortality begin as temperatures exceed 55.4 °F, but the vast majority of the studies indicate the significant mortality rates do not occur until temperatures exceed 58 °F. Even at 58 °F, the vast majority of spawning would be successful, though some egg mortality would be expected to occur. Application of the 55.4 °F suitability threshold limits the calculated amount of spawning habitat availability on the lower American River during the assumed fall-run spawning period of October to December. During October, the simulated water temperatures are in excess of 55.4 °F 100% of the time for the existing conditions, 55% UIF, and VA alternatives. During November, the simulated water temperatures are in excess of 55.4 °F 95.3% of the time for both the existing conditions and 55% UIF alternatives, and 89.4% of the time for the VA alternative. Even during December, when ambient air conditions control water temperatures in the lower American River, the simulated water temperatures are in excess of 55.4 °F 42.3% of the time for the Existing Condition, 40.4% of the time for the 55% UIF alternative and 38.2% of the time for the VA alternative. This means that, under the SED's metric, the water temperatures during the vast majority of the spawning period are considered unsuitable for Chinook spawning. While the lower American River does face water temperature challenges, all available data confirms that the available spawning habitat is highly utilized, providing successful reproduction. Monitoring data indicate that a majority of fall-run Chinook spawning occurs in November and December, when water temperatures are typically in excess of 55.4 °F, and that a majority of this spawning is successful, leading to offspring. Real data from the lower American River demonstrate that the suitability threshold assumed in the SWRCB analysis is overly restrictive and counter-factual. This approach incorrectly discounts the 25 acres of spawning habitat proposed in the VA down to 3.35 acres, whereas in reality the proposed spawning habitat would provide more than the amount of habitat required to meet 25% of the doubling goal.	

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327	23	[Exhibit 2: Graph titled Figure 7. Chinook salmon fertilized egg and pre-emergent fry water temperature-daily survival functions presented in SacPAS, including relationships developed in this TM] Source: Bratovich et al. 2020. CHINOOK SALMON EARLY LIFESTAGE SURVIVAL & FOLSOM DAM POWER BYPASS CONSIDERATIONS. Prepared for the Sacramento Water Forum. (Attachment 18 [Attachment 18].)	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.
327	24	We note that temperature is just one component of habitat, and the American River VA also proposals gravel augmentation projects. While the DSR indicates "Few evaluations of the effectiveness of completed or ongoing gravel augmentation projects are available," we appreciate that the DSR also acknowledges the scientific work on this topic that our region has undertaken: "In the American River, however, quantitative evaluation of pre-project and post-project spawning utilization of gravel augmentation sites designed using a systematic modeling approach (Wheaton et al. 2004a, 2004b) demonstrated significantly increased spawning utilization by Chinook salmon and steelhead (Zeug et al. 2014b)." (DSR, at p. 3-36.) We note, for your information, that the effectiveness of constructed and enhanced salmonid habitat under a variable hydrology, and the complexity of spawning and rearing habitat interactions in the American River is supported by additional, recent peer-reviewed literature, as referenced below: Merz, J. et. Al (2018). Balancing competing life stage requirements in salmon habitat rehabilitation: between a rock and a hard place: Optimizing salmon spawning and incubation success. Restoration Ecology. 27. October. (Attachment 8 [Attachment 8].) Sellheim, K. et. Al. (2015). Juvenile Salmonid Utilization of Floodplain Rearing Habitat After Gravel Augmentation in a Regulated River. River Research and Applications. February. (Attachment 13 [Attachment 13].) For your convenience, we are including copies of both these	See Common Response 3.1, Fish Protection, on habitat benefit analyses and use of best available science and process for updates to literature in Chapters 3 and 4. Section 3.4.2.1, Chinook Salmon, has been updated to include Merz et al. 2019 and Section 3.4.4, Dam and Reservoir Effects on Salmonids, has been updated to include Sellheim et al. 2015.

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		studies with the materials we are submitting along with this letter.	
327	25	SacWAM Modeling Understates the Flow Benefits from the American River Voluntary Agreement. As discussed in the attached report, SacWAM Modeling of Voluntary Agreement, Attachment 12, the SacWAM modeling provided omits critical portions of the American River Voluntary Agreement proposal. The proposal, which was provided to the State Board in the Draft Strategic Plan [Footnote 6: https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Voluntary-Watershed-Agreements/Draft_Strategic_Plan.pdf] as well as numerous other public documents provided to the State Board dating to 2018, provides the following outflow contributions for the Lower American River: 10,000 acre-feet of upstream reservoir contributions in above normal and below normal years; 30,000 acre-feet of contributions from groundwater wells and the Sacramento Regional Water Bank in dry and critical years; 10,000 acre-feet of either, or a combination of, upstream reservoir and groundwater contributions. The modeling for upstream reservoir contributions should depict both releases from upstream reservoirs and a corresponding inflow to Folsom Reservoir as a result. However, the SacWAM modeling appears to show no difference between baseline conditions and implementation of the voluntary agreement in above normal and below normal years. This would seem to indicate this contribution was not included. Additionally, while the model does not show an increase in inflows to Folsom Reservoir, it does show that there are increased releases from Folsom Reservoir, which causes a net reduction in Folsom Reservoir storage. Therefore, this modeling incorrectly represents a decrease in storage, showing impacts to Folsom Reservoir storage that would not occur under the American River VA.	The VA proposal for the American River did not include any specifics about upstream reservoirs which made it impossible to model the upstream reservoir reoperation. SacWAM modeling has been updated to include reoperation of French Meadows and Hell Hole reservoirs which is reflected in the analysis presented in Chapter 13, Revised Proposed Plan Amendments. Please see Appendix H1a, Sacramento Water Allocation Model Methods, for details on model updates for the 2025 partially recirculated draft Staff Report.

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327	26	The modeling for groundwater contributions should represent 30,000 acre-feet of groundwater pumping in three out of eight years, as well as an increase in flows to the Lower American River due to a reduction in surface water diversions. However, SacWAM does not represent either of these, which results in an underestimation of the resulting flow benefit of the American River Voluntary Agreement.	Based on comments received, the model has been updated with respect to the American River VA proposal. Please see Appendix H1a, Sacramento Water Allocation Model Methods, for details on model updates for the 2025 partially recirculated draft Staff Report.
327	27	Finally, in dry years, there should be a representation in the SacWAM modeling of the 10,000 acre-feet of outflow provided through either or both groundwater and upstream reservoir contributions, and the resulting outflow to the Lower American River or additional inflow to Folsom Reservoir. This also appears to be unrepresented in the modeling.	Based on comments received, the model has been updated with respect to the American River VA proposal. Please see Appendix H1a, Sacramento Water Allocation Model Methods, for details on model updates for the 2025 partially recirculated draft Staff Report.
327	28	[Attachment 1: Attachment 1—Document titled The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region Fifth Edition]	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.
327	29	[Attachment 2: Attachment 2—Resume of C. Hammersmark]	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.
327	30	[Attachment 3: Attachment 3—Document titled City of Folsom 2020 Urban Water Management Plan]	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.
327	31	[Attachment 4: Attachment 4—Document titled City of Roseville 2020 Urban Water Management Plan]	Please see the response to comment 327-16. 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.
327	32	[Attachment 5: Attachment 5—Resume of E. Bishop]	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.

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327	33	[Attachment 6: Attachment 6—Resume of J. Weaver]	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.
327	34	[Attachment 7: Attachment 7—Document titled California's High Housing Costs Causes and Consequences]	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.
327	35	[Attachment 8: Attachment 8—Article titled Balancing competing life-stage requirements in salmon habitat rehabilitation: between a rock and a hard place]	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.
327	36	[Attachment 9: Attachment 9—Document titled American River Minimum Flows]	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.
327	37	[Attachment 10: Attachment 10—Document titled Biological Opinion on Long-term Operation of the Central Valley Project and the State Water Project]	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.
327	38	[Attachment 11: Attachment 11—Document titled Reservoir Coldwater Pool Development and Utilization]	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.
327	39	[Attachment 12: Attachment 12—Document titled Review of Voluntary Agreement Modeling]	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.
327	40	[Attachment 13: Attachment 13—Article titled Juvenile Salmonid Utilization of Floodplain Rearing Habitat after Gravel Augmentation in a Regulated River]	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,

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			General Comments, for the approach to addressing attachments to comments.
327	41	[Attachment 14: Attachment 14—Transcription titled State Board Hearing Sacramento / Delta Draft Report December 1, 2023]	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.
327	42	[Attachment 15: Attachment 15—Transcription titled State Water Board Hearing December 11, 2023 Public Hearing – Sacramento Delta Draft Staff Report]	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.
327	43	[Attachment 16: Attachment 16—Transcription titled Sacramento Delta Draft Staff Report Hearing November 17, 2023]	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.
327	44	[Attachment 17: Attachment 17—Document titled The Lower American River Modified Flow Management Standard A Drought Buffer for the Environment and Local Water Supplies]	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.
327	45	[Attachment 18: Attachment 18—Document titled Chinook Salmon Early Lifestage Survival & Folsom Dam Power Bypass Considerations]	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.
327	46	[Attachment 20: Attachment 20—Resume of M. Banonis]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or environmental effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
327	47	[Attachment 21: Attachment 21—Resume of A. Casey]	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.

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327	48	[Att 19:] 2020 water supply deliveries to American River-region water users were approximately 400 TAF, including both surface and groundwater. Figure 1 [Att 19: Exhibit 1] shows historical surface water and groundwater deliveries for the region from 2011 through 2022. Annual surface water deliveries in the region have remained close to 250 TAF since 2015. The 2014-2015 drought, and accompanying mandate for reduction in water use changed regional water-use behavior, and usage has not returned to pre-drought levels in spite of population growth. The following is a review of SacWAM simulated operations for American River regional water supplies under the Existing Condition, Voluntary Agreement (VA) and 55% Unimpaired Flow (55% UIF) scenarios. Regional Water Supplies Figure 2 [Att 19: Exhibit 2] shows a comparison of simulated annual surface water diversions for the American River regional water users (as represented in Figure 1 [Att 19: Exhibit 1]) for all three scenarios. Figure 2 [Att 19: Exhibit 2] indicates that the maximum annual surface water deliveries to the region is approximately 427 TAF under the Existing and VA scenarios, while the maximum surface water delivery under the 55% UIF scenario is approximately 384 TAF. The surface water diversion volumes used in SacWAM substantially exceed both pre- and post-2014 regional surface water use. A portion of this difference could be explained through reporting differences, but it is likely that the SacWAM modeling substantially overstates regional surface water diversions, and understates typical groundwater deliveries for all scenarios, possibly by more than 100 TAF per year. Additionally, the SacWAM analysis likely overstates the region's ability to handle large shortages in surface water supplies; historical surface water usage between 2014 and 2020 indicates that the region has historically had the ability to reduce annual surface water usage between the highest and lowest volumes of historical surface water use (2014 vs 2019) by around 20 TAF. The shortages in surface water supplies implied by the SacWAM modeling are beyond the region's historical ability to manage.	The commenter compares the historical 2020 water supply deliveries to American River-region water users (approximately 400 TAF total, with approximately 250 TAF of that made up of surface water supply) to the maximum simulated in SacWAM from 1922 through 2015. Since 2020 was a dry year, a better comparison would be a comparison to the minimum simulated diversion (248 TAF), which is consistent with the volume provided in this comment. The urban demand assumed in SacWAM is based on 2006-2010, as described in Section 1.1 of the SacWAM Documentation (available on the State Water Board's Bay-Delta webpage). Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding the scope, scale and application of SacWAM. Additionally, please see the response to comment 327-11a.

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327	49	[Att 19: Exhibit 1: Graph titled Figure 1. Historical Surface Water and Groundwater Deliveries to American River Regional Users]	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.
327	50	[Att 19: Exhibit 2: Graph titled Figure 2. Simulated Surface Water Deliveries to American River Regional Users]	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.
327	51	[Att 19:] Purveyor Surface Water Supplies A closer review of surface water supplies for individual water users shows some unclear results; Figure 3 [Att 19: Exhibit 3] shows combined regional CVP contract deliveries to the City of Roseville, San Juan Water District, City of Folsom, and the Sacramento County Water Agency. Placer County Water Agency (PCWA) and the City of Sacramento have contracts with Reclamation, but are not included in the volume of CVP water supplies shown in SacWAM.	As shown in footnote 6 of Table 7-1 in the SacWAM Documentation (available on the State Water Board's Bay-Delta webpage), Placer County Water Agency currently has no facilities to take delivery of CVP water from Folsom Lake. Please see Section A.3.15 of the SacWAM Documentation for information about water diversions by the City of Sacramento. While the CVP portion of the City of Sacramento's diversion is not explicitly identified in SacWAM, the total diversion from the City of Sacramento includes CVP diversions.
327	52	[Att 19: Exhibit 3: Graph titled Figure 3. Simulated CVP Surface Water Deliveries to American River Regional Users]	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.
327	53	[Att 19:] Remaining surface water deliveries for the region in the SacWAM modeling, are assumed to rely on regional water rights; several water agencies within the region provide wholesale deliveries to others from their water rights. Figure 4 [Att 19: Exhibit 4] shows a comparison of simulated regional water right deliveries, including wholesale deliveries. For the most part, regional water right deliveries should be relatively stable; SCWA has a Term 91-limited water right, so their supplies would be vulnerable to reduction, but others with relatively senior rights, like the City of Folsom, are often heavily reduced in the SacWAM modeling. The City of Folsom's average annual water right supplies under the 55% UIF scenario are reduced by 12 TAF relative to the Existing Condition; for context, recent historical City of Folsom surface water diversions have ranged from a minimum of 16.7 TAF in 2015 to 20.3 TAF in 2020,	Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding the scope, scale and application for the interpretation of SacWAM results on a regional scale. Also, please see Common Response 7.20, Utilities and Service Systems, for more information about the Staff Report's environmental analysis and approach to regional analysis.

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		so a 12 TAF reduction would be excessively beyond their capability to manage.	
327	54	[Att 19: Exhibit 4: Graph titled Figure 4. Simulated Water Right Surface Water Deliveries to American River Regional Users] Source: Volumes in shown in Figure 2 [Att 19: Exhibit 2] minus volumes shown in Figure 3 [Att 19: Exhibit 3]	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.
327	55	Water Supply Shortages [Att 19:] Figure 5 [Att 19: Exhibit 5] shows a comparison of simulated unmet water supply demand for the same water users represented in Figure 2 [Exhibit 19: Exhibit 2]. The Existing and VA scenarios have no unmet demands, their respective traces are along the 0 TAF line. The SacWAM modeling assumed groundwater usage was consistent across scenarios, so the volumes shown in Figure 5 [Att 19: Exhibit 5] would need to be met through either increased groundwater pumping or through demand reductions.	Please see the response to comment 327-11a.
327	56	[Att 19: Exhibit 5. Graph titled Figure 5. Simulated Unmet Water Demand for American River Regional Users]	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.
327	57	[Att 19: Exhibit 5. Simulated water demand for American River regional users]	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.
327	58	[Att 19:] Projected reductions in surface water supplies to the American River region based on operations for the 55% UIF scenario are beyond the region's ability to manage based on historical experience. Even if the region had the ability to shift to groundwater supplies to meet the reduction in surface water usage, the frequency and magnitude of the increased groundwater pumping would result in an unsustainable groundwater basin.	Please see the response to comment 327-13. While the State Water Board recognizes that the response to the reduction in Sacramento/Delta surface water supplies may be to pump (more) groundwater, the proposed Sacramento/Delta Update to the Bay-Delta Plan does not require or mandate an increase in groundwater pumping and nothing in the Staff Report requires groundwater pumping to be the response. Precise actions that local entities would take in response to changes in the water supply are in the hands of local entities. Refer also to Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, regarding groundwater impact analysis.

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328	1	South Feather Water & Power Agency (South Feather) has reviewed the comment letter and supporting technical memorandum of Nevada Irrigation District. South Feather incorporates NID's comments by this reference and adopts them as its own. South Feather and NID share common characteristics, including treated and agricultural deliveries, FERC regulated hydroelectric power projects, reliance in interbasin transfers [Footnote 1: The South Feather Power Project diverts approximately 85 TAF/yr from Slate Creek (tributary to the North Yuba River) into the Feather River watershed ." (DSR, p. 2-36], and reservoirs and recreational facilities. Given the two agencies' similarities, the impacts and inadequate analyses identified by NID would similarly apply to South Feather, including water supply, power generation, recreation, and other inadequately described and analyzed impacts in the State Water Board's Draft Staff Report (DSR).	Please see the response to comment 328-2. Please refer to Comment Letters 324 and 325 to review responses to the comments incorporated by reference.
328	2	South Feather relies exclusively on capturing and storing surface water to sustain its drinking water, irrigation water, hydropower and recreation enterprises, as well as to deliver water to North Yuba for its purposes. South Feather does not have any groundwater wells, or access to groundwater given its location almost exclusively overlies fractured rock aquifers. (See, e.g., DSR p. 7.4-52.) Water supply impacts resulting from the proposed plan amendments (55% unimpaired flow [UIF], within a 45% to 65% adaptive range) cannot be made up through "other water management actions", such as diversifying water supply portfolios. Groundwater storage and recovery is not available given South Feather's location. There is no upstream or other party from which to purchase transfer supplies. Nor are the other water management actions feasible in South Feather's case. The DSR narrative states that the UIF requirement would be imposed on all water rights and all facilities. (E.g., DSR, p. 5-17 [describing "default" implementation plan for all tributaries and all water rights in the Delta watershed].) Text like this would suggest that South Feather would be subject to the proposed UIF alternatives. However, like NI D's Scotts Flat Reservoir, neither the DSR nor the SacWAM modeling analyzed impacts associated with an UIF regime on South Feather's facilities, including Little Grass Valley Reservoir and Sly Creek Reservoir, and service area.	The hydrologic analysis of alternatives in SacWAM for the draft Staff Report assumed an unimpaired flow requirement on above New Bullards Bar on the North Yuba and one on the Feather below Oroville. In the model, these new instream flow requirements did not affect operations of SFWP because in some cases the existing flows are higher than the new flow requirements, and in others because of the scale of the analysis. Regarding the level of detail of the analysis, please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply. The impact conclusions made in the draft Staff Report do not rely on the implementation of other water management actions. In the implementation of the proposed project, it is possible that operations of SFWP operations may be affected. 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.

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328	3	Table 6-5 of the "Sacramento Water Allocation Model, Model Version 2023.06.12 Documentation, September 2023" (the "SacWAM Documentation"), contains the reservoir operational logic and states for both Little Grass Valley and Sly Creek that "TOC = TOI = average monthly historical". In other words, SacWAM modeled South Feather's key reservoir facilities as having top of conservation equal top of inactive, or full pool equals dead pool. These reservoirs are hardwired to always be at average monthly historical storage with no deviation from average. These two key South Feather facilities were not operated to ensure a 55% unimpaired flow below the reservoirs, contrary to the language of the DSR. Consistent with the foregoing, the DSR (Tables A1-258 to A1-261 [Exhibit 1]) depicts no change to Little Grass Valley Reservoir under all the UIF alternatives: Similarly, there the DSR (Tables A 1-321 to A 1-324) depicts no change to Sly Creek Reservoir: CEQA requires full disclosure of the proposed action and its environmental effects. (Washoe Meadows Community v. Department of Parks & Recreation (2017) 17 Cal.App.5th 277 [project description that did not identify a specific proposed project, and instead presented significantly different alternative proposals, was found legally inadequate because it precluded informed public participation in the CEQA process] .) The voluminous DSR cannot answer even the most basic question as to whether the proposed UIF requirement applies to South Feather's facilities and water rights (as DSR text suggests), or not (as SacWAM suggests). And, certainly, there is no analysis of the impacts of UIF on South Feather's facilities. (See, e.g., County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931 [CEQA analysis inadequate because it lacked detailed description of effects of proposed action on reservoir operations and related impact areas].) The DSR's UIF alternatives, as applied to South Feather, are woefully inadequate under CEQA. Given the foregoing, South Feather can only speculate as to the environmental impacts, economic effects, feasibility of alternatives and mitigation measures of the proposed UIF alternatives, and the reasonableness (or not) of the	Please see the response to comment 328-2.

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		balancing of beneficial uses required by Water Code section 13241. To the extent the State Water Board wishes to continue its analysis of the UIF alternatives (as opposed to the VA alternative), the DSR must be modified to address the issues raised in this comment letter and the DSR must be recirculated .	
328	4	[Exhibit 1: Tables A1-258 through A1-261 from Appendix A1, Sacramento Water Allocation Model Methods and Results, 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.
328	5	[Exhibit 2: Draft Staff Report Tables A1-321, A1-322, A1-323, A1-324]	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.
329	1	I offer the following comment regarding the Draft Staff Report's (DSR) assumption that unimpaired flow (UIF) alternatives may result in increased use of water transfers to address supply shortages stemming from a UIF requirement. I am the General Manager of South Feather Water & Power Agency. I have held that position for 7 years. South Feather owns and operates the South Feather Power Project (FERC Project No. 2088) that includes four hydroelectric power plants and five reservoirs on the South Fork of the Feather River. South Feather facilities also support 6,860 treated water connections and 38,000 irrigated acres. Over the course of my tenure, I have negotiated two reservoir reoperation water transfers on behalf of South Feather. I have also reviewed the files of prior South Feather water transfers to acquaint and educate myself as to South Feather's water transfers prior to my onboarding as General Manager. To implement a reservoir reoperation transfer, South Feather modifies its reservoir operations and stored water releases to deliver new water to Lake Oroville where the California Department of Water Resources (DWR) then captures and conveys the transfer water to downstream purchaser(s). South Feather's transfers involve post-1914 water rights administered by the State Water Resources Control Board and require temporary changes requested via petition under Water Code	The 2023 draft Staff Report acknowledges that Sacramento/Delta surface water supplies would be reduced following implementation of the Sacramento/Delta update to the Bay-Delta Plan. 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 decline. This may result in less water available for transfer. Please refer to Common Response, 8.1, Economic Analysis and Other Considerations, for additional discussion of water transfers. 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 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. The revised proposed Plan amendments also allow reservoir owner/operators, as part of their development of long-term temperature management strategies, to propose carryover storage levels within an appropriate range tailored to each reservoir, with lower requirements during drought years.

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		section 1725 et seq. South Feather's decision in whether to participate in a transfer, or not, is multifaceted. South Feather must consider other water demands, including consumptive deliveries for South Feather's domestic and irrigation customers and deliveries per contract to neighboring North Yuba Water District via a 2005 agreement between the two agencies. South Feather must also consider its other legal obligations, including instream flows, recreation commitments, and other obligations imposed by FERC as part of its licensing of the South Feather Power Project. South Feather must also consider its obligations to generate hydroelectric power as agreed to in its Power Purchase Agreement with Northern California Power Agency. Finally, given South Feather's transfers occur in drought years, South Feather must consider its own carryover storage levels and ensure it maintains enough water to satisfy its various demands and obligations if drought conditions persist in the years following the transfer. A key risk in whether South Feather participates in a water transfer, or not, are the terms of the reservoir refill criteria. Both the State Water Board, as part of its order approving the transfer, and DWR, as part of its agreement to convey transfer water, require a refill criteria. Modified reservoir operations from transfers create additional storage capacity that would not exist in the absence of the transfer. Refill of this additional vacated storage post-transfer has the potential to impact other legal users of water. The refill criteria and resulting refill agreement are mechanisms to ensure no injury to other legal users of water. The refill criteria can, and typically does, constrain South Feather's operations for multiple years following a transfer. In effect, the refill agreement can require South Feather to replicate the transfer and modified reservoir operations multiple years following the year of the transfer. Enclosed is South Feather's refill agreement [ATT 1] from its last reservoir reoperation transfer in 2022. Given that South Feather is geographically located above/upstream of Lake Oroville, the potentially injured party is the State Water Project and the terms of the refill agreement apply and continue indefinitely until Lake Oroville enters "Flood Control Operations". (See 2022 Refill	

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		Agreement, §§ 2.d, 4.a.) Phrased differently, South Feather's refill criteria continues until Lake Oroville spills (actually or theoretically via flood release). Thus, as part of South Feather's complex and multifaceted decision making on whether to transfer or not, South Feather must and does consider the likelihood of Lake Oroville entering Flood Control Operations following the transfer. Even under existing conditions, this assessment has resulted in South Feather ultimately declining to participate in prior transfer years given an assessment that the refill criteria would linger multiple years post-transfer. This includes, for example, 2018 where transfer purchasers sought transfer supplies from South Feather, but South Feather ultimately declined given concerns with the terms and forecasted duration of the refill criteria. In preparing this comment I reviewed the following sections in the DSR: (1) the environmental effects of increased use of water transfers in the resource-specific analyses in Section 7.3 through Section 7.20 (under Other Water Management Actions); (2) information on water transfers in Chapter 6, Changes in Hydrology and Water Supply (specifically Section 6.6.1.2, Water Transfers); and (3) Chapter 7, Environmental Analysis (subsection Water Transfers in Section 7.1.5.3, Reasonably Foreseeable Methods of Compliance and Response Actions). In general, the DSR forecasts water supply impacts from the UIF requirement and assumes the availability of water transfer supplies to minimize those water supply impacts, particularly for municipal water suppliers. In addition, I reviewed the DSR Technical Memorandum prepared by MBK Engineers summarizing the SacWAM model results for the proposed plan amendments (55% UIF with a 45%-65% adaptive range). The UIF standard significantly impacts storage levels in Lake Oroville. For example, MBK provided the following chart [Exhibit 1] demonstrating the modeled change in Oroville storage under a 55% UIF standard as compared to baseline conditions: Under a UIF regime, there is considerably more storage space in Lake Oroville, meaning Lake Oroville will enter "Flood Control Operations" less frequently. This would prolong the duration	

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		(and enhance risk) of future refill criteria if South Feather were to provide transfer supplies with UIF being the operative standard. In my opinion, this change alone by decreasing the likelihood of Lake Oroville Flood Control Operations would result in South Feather not participating in future reservoir reoperation water transfers. In addition to the decreased likelihood of Lake Oroville entering "Flood Control Operations", the UIF causes significant impacts to the water supply and power production of South Feather. These impacts are summarized in a separate comment letter from South Feather. Given the confluence of these circumstances, in my opinion, South Feather would not participate in water transfers in an UIF regime . I understand other potential transfer water sellers would also not be able to participate in future water transfers with UIF. Consequently, it is neither reasonable nor realistic for the DSR to include large volumes of transfer supplies in its analysis of how water suppliers would respond to shortages associated with implementation of the proposed plan amendments (UIF).	
329	2	[Exhibit 1: Table showing storage levels in Lake Oroville under 55% UIF]	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.
329	3	[ATT 1: Document titled In the Matter of Water Right Permits 1267 and 2492 (Applications 1651 and 2778) of South Feather Water & Power Agency Petitions for Temporary Change Involving the Transfer of up to 10,000 Acre-Feet of Water to Santa Clara Valley Water District]	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.
330	2	Advancing Agreements to Support Healthy River and Landscapes December 11, 2023 State Water Resources Control Board Public Hearing for Phase 2 of the Water Quality Control 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. Please also see Common Response 1.2, Water Quality Control Planning Process, for a discussion of non-flow measures and the State Water Board's authority to impose non-flow measures.

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		The Healthy Rivers and Landscapes Alternative is Fully Implementable and Enforceable - The Agreements to Support Healthy Rivers and Landscapes provide a clear path to the timely implementation of flows and habitat that promote species recovery--the public water agencies are committed to advancing this program, investing the time to collaborate with state and federal agencies, our conservation partners, and tribes. - Water agencies have been leading implementation of habitat improvements using best available science as the Early Implementation Panel provided on December 1. This would not be possible if unimpaired flows are implemented.	
330	3	The Healthy Rivers and Landscapes Alternative is Fully Implementable and Enforceable - The Agreements to Support Healthy Rivers and Landscapes include secured funding from state, federal and local sources. - The Agreements to Support Healthy Rivers and Landscapes will have enforcement agreements with the State Water Board under Government Code Section 11415.60, which will state the specific obligations of Parties responsible for implementation of an Implementing Agreement, along with related regulatory enforcement mechanisms related to flows and habitat restoration.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 507 for responses to oral comments related to this PowerPoint.
330	4	Flows with Function - The Agreements to Support Healthy Rivers and Landscapes are designed to restore ecosystem function of the landscapes and riverscapes, while concurrently helping secure water supplies for communities, farms, other fish and wildlife, recreation, and hydropower. - We recognize that a healthy river ecosystem depends upon on a sufficient volume of water interacting with a healthy landscape in a way that approximates the habitat patterns to which the native flora and fauna are adapted.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 507 for responses to oral comments related to this PowerPoint.

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		- The Healthy Rivers and Landscapes approach includes a portfolio of actions in every major part of the system designed to reactivate the landscape-scale patterns of biophysical habitat conditions that robust, resilient populations of salmon (and other fish, bird, and wildlife populations) depend upon. - The Agreements Supporting Healthy Rivers and Landscapes provide an opportunity to integrate flows with infrastructure improvements that allows for the more efficient use of water to restore ecological function.	
330	5	Need a Balanced Approach that Protects All Beneficial Uses - The Healthy Rivers and Landscapes alternative provides more benefits and fewer impacts than the proposed Plan amendments - Public water agencies acknowledge flow as an important component of habitat, but we need a new approach where every drop of water serves a specific and targeted beneficial use or multiple uses. The updated Delta water quality standards should protect all beneficial uses. - Public water agencies--like the State Water Board--are also charged with meeting water supplies for all the beneficial uses in their region and we take this very seriously. - The modelling expert panel showed that Agreements Supporting Healthy Rivers and Landscapes are a better balance that reasonably protects beneficial uses, which is demonstrated in 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.
330	6	[Exhibit 1 of ATT 1: Table titled Expected Change Compared Draft Staff Report Baseline]	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.
330	7	The Healthy Rivers and Landscapes Alternative Incorporates Science and Adaptive Management - Flow and non-flow measures that were developed based on best available science, with direct input and oversight by California Environmental Protection Agency, the Natural Resources Agency, and the California Department of Fish and	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 507 for responses to oral comments related to this PowerPoint.

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		Wildlife, and with direct input from dozens of experienced and well respected scientists. - A process that encourages rapid adaptive management as we continue to learn about flow, non-flow, and the flow/non-flow interactions, adaptive management that would occur through a structured, open, and transparent process and for which the State Water Board will have oversight. - A path to harmonize multiple regulatory processes, the authority over which is held by different agencies-provide for alignment of, among other laws, federal regulation under the federal Endangered Species Act, Clean Water Act and state regulation under the State Endangered Species Act, Porter-Cologne Water Quality Control Act, and California water rights.	
330	8	[Exhibit 2 of ATT 1: Graphic titled Watershed Wide Approach]	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.
330	9	Summary The Healthy Rivers and Landscapes alternative should be adopted by the State Water Board as the best alternative for meeting the policy, technical and legal objectives for the Delta Plan update. - The Healthy Rivers and landscapes alternative provides more benefits and fewer impacts than the proposed Plan amendments. - The Healthy Rivers and Landscape alternative is the culmination of more than 5 years of collaboration among the California Natural Resources Agency, the California Environmental Protection Agency, public water agencies throughout California and other stakeholders and reflects input based on the best available science from numerous aquatic ecosystem and species experts, which resulted in a modern approach to protecting all beneficial uses of water in the Bay-Delta watershed. - The unimpaired flow (UIF) alternatives at the core of the Draft	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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		Staff Report, if implemented, would have significant negative impacts throughout California.	
331	1	The Tuolumne River as an Example of the Impact of Delays Caused by the VA Process [See Exhibits 1 & 2] Dave Warner November 17, 2023	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 421 for responses to oral comments related to this PowerPoint.
331	2	[Exhibit 1: Graph titled Tuolumne Fall Run Chinook Salmon Escapement 1952-2022]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 421 for responses to oral comments related to this PowerPoint.
331	3	[Exhibit 2: Graph titled Tuolumne Fall Run Chinook Salmon Escapement 2000-2022]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 421 for responses to oral comments related to this PowerPoint.
333	1	Agreements to Support Healthy Rivers and Landscapes November 17, 2023 State Water Resources Control Board Public Hearing for Phase 2 of the Bay-Delta Water Quality Control Plan Update	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	2	[Exhibit 1: PowerPoint slide of multiple graphics titled MOU Signatories]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	3	Our Review of the Staff Report - Collaboratively advance the Healthy Rivers/Voluntary Agreement approach - Reviewing the report to ensure that the description of the alternative, analysis and final decision are consistent with the MOU	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	4	Healthy Rivers: Implementation Through Governance	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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		Unprecedented Watershed- Wide Coordination - Regulatory agencies - Water agencies - Environmental groups and tribal communities invited/welcome Consensus Building - Pooled resources of \$ and water - Address trade-offs - Learn about constraints and opportunities - Voting structure if needed Science and Hypothesis Testing - Coordination across parties - Directly answering open questions about habitat and flows Reporting - Annual - Triennial	November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	5	[Exhibit 2: PowerPoint slide of a graphic titled Healthy Rivers: Implementation Through Governance]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	6	Healthy Rivers: Feather and Sacramento Rivers Integration of Flows and Landscape	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.

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		- 160,000af of dedicated flows during middle-year types - Up to 35,000 acres of idled land - Limited groundwater substitution - Water User Contributions \$\$ - Early Implementation Projects Underway (more at December 1 Hearing) - Reactivating the Landscape (Floodplains, Oxbows, Spawning Gravels etc.) Holistic Approach to Healthy Rivers and Landscape	
333	7	[Exhibit 3: Photo of a tree]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	8	[Exhibit 4: Graphic titled A Holistic Approach to Healthy Rivers and Landscapes] A circular graphic that depicts the stages of the Salmon lifestyle. A map of the Sacramento river and additional rivers with points of interest for salmon, including creek/river enhancements, fish passage, fish rest stops, temperature management, and more.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	9	Healthy Rivers: Yuba River 50 TAF in Above Normal, Below Normal and Dry water years - Flow contribution is supplemental to Yuba Accord flows and Yuba River Development operations, including requirements specified in SWRCB Corrected Order WR2008-0014 - Resulting from reoperation of New Bullards Bar Reservoir storage operating to a September 30 storage level which is 50,000 acre-feet below the existing Yuba Accord September 30	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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		target storage level 150 Acres of Habitat Enhancement - Includes the restoration of 50 acres of instream habitat and 100 acres of floodplain habitat \$1,187,000 in Annual Funding - Supports habitat enhancement projects and the Yuba River Science Program	
333	10	[Exhibit 5: PowerPoint slide of photo titled Healthy Rivers: Yuba River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	11	Healthy Rivers: American River Flows in Above Normal + Below Normal, and Dry + Critically Dry Years - Upstream reservoir operations (3 AN/BN years): 10 TAF - Groundwater replenishment (3 D/C years): 30 TAF - Either reservoir operations and/or groundwater replenishment (3 D years): 10 TAF 100 Acres of Habitat - 25 acres of spawning - 75 acres of rearing Over \$1,000,000 in Estimated Annual Contributions - Based on annual diversions	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.
333	12	[Exhibit 6: PowerPoint slide of photo titled Healthy Rivers: American River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.

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333	13	Healthy Rivers: Mokelumne Expected Net Delta Inflow of 5, 5, and 7 TAF (in Dry, Above Normal, and Above Normal years) 25 Acres of New Floodplain and 1 Acre of In-Stream Rearing \$10 Per Acre-Foot Diverted, Plus \$1.5 Million for Mokelumne Habitat	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.
333	14	[Exhibit 7: PowerPoint slide of photo titled Healthy Rivers: Mokelumne]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	15	[Exhibit 8: Table titled Additional Releases from Camanche Dam, Above D-1641]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	16	Health Rivers: Putah Creek 1.4 ac. Improved Spawning and Rearing Habitat (Early Implementation) - Maintain approximately 0.4 acres/year with gravel scarification (CDFW RMA) Reservoir Reoperation- Lake Berryessa - Provide 6,000-7,000* acre feet of new instream flow in AN, BN, D, and C* years - In addition to Putah Creek Accord flows - Enhances Putah Creek restoration work and North Delta Arc habitat investments Funding \$2/AF diverted to Putah South Canal for science and habitat programs - Support Healthy Rivers science program	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.

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		- Continue Putah Creek habitat and science programs - Enhance Putah Creek monitoring program Putah Creek provides very little water to the Delta except during flood events” (SWRCB 2016)	
333	17	[Exhibit 9: Table titled Table 20. Voluntary Agreement Flow Plan (cfs/d) for Putah Creek]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	18	[Exhibit 10: PowerPoint slide of a graphic titled Healthy Rivers: Putah Creek]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	19	Healthy Rivers: Tuolumne River Habitat Restoration - 77 acres of newly-constructed rearing/floodplain habitat which will be inundated at the proposed Tuolumne VA flows. - 75,000 tons of new gravel between river mile (RM) 52 and RM 39 and approximately 25,000 tons of new gravel between RM 39 and RM 24.5 to create additional spawning/rearing habitat. - See Tuolumne Term Sheet for additional projects. Self Funded - Approximately \$81.5M	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	20	[Exhibit 11: PowerPoint slide of photo titled Healthy Rivers: Tuolumne River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	21	[Exhibit 12: Table titled Flow Contributions]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.

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333	22	Healthy Rivers: Friant In Dry, Below Normal, and Above Normal water years under the existing San Joaquin River Restoration Settlement, Reclamation would reduce recapture of Restoration Flows to achieve a Delta outflow goal of 50 TAF between February and May.	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.
333	23	[Exhibit 13: Graphic titled San Joaquin River Restoration Program Area]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.
333	24	Healthy Rivers: Delta 5,500 ac of tidal wetland restoration - North Delta Arc - Highest likelihood of success - Monitoring and learning to support additional Delta restoration - Interaction with flow? Combined outflow from throughout the watershed - 500,000-700,000 acre feet of water for outflow in D, BN, and AN years - Science basis report shows substantial improvements in fish abundance - Monitoring/research to understand these mechanisms and best way to deploy flows for maximum benefits - Interaction with landscapes? Funding \$10/acre-foot diverted from the Delta	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.
333	25	[Exhibit 14: PowerPoint slide of photo titled Healthy Rivers: Delta]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 590 for responses to oral comments related to this PowerPoint.

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334	1	Tribal Water Rights – Where is Our Water? Clarification There are 109 federally recognized Native American Tribes in California, including several tribes with lands that cross state boundaries. There are more than 80 Native American Tribes in California that are currently not recognized by the federal government but receive some acknowledgement from the State. There are over 300 individual Native America allotments located both on reservations and in the public domain. All qualify for quantification. Sources: California Courts, Watereducation.org Tribal Water Rights Federally reserved water rights on Indian reservations are governed by the Winters doctrine, which has evolved over more than a century in federal courts, and since 1955 in state courts as well. Two landmark U.S. Supreme Court cases, <i>Winters v. U.S.</i> and <i>U.S. v. Rio Grande Dam & Irrigation Co.</i>, established several key principles: 1) federally reserved lands have a right to use sufficient water to fulfill the “primary purpose” of the reservation, and 2) these water rights cannot be destroyed by state water law or by water users acting in accordance with state law. Evaluation of a tribe’s water rights requires a determination of two factors – the date on which the land became federally reserved (the “priority date”), and the amount of water needed to fulfill the “primary purpose” for which the land was federally reserved. Source: Watereducation.org Priority Date of Reserved Rights	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for discussion of tribal reserved water rights. Additional information has also been added to Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, on this topic. Chapter 11 explains the Winters Doctrine, methods and processes for quantifying federally reserved tribal water rights, and the State Water Board’s water-right functions, including its ability to consider unquantified reserved rights in water-right proceedings. Chapter 11 also provides updated background information regarding federally recognized tribes, groups seeking federal recognition, and public domain allotments in California.

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		Federally reserved water rights have priority over all other water rights dating from the time when the reservation was first created and cannot be appropriated by the State. In California there are no treaty tribes. In 1851-1852, federal agents negotiated 18 treaties with California Tribes. These treaties would have set aside approximately 8% of the state's acreage for California tribes, provided federal recognition of those tribes, and provided assistance with transition to an agrarian lifestyle. At the same time, Congress passed the Land Claims Act of 1851, providing that all lands in California would pass into the public domain unless claimed within two (2) years. Under pressure from California statesmen, Congress failed to ratify the negotiated treaties and secretly sealed them away without informing the tribes that they had not been ratified. Congress also failed to "priority date" which is usually the date of the executive order or statute which created the Indian tribe's reservation. However, it is important to understand that the priority date in some cases is actually earlier than the creation of the reservation. For instance, the priority date of tribes whose reservation occupies land which was originally a military base, Indian boarding school, or other type of federal land is actually the date of creation of the military base, Indian boarding school, or other type of federal land. This is but one example of a situation where a careful examination of a tribe's individual history is essential. It is also important to understand that there is no requirement that the Indian people of a reservation actually used the water from the priority date. Unlike water rights under state law, federally reserved rights do not expire if the water is not used. As a result, Indian tribes may decide to use their water rights later than other users and still have a senior right to sufficient water for the purposes of their reservation. Only landowners who have made continuous beneficial use of water since before the priority date will have a	

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		right senior to that of the tribe. In practical terms this means that, once asserted, tribal water rights can have a significant impact on the quantity of water available to non-Indians both in the present and in the future. Source: Watereducation.org	
334	2	Primary Purpose and Quantification In recognition of the importance of finality in water adjudications, the U.S. Supreme Court has found that tribal water rights must be quantified for both present and future uses. The method most commonly used is the “practicably irrigable acreage” (PIA) method. The PIA method quantifies the amount of water needed to irrigate arable lands on the reservation. The weight of authority holds that federally reserved rights include both groundwater and surface water. The federal McCarran Amendment provides for a limited waiver of sovereign immunity so that the United States, as trustee of tribal resources, can be joined in state general stream adjudications to determine tribal water rights. Together, a tribe’s priority date and primary purpose quantity must be used to determine the tribe’s water rights. This mechanism allows states to permanently quantify tribal water rights, and to allow for informed planning by providing certainty in the allocation of limited water resources. Source: Watereducation.org	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses.
334	3	Individual Indian Allotments Allotments made to individual Indian persons can be divided into two categories – first, lands on Indian reservations which were allotted to individual members of federally recognized tribes under the General Allotment Act of 1887 (“Dawes Act”); second, lands on the public domain which were allotted to individual members of both federally recognized and non-federally-recognized tribes. One of Congress’ intentions in passing the Dawes Act was to encourage Indian persons to adopt an agricultural lifestyle. Both the Dawes Act and the U.S. Supreme Court have recognized that on reservation allotments are entitled to a proportional share of a tribe’s federally reserved water rights. Thus, individual	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses.

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		allotments located on a reservation must be included in the total acreage used when calculating a tribe's PIA. Public domain allotments located off of Indian reservations are subject to the same principles as Dawes Act allotments and other federally reserved lands with respect to water rights. That is, the water rights attached to a public domain allotment are determined by application of the priority date and the primary purpose as discussed above. Source: Watereducation.org	
334	4	Conclusion In general, California's Bay-Delta plan update does not account for tribal water rights which have not yet been quantified. The exact count of tribes whose water rights have been accurately quantified is unclear, but what is clear is that the tally is far below the total number of federally-recognized tribes in the state. Furthermore, there is no evidence to suggest that the water rights of any public domain allotment have been accurately quantified and incorporated into water allocations. Not properly accounting for reserved tribal water rights limits the ability of the SWRCB, other public entities, businesses, tribal governments, and individual landowners to formulate equitable, reliable, long-term water usage plans. Tribal Water Rights must be addressed and quantified. Source: Watereducation.org	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses.
335	1	Habitat on Working California Ricelands California Rice Overview - 500,000 acres – Sac Valley - 2,500 family farms - Sacramento River, Feather River and Yuba River - Annually winter flood 320,000 acres - \$6M in conservation practice programs – NRCS, DWR, CDFW	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.

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		Species - 230 species -- 30 special status - 300,000 acres of equivalent wetlands -- \$2.8B - Symbiotic to the 75,000 of managed wetlands – public and private - Pacific Flyway - Shorebird Site of International Significance Impact of Unimpaired Flows on Waterfowl - Central Valley supports the highest density of wintering waterfowl in the world. - Half of all ducks and nearly all of the geese in the Central Valley are found in the Sacramento Valley. - Rice in the Sacramento Valley provides 80% of all waterfowl food. Impact of Unimpaired Flows on Waterfowl - Unimpaired flows may fallow up to 144,000 acres of rice in the Sacramento Valley. - Equal to nearly 25% of all the waterfowl food now available. - No food surpluses elsewhere in the Central Valley to offset this loss.	
335	2	[Exhibit 1: Photo of rice fields]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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			November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	3	[Exhibit 2: Table of reptile and bird species]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	4	[Exhibit 3: Photo of ducks]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	5	[Exhibit 4: Photo of rice fields]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	6	[Exhibit 5: Photo of a salmon]	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.
335	7	[Exhibit 6: Photos of Ricelands Salmon Project]	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.
335	8	[Exhibit 7: Graphic titled Salmon Rearing Current Practice Illustration]	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.
335	9	[Exhibit 8: Graphic titled Modified Boards in Field Drains for Volitional Fish Passage]	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.
335	10	[Exhibit 9: Two graphics including Sutter and Yolo bypasses, rice fields, and wildlife areas/national wildlife refuges]	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.
335	11	[Exhibit 10: Graphic titled Both Dry-side and Wet-side Fields Helping Salmon]	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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335	12	Conservation Reliance of Giant Gartersnakes on Water Deliveries Giant gartersnakes historically occurred in marshes and sloughs throughout Central Valley. Loss of >95% of marshes in Central Valley extirpated giant gartersnakes from 2/3 of their range and precipitated listing as threatened under California and U.S. Endangered Species Acts. In today's landscape, densities are highest in natural and restored marshes, but most remaining habitat is rice fields in Sacramento Valley. Wylie et al. 2010; Halstead et al. 2010, 2014 What happens to giant gartersnakes when water is removed from the landscape? Giant gartersnake risk of mortality is higher when less rice is available in and near their home ranges. Giant gartersnake annual survival is much lower when less rice is grown in and near their home ranges. Halstead et al. 2019 Giant Gartersnakes are reliant on water deliveries to marshes and rice in Sacramento Valley for persistence.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	13	[Exhibit 11: PowerPoint slide of three photos titled Giant gartersnakes historically occurred in marshes and sloughs throughout Central Valley]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	14	[Exhibit 12: PowerPoint slide of three photos titled Loss of >95% of marshes in Central Valley extirpated giant gartersnakes from 2/3 of their range and precipitated listing as threatened under California and U.S. Endangered Species Acts]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	15	[Exhibit 13: Graph titled Giant Gartersnake Density]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.

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335	16	[Exhibit 14: PowerPoint slide of graphic titled In today's landscape, densities are highest in natural and restored marshes, but most remaining habitat is rice fields in Sacramento Valley]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	17	[Exhibit 15: PowerPoint slide of graph titled In today's landscape, densities are highest in natural and restored marshes, but most remaining habitat is rice fields in Sacramento Valley]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	18	[Exhibit 16: Photo of a fallow field with a red question mark]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	19	[Exhibit 17: Photo of a giant gartersnake]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	20	[Exhibit 18: PowerPoint slide of graph titled Giant gartersnake risk of mortality is higher when less rice is available in and near their home ranges]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	21	[Exhibit 19: PowerPoint slide of graph titled Giant gartersnake annual survival is much lower when less rice is grown in and near their home ranges]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	22	[Exhibit 20: Photo of a giant gartersnake]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	23	[Exhibit 21: Photo of a field]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
335	24	[Exhibit 22: PowerPoint references list titled For Further Information]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 443 for responses to oral comments related to this PowerPoint.
336	1	Nonlinear trends in warming and 21st Century droughts	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		• rising temperatures • increased evapotranspiration • soil drying • reduced runoff • Tree mortality • wildfires Update to IPCC AR6 WG1 report “Indicators of Global Climate Change 2022: annual update of large-scale indicators of the state of the climate system and human influence” Earth System Science Data, June 2023 By IPCC lead author Piers Forster & international team of 50 scientists. Followed “methods as close as possible to those used in the IPCC Sixth Assessment Report (AR6) Working Group One (WGI) report. “ Compiled “monitoring datasets to produce estimates for key climate indicators related to forcing of the climate system.” Finding: Earth’s Energy Imbalance has increased Piers Forster et al. (2023) 90% of heat has been going into the ocean (a) Observed changes in the Earth heat inventory for the period 1971- 2020 (b) Estimates of the Earth energy imbalance for IPCC AR6 assessment periods and the most recent decade.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.

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		Finding: Anthropogenic warming has accelerated Piers Forster et al. (2023) Decadal trends in human induced warming on the left axis and anthropogenic effective radiative forcing (ERF) on the right axis. "The most recent trends were unprecedented at the time of AR6 and have increased further since then (red markers), showing that human activities are consistently causing global warming recently of more than 0.2°C per decade." Piers Forster et. Al. (2023) September 2023 breaks global temperature record by "staggering large" margin From "September 2023 Temperature Update", Robert Rhode, Berkeley Earth Globally, September 2023 was the warmest September — and the largest monthly anomaly of any month — since records began in 1850. The previous record for warmest September was broken by 0.5°C (0.9°F), a staggeringly large margin. Both land and ocean individually also set new records for the warmest September. Large increase in evaporative demand From: A Multidataset Assessment of Climatic Drivers and Uncertainties of Recent Trends in Evaporative Demand across the Continental United States, Journal of Hydrometeorology, April 2022 Christine Albano, John Abatzoglou, Daniel McEvoy, Justin Huntington, Charles Morton, Michael Dettinger, and Thomas Ott	

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		“Trends are large and are more than warming trends. ...a big increasingly impactful change, mostly unnoticed historically because temps measured everywhere but evapotranspiration only here and there” – Mike Dettinger Water balance shifts during multi-year droughts – less runoff Climate elasticity of evapotranspiration shifts the water balance of Mediterranean climates during multi-year droughts, Hydrology and Earth System Sciences, Sept 2020. Francesco Avanzi, Joseph Rungee, Tessa Maurer, Roger Bales, Qin Ma, Steven Glaser, and Martha Conklin. Changes in runoff response during droughts have been observed in Australia (Saft et al., 2016b), California (Bales et al., 2018), and China (Tian et al., 2018) and have often been quantified as statistical shifts in the precipitation–runoff relationship, i.e., an empirical regression between annual precipitation and annual runoff.	
336	2	[Exhibit 1: Two graphs titled (a) Earth Heat Inventory and (b) Earth Energy Imbalance, 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.
336	3	[Exhibit 2: Graph titled Decadal trends]	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.
336	4	[Exhibit 3: Graph titled Berkely Earth - Global - September]	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.
336	5	[Exhibit 4: Graphic from scientific study titled A Multidataset Assessment of Climatic Drivers and Uncertainties of Recent Trends in Evaporative Demand across the Continental United States]	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.
336	6	[Exhibit 5: Graph from scientific study titled A Multidataset Assessment of Climatic Drivers and Uncertainties of Recent	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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		Trends in Evaporative Demand across the Continental United States]	the project. Refer to Common Response 1.1, General Comments, for the approach to addressing exhibits.
336	7	[Exhibit 6: Three graphs titled Almanor, East Branch, and Oroville, 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.
336	8	[Exhibit 7: Six graphs titled Yuba, American, Cosumnes, Mokelumne, Stanislaus, and Tuolumne, 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.
336	9	[Exhibit 8: Six graphs titled Merced, San Joaquin, Kings, Kaweah, Tule, and Kern, 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.
337	1	The Bay Institute. Bay Impacts, Operations Modeling, Water Supply Staff Hydrologist State Water Resources Control Board Hearing on 9.2023 Draft Phase 2 Bay-Delta WQCP Update Staff Report/SED December 1, 2023 San Francisco Bay inflow conditions are already worse than baseline The proportion of Central Valley runoff reaching the Bay has declined persistently, despite water quality control plan standards and ESA requirements. Bay Inflow ...and conditions are getting even worse.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	2	[Exhibit 1: Graphic titled Weather & Climate]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	3	[Exhibit 2: PowerPoint slide of four graphs titled San Francisco Bay inflow conditions are already worse than baseline]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	4	[Exhibit 3: Two graphs of Bay Inflow titled Unimpaired and Actual, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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			November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	5	[Exhibit 4: Graph titled Proportion of flow reaching the Bay]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	6	[Exhibit 5: Graph titled Changes in Feb-June Bay Inflow Indicator]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	7	Water Supply Impacts • Water supply impacts are overstated on p. 6-57 (e.g. 14% of Bay-Delta supply is only 4% of total supply) • Analysis assumes worst case scenario – impacts will be less • People can and do adjust to water supply limitations (e.g., through conservation, different cropping patterns, etc). But fish, wildlife, and water quality cannot "adapt" to the extreme changes to the hydrograph in the status quo (as evidenced by degraded conditions). • it would take just 5% of So Cal supplies to reach the 55% Alternative and 7% to reach the 65% Alternative • San Francisco Bay region is the most-impacted region, yet it also has the most to gain	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	8	State Water Board must do better than the status quo • Declining fisheries at status quo flows • Modeling results show little change at 55% or lower alternatives • Simply improving flow conditions is not the standard, Reasonable protection of beneficial uses and achieving plan objectives is the standard. So, small changes in flow (or habitat, for that matter) are not adequate.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.

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337	9	[Exhibit 6: Graph titled Water Supply Impact vs. Longfin Abundance]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	10	SacWAM Model • Freeport Instream Flow Requirement does not cover flow in the Yolo Bypass • This potentially leaves on average 20% and up to 60% of the Sacramento Valley flow unprotected	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	11	[Exhibit 7: Two graphs titled February 1986 Freeport IFR only and February 1986 Yolo Bypass Included in IFR, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	12	SacWAM Model • Failure to include modeling of 2018 Lower San Joaquin River objective (40% UIF) underestimates the flow alternatives (compared to the VA Alternative, which includes these flows on the Merced and Stanislaus Rivers) • “The differing responses to changed BiOp assumptions observed in SacWAM and CalSim II result from multiple differences between the models that are not fully understood at the time of this writing.” G3a-11 • “The changes in hydrology and supply associated with the proposed VAs are relatively small compared with the volume of water in the system, and some details of the VAs such as which reservoirs may be reoperated, which fields will be fallowed, when reservoirs can refill, and when groundwater substitution will occur, have not been fully specified.” G3a-1	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
337	13	Climate-resilient Year Types: • The Bay-Delta Plan should update the Sac Valley Index and SJ Index Null & Viers 2013: “...if current	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.

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		WYT thresholds are maintained (Figure 7), then the burden of climate-driven water scarcity falls entirely on environmental outflow through the Bay Delta (-16%), while the percentage of average annual flow to exports (+2%) and out-of-stream uses (+4%) increase somewhat to preserve relatively constant deliveries in drier years... The WYT framework, and how it could be altered to reflect climate change, directly affects water winners and losers in the state.”	
337	14	[Exhibit 8: Two graphs titled Figure 7. Modeled distribution of water year types using historical thresholds]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
341	1	The TRP strongly supports adoption and implementation of the Sacramento River Parties Phase II Voluntary Agreements (VA), which will result in a more durable outcome for the environment, fisheries, local stakeholders, and more broadly, the public at large. The Tuolumne River Voluntary Agreement (TRVA), as part of the comprehensive VA proposal, seeks to address the same positive outcomes and is a key piece of the comprehensive VA package. As part of our commitment to the TRVA and the continued overall health of the Lower Tuolumne River, the TRP recently partnered with River Partners and McBain Associates to provide robust support for the TRVA’s habitat restoration commitments - a locally funded \$80 million commitment [Footnote 1: More information available at: http://tinyurl.com/3vbkmp22].	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.
341	2	The TRP recognizes the diligent, hard work required by State Water Board staff to arrive at the DRSED II. The TRP comments below are intended to support the State Water Board’s efforts to improve and finalize the DRSED II and focus on: 1) the State Water Board’s representation of the Lower San Joaquin River/Southern Delta updates to the Bay-Delta Plan [Footnote 2: In December 2018, the State Water Board adopted Bay-Delta Plan amendments focused on flows in the Lower San Joaquin River and its three major tributaries – the Stanislaus, Tuolumne, and Merced rivers. In 2022, the State Water Board issued a Notice of Preparation to receive input on the scope and information to be included in a draft environmental impact report for a proposed regulation to implement the Lower San Joaquin River/Southern Delta updates to 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. Refer to Comment Letters 243 and 316 for responses to comments submitted by the San Joaquin Tributaries Authority and Modesto Irrigation District, respectively. Please also see Common Response 1.1, General Comments, regarding comments on other projects.

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		and specifically the Tuolumne River flow contributions to the San Joaquin River and Bay-Delta [Footnote 3: In April 2023, the State Water Board issued a Notice of Preparation for a draft Staff Report/Substitute Environmental Document (SED) needed to support possible amendments to the Bay-Delta Plan to incorporate the TRP's proposed TRVA that was detailed in the 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, dated November 9, 2022.]; and 2) fisheries related issues that should be addressed by State Water Board staff in the final RSED II. I. LEGAL COMMENTS The TRP concurs with and incorporates by reference the comments submitted by the San Joaquin Tributaries Authority and the Modesto Irrigation District, copies of which are included in Attachment 1 [see Attachment 1 through Attachment 54]. In addition, Attachment 1 includes all references cited in TRP's comments below. II. TECHNICAL COMMENTS Many of the technical concerns the TRP has with the DRSED II are identical to those the TRP noted with the State Water Board's September 2016 Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Supporting Draft Revised Substitute Environmental Document (Draft SED), and were presented in the TRP's March 17, 2017, comments on the Draft SED [Footnote 4: The 2017 letters were filed by Nick Braden, Ronda Azevedo Lucas, Greg Slayer, Casey Hashimoto, Dennis Herrera, Jonathan Knapp, along with letters from TID and MID. These letters are included in Attachment 1 to this filing. [see Attachment 35 through Attachment 47, and Attachment 49]]. The TRP has not repeated those comments here but includes its March 17, 2017, comment letter in Attachment 1 [see Attachment 41].	
341	3	The DRSED II includes inadequate information to determine whether Tuolumne River flows are reasonably represented. These issues should be addressed in the final RSED II.	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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		The DRSED II estimates San Joaquin River inflow into the Bay-Delta at one location – Vernalis. Vernalis flows are estimated for two generalized State Water Board scenarios: 1) Baseline, which assumes Tuolumne River flows under the existing conditions (i.e., TID's and MID's current operation of the Don Pedro and La Grange hydroelectric projects) and existing conditions for the Stanislaus and Merced rivers; and 2) varying versions of San Joaquin River inflow including several Voluntary Agreement (VA) scenarios, which assumes Tuolumne River flows from February through June as stipulated in the TRP's TRVA and from July through January flow requirements as proposed by TID and MID in their Amended Final License Application for the Don Pedro Hydroelectric Project and the Final License Application for the La Grange Hydroelectric Project, and varying versions of flow contribution from the Stanislaus and Merced rivers. The DRSED II hydrologic analysis of the scenarios is performed with a combination of modeling tools. The primary focus of modeling involves Stockholm Environment Institute's and State Water Board's Sacramento Water Allocation (SacWAM) model that has a domain of the Sacramento River Basin and its tributaries, certain Eastern Delta tributaries, and the Delta including export facilities. The San Joaquin Basin is represented as a single input node at Vernalis within SacWAM and includes a time-series of monthly flow and water quality data, the latter derived from the output of the Department of Water Resources' (DWR) and the United States Department of the Interior, Bureau of Reclamation's (USBR) California Water Resources Simulation (CalSim 3) model. Incremental change of flow from the different San Joaquin River scenarios (e.g., baseline, the San Joaquin River and TRVA, and the San Joaquin River Phase 1 flow alternatives (e.g. X percent of unimpaired flow)) is developed through use of the Water Supply Effects (WSE) model that was developed by State Water Board staff during SED Phase 1. In our review, we found that the DRSED II does not adequately describe the baseline and VA scenarios with respect to Tuolumne River flows.	raise specific economic effects of the project. Modeling for the Tuolumne River VA flows using the WSE model are described in Attachment G3a1, Water Supply Effects Model Updates for the Tuolumne Voluntary Agreement from Appendix G3a, Sacramento Water Allocation Model Methods and Results for the Proposed Voluntary Agreements.

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341	4	Examples of some problem areas that should be corrected in the final RSED II are noted below. The modeling baseline is inconsistent between State Water Board's analytical tools. Modeling should be made consistent in the final RSED II. Staff has incorporated a CalSim 3 "baseline" data set for Vernalis that equates to an average annual flow of approximately 2,662 thousand acre-feet (TAF). The SWRCB's WSE-VA modeling incorporates a different baseline drawing from CalSim II, which estimates incremental changes at Vernalis. This CalSim II based result at Vernalis equates to an average annual flow of approximately 3,130 TAF, which is significantly different than the CalSim 3 based baseline. This approach will result in an inconsistent baseline in the SacWAM modeling.	The WSE-VA model is not used for the modeling of the SacWAM baseline. The WSE-VA model is only used for the Staff Report in Chapter 9, Proposed Voluntary Agreements, to evaluate how the Tuolumne VA and 2018 LSJR flow objectives could increase outflow from LSJR tributaries and, ultimately, the Delta. The WSE is used to estimate the incremental changes in flow that would be expected with implementation of the Tuolumne VA proposal and LSJR flow objectives.
341	5	State Water Board's use of its WSE-VA model does not adequately depict deployment of the TRVA, and also may not adequately or correctly depict the operation to the X% of UIF requirements on the Stanislaus and Merced rivers. The TRVA flows should be reasonably and consistently represented in the final RSED II. TRP modelers previously worked with State Water Board Staff concerning errors and inadequacies in the WSE VA model. While several issues were resolved, some fundamental deficiencies remained in the WSE modeling methodology, stemming from the lack of a daily-time step and inaccurate depiction of flood control operations that lead to inaccurately depicting operations at Don Pedro Reservoir and flows delivered to the San Joaquin River from the Tuolumne River. The TRP is uncertain if the State Water Board's Phase 1 assumptions and results for X% of UIF implementation in the rivers still apply in this modeling effort. The assumptions should not include carry-over storage requirements and re-fill diversion constraints for the reasons described in the TID's and MID's joint comments on the SED Phase I.	Though it may not capture exact sub-monthly operations, such as for flood control, a monthly timestep provides enough detail to analyze changes in system operations and allocation of monthly water volumes. Please refer to Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, for responses to comments that raise issues about modeling using a monthly timestep. Though the responses in Common Response 6.1 were developed with regards to SacWAM, the same arguments should apply to WSE modeling. Please see Common Response 1.1, General Comments, for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	6	State Water Board's method of modeling Delta salinity/flow within the alternatives is	The analysis is not intended to imply that Vernalis flow does not affect Delta conditions. On the contrary, the decision to keep Vernalis flow and salinity constant between the baseline and the

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		inadequate and flawed. This issue should be corrected in the final RSED II. The DRSED II notes that the Vernalis flow data set does not change among baselines or alternative scenarios, and that DWR's Delta Simulation Model II (DSM2) and Delta flow relationships are not changed among alternatives in the context of Vernalis flow and water quality. This is conceptually incorrect: results for interior Delta conditions and Delta Outflow would in reality change with Vernalis flows. The State Water Board's post-analysis adjustment to SacWAM results (i.e., the step of analysis results without San Joaquin River actions) is not adequate to illustrate all of the hydrologic/hydraulic effects of changes to San Joaquin River flows. The assumed incrementally, changed flows at Vernalis will manifest throughout the Delta, not just at selected points of interest and compliance. The estimated incremental changes in Vernalis flow need to be implemented throughout the modeling tools, which would likely require additional protocols in SacWAM to recognize "protected" flow from the San Joaquin River.	alternative scenarios is meant to avoid conflating the effects caused by varying flow and salinity at Vernalis with effects caused by changing flow requirements in the Sacramento watershed. Including variable flows from the San Joaquin River would only make it more difficult to isolate the effects attributable to the actions in the Sacramento watershed. It is not necessary to identify every possible hydrologic/hydraulic effect that could occur under the project throughout the Delta, but to provide a reasonable depiction of how overall conditions could change. The potential effects of changing flow from the San Joaquin River related to the 2018 Bay-Delta Plan updates for LSJR instream flow requirements in conjunction with the proposed Plan amendments are discussed in Section 7.23, Cumulative Impacts Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes. Furthermore, the potential effects of changing flow from the San Joaquin River related to the VAs are analyzed in Chapter 9, Proposed Voluntary Agreements. Please see Common Response 7.24, Alternatives Analysis, for further discussion of the alternatives used in the analysis.
341	7	An adequate range of alternative outcomes for the "proposed Plan amendments" scenarios has not been formulated by not including potential changed conditions on the San Joaquin River. This inadequacy should be corrected in the final RSED II. The DRSED II provides a range of assumed San Joaquin River conditions and contributions within the VA scenario assessments. However, for the X% of UIF scenarios in the Sacramento/Delta domain, only the baseline San Joaquin River condition, albeit potentially wrong, has been provided. This shortcoming shorts the depiction of the outcomes from alternative versions of the X% of UIF scenarios by the amount of potential contributions from the San Joaquin River under differing assumptions of implementation of Phase 1.	The analysis of the flow scenarios is intended to identify the impacts, relative to baseline conditions, attributable to implementation of flow requirements in the Sacramento watershed. If inflow from the San Joaquin watershed is not consistent between the baseline and the flow scenarios, it could mask impacts attributable to implementation of the Sacramento requirements. The impacts caused by increased flow requirements on the LSJR tributaries from the 2018 Bay-Delta Plan updates were fully analyzed in the 2018 SED. Cumulative effects of the 2018 updates in conjunction with the proposed Plan amendments are discussed in Section 7.23, Cumulative Impacts Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes. Please see Common Response 7.24, Alternatives Analysis, for further discussion of the alternatives used in the analysis.

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			Please see Common Response 1.2, Water Quality Control Planning Process, regarding the relationship between the proposed Plan amendments and the LSJR updates to the Bay-Delta Plan.
341	8	No description of the implicit “protection” of San Joaquin River contributions included in the DRSED II has been identified. This protection should be clearly stated in the final RSED II. While the protection of all San Joaquin River incremental “contributions” to a scenario appears to have been assumed through the display of the post-processed selected group of affected SacWAM reported parameters (e.g., Delta Outflow, not Exports), no explicit discussion concerning the potential outcome of San Joaquin River requirements has been included in the DRSED II. An explicit statement is needed to provide transparent intent of a proposed Phase 2 order that addresses the intent to provide “protection” of final Phase 1 San Joaquin River flows towards Delta Outflow without depletion towards diversion and Export.	The Tuolumne River VA is being considered in a separate, concurrent process to this Bay-Delta Plan update effort. Section 5.4.4.3, Proposed Delta Outflow Objectives, of the Staff Report describes the inflow-based Delta outflow objective and states that the proposed objective would require that the inflows required in the Bay-Delta Plan, including the proposed Sacramento/Delta and San Joaquin River flows specified in the Bay-Delta Plan, are provided as outflows. Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on inflow-based Delta outflow objective.
341	9	The DRSED II relies upon relatively few, and in some cases decades old, studies of the relationships between juvenile salmon survival and escapement as explained by tributary inflows to the Delta as well as interior Delta hydrodynamics. These conclusions should be critically reviewed as part of the final RSED II, with any specific flow prescriptions based upon more recent (post 2010) data. The updated DRSED II provides references to potential flow related stressors on in-river life stages of fall-run Chinook salmon (<i>O. tshawytscha</i>) (p. 3-39), discussing juvenile rearing with reference to studies within the Sacramento River basin, as well as through Delta survival (pp. 3-40 through 3-44). However, the DRSED II draws heavily on relatively few experimentally derived studies on the relationship between flows and catch/survival in the Sacramento/San Joaquin Delta. Of these studies, it was apparent that most were utilizing data collected prior to the first observations of the Pelagic Organism Decline (POD) in 2000, a period of rapid changes in the Delta food web and changes in prey consumed by striped bass (<i>Morone</i>	See Common Response 3.1, Fish Protection, on use of best available science, data sources, and flow-benefit analyses for a discussion on uncertainties in statistical analyses. See Common Response 1.2, Water Quality Control Planning Process, on the relationship to the 2018 Lower San Joaquin River and Southern Delta Salinity Update to the Bay-Delta Plan.

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		saxitalis) [Footnote 5: Nobriga, M. L, and W.E. Smith. 2020. Did a Shifting Ecological Baseline Mask the Predatory Effect of Striped Bass on Delta Smelt? San Francisco Estuary and Watershed Science, 18(1). http://dx.doi.org/10.15447/sfews.2020v18iss1art1 Retrieved from https://escholarship.org/uc/item/46f3j55m] [Att. 28]. While the State Water Board discusses more recently developed correlations between flow and abundance based on extrapolated data from Brandes and McLain (2001) [Footnote 6: Brandes, P.L. and McLain, J.S., 2001. Juvenile Chinook salmon abundance, distribution, and survival in the Sacramento-San Joaquin Estuary. Department of Fish and Game.] [Att. 3]. (cited as DWR 2017a, page 3-43), the TRP has low confidence in the present-day validity of historical relationships between Delta flows and salmonid populations, specific flow thresholds identified, or other flow prescriptions based upon historical fish data. The TRP previously stated that the explanatory power of the historical relationship between time lagged spring outmigration flows and subsequent escapement has deteriorated across the lower San Joaquin River tributaries since 2000 and in some cases no relationship between tributary flow and escapement exists today (See Appendix A to March 17, 2017 TRP comment letter [Footnote 4: The 2017 letters were filed by Nick Braden, Ronda Azevedo Lucas, Greg Slayer, Casey Hashimoto, Dennis Herrera, Jonathan Knapp, along with letters from TID and MID. These letters are included in Attachment 1 to this filing.]) [see Attachment 35 through Attachment 47, and Attachment 49], [Att. 41]. Recognizing that historical escapement data contains unknown and uncorrectable biases due to unaccounted influences of unmarked hatchery fish within the historical Central Valley escapement record (Newman and Hankin 2004) [Footnote 7: Newman, K.B., and D.G. Hankin. 2004. Statistical procedures for detecting the CVPIA natural Chinook salmon production doubling goal and determining sustainability of production increases. Prepared for the U.S. Fish and Wildlife Service AFRP under subcontract to CH2MHill, Sacramento, CA. June 21.] [Att. 26], the TRP estimated the numbers of wild origin spawners within the GrandTab database (Azat 2022) [Azat, J. 2023. GrandTab. California Central Valley Chinook Escapement Database Report. California Department of Fish and Wildlife.	

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		Available online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=84381 accessed on January 3, 2024] [Att. 16] by estimating the proportion of hatchery origin salmon in these data using the numbers of marked and unmarked salmon associated with releases documented in the Pacific States Marine Fisheries Commission's Regional Mark Information Center database archive (RMIS 2024). [Footnote 9: Regional Mark Information System (RMIS). 2024. RMIS Standard Reporting query results obtained from the CWT database maintained by the Pacific States Marine Fisheries Commission's Regional Mark Processing Center. Available online at http://www.rmhc.org/ . Accessed January 3, 2024.]	
341	10	The TRP asserts there is currently little or a negative relationship between time lagged flow and subsequent escapement of wild fall-run Chinook salmon in the Lower San Joaquin River and its tributaries for the periods 2001–2021 as well as 2010–2021 (Figure 1 and Figure 2 [Exhibits 1 and 2], respectively). Although the Constant Fractional Marking (CFM) Program was initiated in 2007, limiting the analysis to the period from 2010 through 2021 when hatchery contributions are more thoroughly accounted for, shows this relationship with outflow is increasingly negative. Although the hydrodynamics of interior Delta flows are discussed at length in the DRSED II (pp 3-47 through 3-53), no tributary specific information (i.e. benefits or effects) supporting unimpaired flow requirements is provided, and it is apparent that even high tributary outflow in 1999, 2000, 2005, 2010, and 2017 did not result in a positive relationship between winter-spring (January through June) outflows and subsequent fall-run Chinook salmon escapement (Figure 1 and Figure 2 [Exhibits 1 and 2]). Recent (2020) published research on survival estimates of Chinook salmon through the south Delta by Buchanan et al. (2013 [Footnote 10: Buchanan, R.A., Skalski, J.R., Brandes, P.L. and Fuller, A., 2013. Route use and survival of juvenile Chinook salmon through the San Joaquin River Delta. North American Journal of Fisheries Management, 33(1), pp.216-229.] [Att. 5]) contrasts with previous coded wire tag (CWT) studies cited in the DRSED II by Newman (2008) [Footnote 11: Newman, K. B.	See Common Response 1.2, Water Quality Control Planning Process, and the relationship to the 2018 Lower San Joaquin River and Southern Delta Salinity Update to the Bay-Delta Plan. Figures 1 and 2 are analysis on Merced, Stanislaus and Tuolumne River, which is not a part of this update process for the Bay-Delta Plan. Please see Common Response 1.1, General Comments, for comments on other projects. Please also see Common Response 3.1, Fish Protection, on flow benefit analyses and entrainment.

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		2008. An Evaluation of Four Sacramento–San Joaquin River Delta Juvenile Salmon Survival Studies. Project SCI-06-G06-299. U.S. Fish and Wildlife Service, Stockton, CA. Available online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=33096 [Att. 25] and SJRGA (2007) [Footnote 12: SJRGA (San Joaquin River Group Authority), 2007. In 2006 annual technical report: on implementation and monitoring of the San Joaquin River agreement and the Vernalis Adaptive Management Plan, SJRGA, Report to the California Water Resources Control Board, Davis, California. Available: www.sjrg.org/technicalreport .] [Att. 48]. The authors found that the relationship between Delta inflow and survival from Old River to Chipps Island was not significant, and that interior Delta flow direction (i.e., reverse flow conditions) in Old and Middle rivers were no longer associated with variations in juvenile survival (Buchanan et al. 2018 [Att. 6] and Buchanan and Skalski 2020 [Footnote 13: Buchanan, R.A., Skalski, J.R. 2020. Relating survival of fall-run Chinook Salmon through the San Joaquin Delta to river flow. Environ Biol Fish 103, 389–410. https://doi.org/10.1007/s10641-019-00918-y]) [Att. 4]. This study should be highlighted in the final RSED II, and assumptions and conclusions included in the DRSED II should be revised as it is apparent that the positive correlations documented between Sacramento River flows and survival to Chipps Island for Chinook salmon do not apply to salmon emigrating from the San Joaquin River and its tributaries.	
341	11	[Exhibit 1: Two graphs titled Figure 1: Relationship between January-June discharge from the San Joaquin River (USGS 11303500) and subsequent Chinook salmon escapement with adjustments to exclude hatchery origin fish from the GrandTab escapement record from the Merced, Tuolumne, and Stanislaus Rivers]	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.
341	12	[Exhibit 2: Six graphs titled Figure 2: Relationship between January-June tributary discharge from the Merced (USGS 11270900), Tuolumne (USGS 11290000), and Stanislaus (USGS 11303000) rivers and subsequent Chinook salmon escapement with adjustments to exclude hatchery origin fish from the GrandTab escapement record from the Merced, Tuolumne, and Stanislaus Rivers]	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.
341	13	The DRSED II continues the pattern of identifying factors other than flow as major impediments to the recovery of salmon and	To provide additional clarity on studies which support the ideas around flow and non-native species within the 2023 draft Staff

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		other species, then inappropriately dismissing them on various unsupported and misleading grounds. These unsupported and misleading statements should be corrected in the final RSED II. The DRSED II identifies non-native species as a major impediment to native species recovery but makes conflicting claims regarding approaches that could be used to manage nonnative species and their impacts on native species recovery. First, the DRSED II claims that altered hydrology has created more favorable conditions for non-native species than for native species and restoring a more natural hydrology may be one way to favor native species. However, this claim fails to truly acknowledge the extent to which the Bay-Delta ecosystem has been altered. Native species evolved and adapted to the hydrology of the area but also to the ecosystems that have been fundamentally altered structurally and biologically (Nobriga and Smith 2020 [footnote 5: Nobriga, M. L, and W.E. Smith. 2020. Did a Shifting Ecological Baseline Mask the Predatory Effect of Striped Bass on Delta Smelt? San Francisco Estuary and Watershed Science, 18(1). http://dx.doi.org/10.15447/sfews.2020v18iss1art1 Retrieved from https://escholarship.org/uc/item/46f3j55m [Att. 28]; see also Mount 1995 [footnote 14: Mount, J.F, 1995. California rivers and streams: the conflict between fluvial process and land use. Univ of California Press.]). Re-creating more natural hydrology will not recreate the historical physical structure of Bay-Delta habitat features or fish community assemblages.	Report, select text within Section 4.4.1, Fishes, of the 2023 draft Staff Report has been revised. The commenter suggests that native fish species have adapted to a highly altered Bay-Delta ecosystem and therefore a return to a more natural hydrology would not produce fish community assemblages which have historically been observed. While the commenter provides reference material to support their conclusion, they did not indicate where within the cited material specific support for their conclusion could be found. Also, Mount 1995 was not attached by the commenter or otherwise included in the comment letter. Additionally, in review of Nobriga and Smith (2020), the authors suggest that the major Bay-Delta ecosystem changes that occurred during the late 1800s and early 1900s were detrimental to estuarine fish production but did not prevent the success of the commercial striped bass fishery. They further suggest that striped bass have since acted as a “phantom predator” on Delta smelt, where they contributed to the historical decline of Delta smelt, primarily before monitoring surveys began. The paper did not conclude nor discuss any adaptive evolution of native species in the Bay-Delta to the altered ecosystem. Please refer to Common Response 1.1, General Comments, regarding cited literature and attachments in review of public comments. Please also see Common Response 3.1, Fish Protection, for information on reviewing and incorporating literature into Chapters 3 and 4 of the Staff Report.
341	14	Consistent with the need to restore physical structure, the DRSED II identifies that habitat restoration may be a limited method of predator control. However, this is followed by the unsubstantiated claim that modifying habitat would be a more effective predator control method than predator removal. While the DRSED II provides no discussion of the effectiveness of habitat modification on predator or predation reduction based on scientific literature, the DRSED II does dedicate effort to attempting to discredit removal as a potential nonnative control method. This is based on very limited information without adequate context. In particular, the DRSED II indicates that predator removal improved salmon survival in small areas of the Bay-Delta for a short time based on a single study. (Cavallo et al.	Section 4.4.1, Fishes, of the 2023 draft Staff Report has been revised to provide additional context and clarity on conclusions surrounding the effects of predator removal in the Cavallo et al. (2012) study. Rytwinski et al. (2019) reviews multiple non-native freshwater fish removal studies. Their results indicate low effectiveness (58%) of predator removal measures across studies and the studies reviewed largely targeted trout as the removed species and were located in small lakes rather than estuary systems. Due to these dissimilarities, it is unlikely that the cited results would apply to the Bay-Delta ecosystem. For additional information on the scientific basis for fish protections in the Staff Report and the use of best available science, please refer to Common Response 3.1, Fish Protection.

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		2012 [footnote 15: Cavallo, B., J. Merz, and J. Setka. 2012. Effects of Predator and Flow Manipulation on Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) Survival in an Imperiled Estuary. <i>Environmental Biology of Fishes</i> 96(2-3):393–403.(DOI: 10.1007/s10641-012-9993-5))] [Att. 8]. Rather than seeing this an opportunity to potentially have a greater impact on salmon survival by expanding the geographic scope and continuing such efforts across multiple years, the DRSED II instead interprets the study as indicating the method as ineffective, and worse, that removal may actually exacerbate the impacts of non-natives. This conclusion is incorrect and not supported by the study. It should be noted that other removal studies have found that successful predator control through removal required intensive effort over a number of years (Rytwinski et al. 2019). [Footnote 16: Rytwinski, T., Taylor, J.J., Donaldson, L.A., Britton, J.R., Browne, D.R., Gresswell, R.E., Lintermans, M., Prior, K.A., Pellatt, M.G., Vis, C. and Cooke, S.J., 2019. The effectiveness of non-native fish removal techniques in freshwater ecosystems: a systematic review. <i>Environmental Reviews</i> , 27(1), pp.71-94.] [Att. 29]	
341	15	Oddly, the DRSED II advocates for not salvaging non-natives at the Central Valley Project and State Water Project facilities as a means of reducing the population size of non-native species. To be clear, not salvaging is a form of removal. This begs the question of why this has not already been implemented, particularly if the State Water Board or other State agencies have plans to develop effective, long-term control and management measures for established non native species. Notably, CDFW's aquatic invasive species plan (CDFG 2008 [Footnote 17: California Department of Fish and Game. 2008. California Aquatic Invasive Species Management Plan.] [Att. 9]) did not include common nonnative piscivores such as black bass or striped bass and recommendations since were not implemented. Specifically, recommendations of the California Department of Fish and Wildlife (CDFW) to change sportfishing regulations to reduce the impact of striped bass were subsequently rejected more than a decade ago. Worse, the latest striped bass management proposal under consideration would limit striped bass harvest through a slot limit intended to create a trophy striped bass fishery. Clearly there is no evidence that policies	Topics related to nonnative fish predators are discussed in the 2023 draft Staff Report Section 4.4.1, Fishes. The 2023 draft Staff Report does not fully dismiss predator removal as an effective management tool. Instead, it cites studies demonstrating that predator removals have not increased salmon survival long-term and that removing a single predator species can lead to replacement by competing species. These conclusions are not contradictory to a statement that stopping the salvage of nonnative fishes may be a cost-effective way to reduce the population size of nonnatives without having a negative effect on native organisms. In addition, the 2023 draft Staff Report states that additional studies are needed to fully examine the consequences associated with nonnative fish salvage at CVP and SWP facilities. Fishery management actions are largely the purview of other agencies, such as CDFW, California Fish and Game Commission, Pacific Fishery Management Council, USFWS, and NMFS. Further discussion of fishery management actions and the appropriate responsible state and federal agencies can be found in Section 5.5.4, Fishery Management Actions.

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		regarding management of non-native fishes are moving in a positive direction.	
341	16	The DRSED II does not appear to use recent data on the current state of production hatchery and wild Chinook salmon, first in its lack of understanding and full characterization of introgression and second in it's the inability to properly examine the impacts of flow on the reproductive success of wild-spawned salmon offspring. This issue should be adequately described and addressed in the final RSED II and the SWRCB should consider a commitment to manage for production hatchery influence. Production hatcheries were initially established to bolster fall-run Chinook salmon populations, mitigate for water development projects, and offset the impacts of recreational and commercial harvest as characterized by the National Marine Fisheries Service (NMFS). [Footnote 18: NMFS 2019. Hatchery Programs. Available online at: https://www.fisheries.noaa.gov/west-coast/endangered-speciesconservation/hatchery-programs/california#:~:text=Most%20of%20these%20hatcheries%20provide,for%20recreational%20and%20commercial%20fisheries.] [Att. 27] Unfortunately, production hatchery practices, such as off-site release of production hatchery-reared juveniles and inter-basin production hatchery transfers and stocking, are reducing the prevalence of diverse early life history traits that provide population stability in the face of fluctuating environmental conditions (Schindler et al. 2010 [Footnote 19: Schindler, D.E., Hilborn, R., Chasco, B., Boatright, C.P., Quinn, T.P., Rogers, L.A. and Webster, M.S., 2010. Population diversity and the portfolio effect in an exploited species. <i>Nature</i>, 465(7298), pp.609-612.] [Att. 31], Carlson and Satterthwaite 2011 [Footnote 20: Carlson, S.M. and Satterthwaite, W.H., 2011. Weakened portfolio effect in a collapsed salmon population complex. <i>Canadian Journal of Fisheries and Aquatic Sciences</i>, 68(9), pp.1579-1589.] [Att. 7]) including climate change. Introgression of spring- and fall-run Chinook salmon stocks has also been documented as confounding genetic integrity. Population enhancement with production hatcheries has resulted in short term abundance but long term declines,	Information on impacts from hatcheries and suggestions for mitigation can be found in Chapter 4, Other Aquatic Ecosystem Stressors, Section 4.5, Fisheries Management. As described in the 2023 draft Staff Report, fishery management actions are largely the purview of other agencies, such as CDFW, California Fish and Game Commission, Pacific Fishery Management Council, USFWS, and NMFS. Further discussion of actions to address harvest and hatchery operations and the appropriate responsible state and federal agencies can be found in Section 5.5.4, Fishery Management Actions. As acknowledged in Section 4.5.2, Hatcheries, of the 2023 draft Staff Report, fish produced in hatcheries can have detrimental genetic and evolutionary population-level effects, reducing the overall resiliency of salmon stocks. These hatchery impacts of reduced resiliency are carried throughout the salmon life cycle, including to ocean environments, where reduced resiliency combined with poor ocean conditions can exacerbate the factors leading to collapse. The 2023 draft Staff Report discusses the link between weak salmon runs and the collapse of the ocean salmon fishery in Section 3.2.1, Riverine Flows, citing ^Lindley et al. (2009). See Common Response 3.1, Fish Protection for flow-benefits analyses, which includes discussion of flow effects on Chinook salmon. See also the response to comment 341-17.

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		particularly for fall-run Chinook salmon (Sturrock et al. 2019 [Footnote 21: Sturrock, A.M., Satterthwaite, W.H., Cervantes-Yoshida, K.M., Huber, E.R., Sturrock, H.J.W., Nusslé, S. and Carlson, S.M. 2019. Eight Decades of Hatchery Salmon Releases in the California Central Valley: Factors Influencing Straying and Resilience. Fisheries, 44: 433-444. https://doi.org/10.1002/fsh.10267] [Att. 51]). Production hatchery origin spawners have heritably lower reproductive success than natural origin spawners and reduce the productivity of the overall population (Araki et al. 2008 [Footnote 22: Araki, H., Berejikian, B.A., Ford, M.J. and Blouin, M.S., 2008. Fitness of hatchery-reared salmonids in the wild. Evolutionary applications, 1(2), pp.342-355.] [Att. 1], Christie et al. 2014 [Footnote 23: Christie, M.R., Ford, M.J. and Blouin, M.S., 2014. On the reproductive success of early-generation hatchery fish in the wild. Evolutionary Applications, 7(8), pp.883-896.] [Att. 12]). Chilcote et al. (2011 [Footnote 24: Chilcote, M.W., Goodson, K.W. and Falcy, M.R., 2011. Reduced recruitment performance in natural populations of anadromous salmonids associated with hatchery-reared fish. Canadian Journal of Fisheries and Aquatic Sciences, 68(3), pp.511-522.] [Att. 10]; 2013 [Footnote 25: Chilcote, M.W., Goodson, K.W. and Falcy, M.R., 2013. Corrigendum: Reduced recruitment performance in natural populations of anadromous salmonids associated with hatchery-reared fish. Canadian Journal of Fisheries and Aquatic Sciences, 68(3), pp.511-522.] [Att. 11]) found that intrinsic productivity of Chinook salmon declined 75 percent as the percent of hatchery origin spawners increased from 10 to 60 percent. Unmitigated production hatchery straying in fall-run Chinook salmon could represent a major mechanism of observed Central Valley-wide Chinook salmon population decline (Johnson et al. 2012 [Footnote 26: Johnson, R.C., Weber, P.K., Wikert, J.D., Workman, M.L., MacFarlane, R.B., Grove, M.J. and Schmitt, A.K., 2012. Managed metapopulations: do salmon hatchery ‘sources’ lead to in-river ‘sinks’ in conservation?. PLoS One, 7(2), p.e28880.] [Att. 20]).	
341	17	Currently, production hatchery management is independent of the State Water Board’s regulatory effort to improve conditions and trends in salmonid populations. Only a fraction of hatchery fish are marked to allow for rapid identification of origin through	Please see the response to comment 341-16. The text quoted in the comment (2023 draft Staff Report, p. 3-4) along with cited references specifically addresses the importance

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		the CFM Program. Reports from the CFM Program have used statistical analyses to estimate hatchery contribution from year-to-year, but as noted above are generally not accounted in the survival and population analyses included in the DRSED II. CFM Program reports note that production hatchery Chinook salmon represent an overwhelming number of returning adults and those percentages over time suggest that fall-run Chinook salmon in most Central Valley streams have familial lineage of production hatchery origin (Williamson and May 2005 [Footnote 27: Williamson, K. S., and B. May. 2005. Homogenization of fall-run Chinook Salmon gene pools in the Central Valley of California, USA. North American Journal of Fisheries Management 25:993-1009.] [Att. 52]). These findings are not new, but the DRSED II appears to either dismiss or ignore the reality of current Chinook salmon population genetics by stating at page 3-4: A more natural flow regime is anticipated to maintain, and perhaps even enhance, the remaining genetic and life-history diversity of natural stocks (Zeug et al. 2014a [Footnote 28: eug, S.C., Sellheim, K., Watry, C., Wikert, J.D. and Merz, J., 2014. Response of juvenile Chinook salmon to managed flow: Lessons learned from a population at the southern extent of their range in North America. Fisheries Management and Ecology, 21(2), pp.155-168.] [Att. 54]; ^Sturrock et al. 2015 [Footnote 29: Sturrock, A.M., Hunter, E., Milton, J.A., EIMF, Johnson, R.C., Waring, C.P. and Trueman, C.N., 2015. Quantifying physiological influences on otolith microchemistry. Methods in Ecology and Evolution, 6(7), pp.806-816.] [Att. 50]). Preserving the genetic and life-history diversity in wild stocks helps protect salmon populations from significant loss of genetic diversity associated with hatchery production... Meaningful and effective improvements in the genetic diversity of Central Valley Chinook salmon populations can only be achieved by directly addressing production hatchery practices. Attempting to use flow as an indirect tool to manage for production hatchery actions has little potential for a meaningful effect and any change would be hard to detect in the current landscape. For real change to begin, State and federal production hatchery managers would need to reduce or cease off-site	of improving life history diversity (e.g., juvenile emigration timing) along with reducing the hatchery genetics impacts of the Central Valley salmonid populations (consider the Final Initial Biological Goals for the Lower San Joaquin River). The proposed numeric unimpaired flow objective described in the 2023 draft Staff Report, Section 5.4.2.3, Proposed Inflow Objective, would result in increased flows at streams and rivers in the Central Valley, especially during the juvenile emigration period. Additionally, implementation of flow objectives would be flexible with shaping and shifting of flow timing and magnitude to maximize ecological benefits to fish and wildlife (2023 draft Staff Report Section 7.6.2, Aquatic Biological Resources, p. 7.6.2-54) that would enhance the phenology in their life history.

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		releases and implement 100 percent marking. Recent research by Sturrock et al. (2019) [Footnote 21: Sturrock, A.M., Satterthwaite, W.H., Cervantes-Yoshida, K.M., Huber, E.R., Sturrock, H.J.W., Nusslé, S. and Carlson, S.M. 2019. Eight Decades of Hatchery Salmon Releases in the California Central Valley: Factors Influencing Straying and Resilience. Fisheries, 44: 433-444. https://doi.org/10.1002/fsh.10267] [Att. 51] demonstrates the multiple negative population-level effects of increased off-site releases of production hatchery salmon including reduced freshwater rearing and increased straying, leading to reductions in genetic diversity and natural production. The TRP discussed many of these issues and challenges with State Water Board staff during the 2023 meeting series of the Stanislaus, Tuolumne, Merced Working Group, addressing hatchery practices and fractional marking, while emphasizing the need for reform and 100 percent marking.	
341	18	The disconnect between flow and habitat creation highlighted in the DRSED II emphasizes the importance of habitat restoration and the negligible increase in habitat resulting from increased flows alone. The final RSED II should include discussion and recognition of the role of habitat restoration and reduce focus solely on increasing flow. The DRSED II begins in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, by establishing the narrowly focused foundation for the authors' logic based on flow management. The DRSED II states on page 3-2, "Flow is commonly regarded as a key driver or master variable governing the environmental processes in riverine and estuarine systems such as the Bay-Delta and its watershed." The DRSED II asserts its viewpoint that historical unimpaired flows support, "more desirable ecological conditions" (page 3-2). The DRSED II appears to take the statement one step further by implying that flow is the master variable. The DRSED II persists that, "Nearly every other habitat factor that affects community structure, from temperature to water chemistry to physical habitat complexity, is influenced by flow..." (page 3-101). In the certainty and focus of the report's introductory statements, the DRSED II essentially is concluding that the augmentation of water to mimic natural flows is a 'silver bullet' to solve the overtly complex landscape of	See Common Response 3.1, Fish Protection, for a discussion of the habitat benefit analysis. See Chapter 4, Other Aquatic Ecosystem Stressors, for a discussion of other stressors that are affecting viability of native fish and wildlife, such as climate change, physical habitat loss, and non-native species. Many of these stressors are also considered alongside the effects of flow in Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations. The 2023 draft Staff Report therefore comprehensively evaluated many stressors in addition to flow. The scientific literature cited in Chapter 3 does support that flow is the master variable. Chapter 3 is based on the 2017 Scientific Basis Report that underwent external scientific peer review. See Common Response 3.1, Fish Protection on the 2017 Scientific Basis Report.

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		dwindling California native fish. Does water influence many variables? Yes, but the evidence that flow singularly dominates all other factors is lacking and naïve to additional processes.	
341	19	The question is not whether flow is an important contributing component of ecological function – it is – but whether or not flow is the master variable. Flow alone cannot overcome the current challenges in salmonid population recovery for myriad reasons. The environment and associated landscape have changed significantly from 30 years ago and even more-so from the early settlement era of the 1800s [Footnote 14: Mount, J.F., 1995. California rivers and streams: the conflict between fluvial process and land use. Univ of California Press.] . The DRSED II agreeably describes the changes as, “...greatly altered hydrology, migratory pathways, hydrodynamics...” (pg 3-11). The DRSED II, however, anticipates that mimicking historic ‘natural’ flows will result in an expected desirable outcome despite being applied over heavily modified and modernized systems. The braided complexity of streams is lost to high-walled protective levees. The Delta is confined and the development surrounding the Delta has changed its function notably. Goertler et al. (2021) [Goertler, P., Mahardja, B. and Sommer, T., 2021. Striped bass (<i>Morone saxatilis</i>) migration timing driven by estuary outflow and sea surface temperature in the San Francisco Bay-Delta, California. Scientific reports, 11(1), p.1510.] [Att. 15] discussed how climate change is altering striped bass timing and potentially increasing the potential for predation on juvenile outmigrant salmonids. Non-native predators introduced under poor State resource management practices dominate the slow-flowing waters of river and Delta habitats. Climate change has increased high elevation ambient conditions, warming what once were persistently chilly waters and has further exacerbated downstream summer conditions. Attempting to replicate historic flow across an altered landscape, and assuming that the emulation of a hydrograph from the 1800’s would result in a similar outcome, is simply not applicable or supported. Grossman (2016) [Footnote 31: Grossman, G.D., 2016. Predation on fishes in the Sacramento–San Joaquin Delta: current knowledge and future directions. San Francisco Estuary and Watershed Science, 14(2).] [Att. 17] stated, “Unfortunately this means the biological conclusions drawn from the Delta of today	See the response to comment 341-18. See also Common Response 3.1, Fish Protection, on flow benefit analyses.

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		may not be relevant a decade from now (e.g., trophic web shift caused by overbite clams), especially as [species] invasions continue." The landscape, the river, and the fish populations are all changed and require progressive, scientific-based, modern solutions.	
341	20	The DRSED II makes its own indirect case against flow being the master variable in its analyses presented in Section 3.14.2 (pg 3-125). Repeatedly the statement is made, "Many of the Sacramento River tributaries show no change in suitable...habitat area across the flow scenarios analyzed..." as related to spawning habitat results (pg 3-126), rearing habitat results (pg 3-128), and flood inundation results (pg 3-131). Does this ultimately mean that habitat is not important, if the 'master variable' flow does not improve it? No, the carrying capacity of a stream is indelibly rooted in the availability of usable habitat, meaning that the ability for a stream to support production of large fish populations requires sufficient suitable habitat. With flow being the assumed 'master variable', shouldn't carrying capacity (i.e. suitable habitat) also increase with greater flow? The DRSED II data do not support that assumption. Maddock (1999) [Footnote 32: Maddock, I., 1999. The importance of physical habitat assessment for evaluating river health. Freshwater biology, 41(2), pp.373-391.] [Att. 24] notes, "Physical habitat is the living space of instream biota; it is a spatially and temporally dynamic entity determined by the interaction of the structural features of the channel and the hydrological regime." Flow represents a singular component of this greater process, and (dis)similarities between flow scenarios within the DRSED II do not appear to alter the availability of suitable habitat irrespective of lifestage. While flow is one contributing variable to recovering and sustaining native fish populations, it is not the only important variable, and can be less influential than other constraining environmental factors. As discussed above, more water does not equate to more habitat, and simply increasing wetted area does not result in a 1:1 creation of usable habitat. Conversely, the opportunity to improve current riverine habitat is equally important to flow and possibly more important in situation-specific instances of highly degraded streams. The reality as	The commenter does not provide any support or evidence that the availability of physical habitat area is limiting to populations of salmonids and other native fishes in Sacramento/Delta tributaries. Please see Common Response 3.1, Fish Protection, for information on the Staff Report habitat benefit analyses and Staff Report Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, for a description of the benefits of increased flow.

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		stated by Kondolf et al. (2007) [Footnote 33: Kondolf, G.M., Angermeier, P.L., Cummins, K., Dunne, T., Healey, M., Kimmerer, W., Moyle, P.B., Murphy, D., Patten, D., Railsback, S. and Reed, D.J., 2008. Projecting cumulative benefits of multiple river restoration projects: an example from the Sacramento-San Joaquin river system in California. Environmental management, 42, pp.933-945.] [Att. 22] is that, "...it is clear that even a restoration effort on this scale will not reverse large-scale historical changes." Habitat improvement or restoration does offer the possibility of increasing the area of usable habitat at a greater range of flows. Modern multibenefit projects create floodplain and off-channel habitat, while carefully balancing flood protection with setback levees and other considerate habitat design approaches. The viability of creative off-channel habitat to grow large juvenile salmonids quickly is documented (Katz et al. 2017). [Footnote 34: Katz, J.V., Jeffres, C., Conrad, J.L., Sommer, T.R., Martinez, J., Brumbaugh, S., Corline, N. and Moyle, P.B., 2017. Floodplain farm fields provide novel rearing habitat for Chinook salmon. PloS one, 12(6), p.e0177409.] [Att. 21]. Through riverine improvement, increases in viable habitat for spawning and rearing can occur in combination with appropriate functional flows designed to optimize available habitat. This is a desirable outcome which is sensitive to more frequent droughts anticipated with climate change. The DRSED II is unrealistic in attempting to achieve pre-European settler conditions by flow alteration, but real change can be made through watershed specific actions that may or may not include explicit flow-related measures. Habitat improvements are a key element of the Voluntary Agreements and offer direct, basin-specific benefits for each unique project proposed which in turn provides positive increases in usable habitat and subsequent riverine carrying capacity.	
341	21	Recent research has highlighted the importance of climate change on the entire salmon lifecycle and the inclusion of climate change in management decisions. The DRSED II states that the impacts of climate change on salmon are negligible and offers minimal consideration of climate change in its suite of discussed actions. Climate change effects on salmonids should be better described and addressed in the final RSED II.	The purpose of the Bay-Delta Plan updates that are considered in the Staff Report is to provide for the reasonable protection of fish and wildlife beneficial uses through establishment of water quality objectives, a program of implementation, and monitoring and special study measures (see Section 7.1.3, Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan). The environmental analyses included in the Staff Report support this purpose and calling for detailed analysis of impacts of climate

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		Climate change is recognized as a threatening contributor for altering global climate patterns, increasing sea level elevation, and impacting aquatic environments (Cunningham et al. 2018). [Footnote 35: Cunningham, C. J., Westley, P. A. H. & Adkison, M. D. Signals of large scale climate drivers, hatchery enhancement, and marine factors in Yukon River Chinook salmon survival revealed with a Bayesian life history model. Glob. Change Biol. 24, 4399–4416 (2018).] [Att. 14] Crozier et al. (2021) [Footnote 36: Crozier, L.G., Burke, B.J., Chasco, B.E., Widener, D.L. and Zabel, R.W., 2021. Climate change threatens Chinook salmon throughout their life cycle. Communications biology, 4(1), p.222.] [Att. 13] highlighted the specific impacts of climate change to salmonids in the article aptly titled, “Climate change threatens Chinook salmon throughout their life cycle.” The article identified the negative ‘carry over’ impacts of climate change accumulating from generation to generation of Chinook salmon, along with the significant potential impact of declined marine survival due to ocean conditions. While riverine life stages were considered ‘more resilient’ relative to ocean rearing life stages, the impact of climate change overall was determined to be threatening. Surprisingly, considering the research on the threats to salmon populations from climate change, the DRSED II appears to write off the reported impacts. The DRSED II states at page 3-4: Although hydrological conditions in the region have been changing as a result of global climate change, these changes are not outside the range under which native species adapted. Prior to 1900, California experienced much longer and more severe droughts and floods than anything seen since 1900 (summarized in Ingram and Malamud-Roam 2013 [Footnote 37: Dettinger, M.D. and Ingram, B.L., 2013. The coming megafloods. Scientific American, 308(1), pp.64-71.] [Att. 19]), and native species were able to persist under those conditions due to their adaptations. The DRSED II disregards the complexity and direct impacts to salmon populations resultant from climate change, while further limiting the effectiveness of planning for future resource management. Battin et al. (2007) [Footnote 38: Battin, J., Wiley, M.W., Ruckelshaus, M.H., Palmer, R.N., Korb, E., Bartz, K.K. and	change is outside the required scope of this analysis. The Staff Report does not state that impacts of climate change on salmon are negligible. The full text from the Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, Staff Report passage quoted by the commenter includes the statements “Continuing to support those adaptations of genetic and life-history diversity through providing more naturally variable flows is an important management strategy in addressing climate change effects. This is particularly important for salmonid species, but also applies to the aquatic ecosystem as a whole, including the food web and other native warmwater and cold water fish communities.” The Staff Report acknowledges that there are climate change effects and impacts on salmonids but states that support of a natural flow regime can help preserve important adaptations which allow salmonids to better cope with climate change effects. In Section 3.13.5, Justification for Environmental Flows, the Staff Report cites climate change as one of the driving factors for the need for critical management actions such as the provision of inflow requirements. Climate change effects on salmonids are further described and addressed in Section 4.6, Climate Change. Please see Section 3.2.1, Riverine Flows, of the Staff Report for a discussion on the provision of flows as a management strategy for addressing climate change effects. This section also includes information on changing ocean conditions and how the maintenance of natural flow regimes can support genetic and life-history diversity, thereby increasing resiliency of salmon stock towards poor ocean conditions. Flow measures, paired with cold water management provisions further discussed in Section 3.14.3, Cold Water Storage, are meant to provide comprehensive protection to native aquatic species from natal streams through the Delta and Bay in a manner consistent with a holistic approach. The Staff Report acknowledges changing climate conditions in the future in various locations. Please see Common Response 4.2, Drought and Climate Change, for information on the consideration of climate change in the Staff Report.

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		Imaki, H., 2007. Projected impacts of climate change on salmon habitat restoration. Proceedings of the national academy of sciences, 104(16), pp.6720-6725.] [Att. 2] highlighted the importance of focusing habitat restoration efforts on low-elevation habitat that will be more resilient to climactic change (i.e., increases in water temperature) in comparison to higher elevation habitat that will see more significant changes in reduced snowpack, increased rain, and greater warming that are reasonably difficult to alter (i.e., lower temperature in unimpaired high mountain streams). Low-elevation habitat restoration is one component of the Voluntary Agreements which appear to offer more applicable diverse solutions, adapted to specific watershed needs. Attempting to suggest that conditions (e.g., water quality, altered channels, introduced predators and commercial harvest) in the 1900's are comparable to today and then inferring present-day survival through the 1900's does not acknowledge projections of future climate change in the 2020's and beyond (see Herbold et al 2018 [Footnote 39: Herbold, B.; Carlson, S. M; Henery, R.; Johnson, R. C; Mantua, N.; McClure, M., et al. (2018). Managing for Salmon Resilience in California's Variable and Changing Climate. San Francisco Estuary and Watershed Science, 16(2).]) [Att. 18].	
341	22	In addition, the DRSED II takes aim at dams, reservoirs and operations as impactful or harmful to thermal regimes in riverine habitats. The DRSED II states, "As discussed in the preceding subsections, as a result of construction of dams that block access to upstream natal cold water habitat and the operations of those dams, nearly all of the tributaries with reservoirs in the plan area have significant problems with maintaining suitable temperatures for native fish and other species downstream of those reservoirs," (pg 3-132). Conversely, Battin et al. (2007) [Footnote 40: Id.] stated that high elevation habitat is not going to be resilient through climate change, making the thermal protection provided by cold-water pools in reservoirs key to the future survival of salmon. Disappearing snowpacks and warmer ambient conditions are not buffered in high elevation areas, but deep cold-water pools offer resilient tailwaters maintained at cooler temperature. The DRSED II should incorporate and acknowledge recent science on climate change and salmonids.	The Staff Report includes discussion on the necessity and maintenance of reservoir cold water pools for salmonids in Section 3.2.1, Riverine Flows, Section 3.4.4, Dam and Reservoir Effects on Salmonids, Section 3.14.3, Cold Water Storage, and Section 5.4.3, Cold Water Habitat. Please see Common Response 4.2, Drought and Climate Change, for further information on the consideration of climate change in the Staff Report. Please also see Common Response 3.1, Fish Protection, for additional information on the use of best available science and temperature impacts to salmonids.

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341	23	The DRSED II places undue focus on June flows for assumed benefits to salmonids that are predominately absent during that period. The negative impact of elevated June flows is substantial and offers negligible resultant benefits to migrating native fishes, but does provide notable benefit to the non-native predator striped bass, as highlighted in the DRSED II. The Final RSED II should remove below normal to dry water year management of June flows and not plan to provide any benefit to non-native predatory fishes. Chapter 7 in the DRSED II emphasizes the importance of June flows as a key to its management plan, describing benefits to migrating juvenile salmonids. The TRP has previously described the impact of June flows on reservoir storage and has noted the lack of migrating fish during June (as filed in March 17, 2017 [footnote 4: The 2017 letters were filed by Nick Braden, Ronda Azevedo Lucas, Greg Slayer, Casey Hashimoto, Dennis Herrera, Jonathan Knapp, along with letters from TID and MID. These letters are included in Attachment 1 to this filing.]) [see Att. 35 through Att. 47, and Att. 49], [Att. 41]. and March 29, 2013 [footnote 41: 2012 letters were filed by Lucas Law on behalf of Modesto Irrigation District, Turlock Irrigation District, and Office of the City Attorney on behalf of the City and County of San Francisco. (files included in Attachment 1 [Attachments 32, 33, and 34]). In fact, in Chapter 7 of the DRSED II, SWRCB staff highlight the lack of salmonids entering the Delta in Table 3.4-2, which shows that zero percent of fall-, spring- and winter-run Chinook salmon or Sacramento steelhead (<i>Oncorhynchus mykiss</i>) were detected in reported monitoring during the proposed period of interest. Interestingly, the DRSED II also cites Yoshiyama et al. (1998) [footnote 42: Yoshiyama, R.M., Fisher, F.W. and Moyle, P.B., 1998. Historical abundance and decline of chinook salmon in the Central Valley region of California. North American Journal of Fisheries Management, 18(3), pp.487-521.] [Att. 53] as stating that peak migration for spring-run occurs May and June (pg 3-25), but in the report, Yoshiyama et al. (1998) also characterizes population abundance as "...not scarce" to "scarce" in June-July (spring run)" with "plenty" to "very plenty" for April and May.	Please see the response to comment 341-24 regarding the effect of June flows on nonnative striped bass. Staff Report Chapter 2, Hydrology and Water Supply, shows that June is highly impaired in many of the tributaries and in the Delta. With extreme levels of flow impairment under current conditions, it is unsurprising that native fish are often unable to utilize historic habitats. Additionally, Turlock and Modesto Irrigation Districts (TID and MID) submit annual reports to FERC for Project No. 2299, and the Article 58 Annual Report for 2017 (TID and MID 2018) provides information regarding June including Exhibit 4f which shows a substantial number of Chinook salmon were observed in the Delta during June in 2017. Also, it is important to note that juvenile salmon that "enter" the Delta prior to June can still utilize the estuarine environment in June and beyond. June flows are part of the wet season during which higher flows are important to salmonids for a variety of reasons. As stated in Section 7.6.2, Aquatic Biological Resources, Delta inflows under the 45 to 65 scenarios would generally increase during December through June and these increased flows would support improved migratory conditions for emigrating juvenile salmonids and other anadromous and estuarine fishes that migrate through the Delta and lower reaches of the Sacramento and San Joaquin Rivers, as well as provide improved attraction and homing cues for adult salmon, steelhead, sturgeon, and other species migrating upstream. June flows also provide benefits to adult spring-run Chinook salmon (peak migration in May and June) and winter-run Chinook salmon (peak spawning in May and June), as shown in Table 3.4-1, both of which require suitable flows and water temperatures for migration and spawning. Similarly, as shown in Staff Report Section 3.2.2, Freshwater Flow and Estuarine Resources, high winter and spring outflows benefit many estuarine species. Winter and spring (January - June) Delta outflows are positively correlated with the abundance of longfin smelt, green sturgeon (peak spawning in May and June), starry flounder (larval-juvenile dispersal in March - June), and California bay shrimp. Additionally, as shown in Table 3.4-1 of the Staff Report, the emergence period for <i>Oncorhynchus mykiss</i> (O. mykiss or steelhead) is Jan-May, and newly emerged O. mykiss fry, which

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			are known to have high densities in June (FERC 2020), are sensitive to warm water temperatures and would benefit from colder temperatures provided by higher flows in June (e.g., see Appendix D of Stillwater Sciences 2017). Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, cites ^Yoshiyama et al. (1998) in reference to spring-run Chinook salmon peak migration timing (May–June) shown in Table 3.4-1, because Yoshiyama et al. (1998) also provides May-Jun as the period of peak adult migration in their Table 1. The ^Yoshiyama et al. (1998) paper does also state that “Overall salmon abundance in the Sacramento River up to the mid-1870s was described, for good years, as usually ... “plenty” to “very plenty” in April-May (mainly spring run) and “not scarce” to “scarce” in June–July (spring run).” However, these qualitative terms were in reference to overall abundance and referenced “daily catch by two men in one boat (with one net)” (^Yoshiyama et al. 1998). Thus, the “not scarce” to “scarce” quotes referenced by the commenter are only applicable up to the mid-1870s and based on very limited information and thus should not be interpreted to fully represent the seasonal distribution of spring run Chinook salmon. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments, and comments on other projects.
341	24	Chapter 7 in the DRSED II continues to frequently emphasize the importance of June flows as a key to its management plan, touting benefits to migrating juvenile salmonids. Countless comment responses and contentions of the impact of June flows on reservoir storage have been made by the TRP and others accompanied by documentation noting the lack of migrating fish during June (as filed in March 17, 2017 and March 29, 2013). Outmigrants are largely absent following the month of May, with only a minimal number remaining. Yet the usage of reservoir storage in June generally results in complete water consumption with minimal potential for refill from precipitation or runoff. The increased flows in June will perpetuate cooler higher flows during striped bass spawning (page 3-97), which improves	Please see the response to comment 341-23 regarding the benefits of June flow to native fish species. Please see Staff Report, Section 6.3.2, Reservoir Storage and Elevation, for information on how carryover storage targets as part of the cold water habitat objective protect reservoir storage. Nonnative fish such as striped bass do pose a threat to juvenile salmon during outmigration to the Delta (Sabal et al. 2016; Lindley and Mohr 2003). For striped bass, even though higher Delta outflow in spring results in more juvenile recruitment, the relationship between flow and population abundance is more complex. While early survival (eggs to young of the year [YOY]) in striped bass is positively correlated with flow (Kimmerer et al. 2009), spawning stock declines seem to have reduced that

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		conditions for the survival and reproduction of a notable voracious non-native predator [footnote 43: Sabal, M., Hayes, S., Merz, J. and Setka, J., 2016. Habitat alterations and a nonnative predator, the Striped Bass, increase native Chinook Salmon mortality in the Central Valley, California. North American Journal of Fisheries Management, 36(2), pp.309-320.] [Att. 30]. The DRSED II even states, “An increase in Delta outflow in spring is predicted to increase the population abundance of striped bass and American shad, two important sport fish in the Bay-Delta estuary,” (pg 3-97). Striped bass is an introduced predator, notably found to consume juvenile and sub-adult salmonids and impact survival (Sabal et al. 2016). [footnote 43: Sabal, M., Hayes, S., Merz, J. and Setka, J., 2016. Habitat alterations and a nonnative predator, the Striped Bass, increase native Chinook Salmon mortality in the Central Valley, California. North American Journal of Fisheries Management, 36(2), pp.309-320.] [Att. 30] Goertler et al. (2021) stated, “Striped bass commonly predate on juvenile Chinook salmon with potentially catastrophic consequences.” Lindley and Mohr (2003) [footnote 44: Lindley, S.T. and Mohr, M.S., 2003. Modeling the effect of Striped Bass (<i>Morone saxatilis</i>) on the population viability of Sacramento River winter-run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>).] [Att. 23] described how striped bass abundance impacted the extinction risk of an endangered Chinook salmon run in California. Interestingly the DRSED II positively highlights the potential improvement for non native species as it states, “An increase in Delta outflow in spring is predicted to increase the population abundance of striped bass and American shad, two important sport fish in the Bay Delta estuary,” (pg 3-97). The effects of increased May and June flows on non-native predators is not seriously analyzed, is actually portrayed as a positive byproduct, and at a minimum should be reconsidered when discussing the overall management benefits and impacts to native fish.	predictive capacity (Kimmerer et al. 2001), and density-dependent survival after the first summer dampens the effect of flow on recruitment (Kimmerer et al. 2000). Section 3.12, Nonnative Fish Species, of the final Staff Report has been edited to better reflect this complexity. In addition, the Chinook Salmon Otolith Study (TID and MID 2016) provided by the commenter suggests that higher flows during the spring may have reduced predator populations by disrupting nesting and other reproductive behaviors.
341	25	[Attachment 1: Article titled Fitness of hatchery-reared salmonids in the wild]	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.

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341	26	[Attachment 2: Article titled Projected impacts of climate changed salmon habitat restoration]	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.
341	27	[Attachment 3: Article titled Juvenile Chinook Salmon Abundance, Distribution, and Survival in the Sacramento-San Joaquin Estuary]	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.
341	28	[Attachment 4: Article titled Relating survival of fall-run Chinook Salmon through the San Joaquin Delta to river flow]	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.
341	29	[Attachment 5: Article titled Route use and Survival of Juvenile Chinook Salmon through the San Joaquin River Delta]	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.
341	30	[Attachment 6: Article titled Survival of Juvenile Fall-Run Chinook Salmon through the San Joaquin River Delta, California, 2010-2015]	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.
341	31	[Attachment 7: Article titled Weakened portfolio effect in a collapsed salmon population complex]	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.
341	32	[Attachment 8: Article titled Effects of predator and flow manipulation on Chinook salmon (<i>Oncorhynchus tshawytscha</i>) survival in an imperiled estuary]	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.
341	33	[Attachment 9: Document titled California Aquatic Invasive Species Management Plan]	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,

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			General Comments, for the approach to addressing attachments to comments.
341	34	[Attachment 10: Article titled Reduced recruitment performance in natural populations of anadromous salmonids associated with hatchery-reared fish]	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.
341	35	[Attachment 11: Article titled Corrigendum: Reduced recruitment performance in natural populations of anadromous salmonids associated with hatchery-reared fish]	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.
341	36	[Attachment 12: Article titled On the reproductive success of early-generation hatchery fish in the wild]	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.
341	37	[Attachment 13: Article titled Climate change threatens Chinook salmon throughout their life cycle]	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.
341	38	[Attachment 14: Article titled Signals of large scale climate drivers, hatchery enhancement, and marine factors in Yukon River Chinook salmon survival revealed with a Bayesian life history model]	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.
341	39	[Attachment 15: Article titled Striped bass (<i>Morone saxatilis</i>) migration timing driven by estuary outflow and sea surface temperature in the San Francisco Bay-Delta, California]	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.
341	40	[Attachment 16: Document titled GrandTab 2023.06.26 California Central Valley Chinook Escapement Database Report]	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.

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341	41	[Attachment 17: Article titled Predation on Fishes in the Sacramento-San Joaquin Delta: Current Knowledge and Future Directions]	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.
341	42	[Attachment 18: Article titled Managing for Salmon Resilience in California's Variable and Changing Climate]	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.
341	43	[Attachment 19: Article titled The Coming Megafloods]	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.
341	44	[Attachment 20: Johnson, R.C., Weber, P.K., Wikert, J.D., Workman, M.L., MacFarlane, R.B., Grove, M.J. and Schmitt, A.K., 2012. Managed metapopulations: do salmon hatchery 'sources' lead to in-river 'sinks' in conservation?. PLoS One, 7(2), p.e28880.]	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.
341	45	[Attachment 21: Article titled Floodplain farm fields provide novel rearing habitat for Chinook salmon]	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.
341	46	[Attachment 22: Article titled Projecting Cumulative Benefits of Multiple River Restoration Projects: An Example from the Sacramento-San Joaquin River System in California]	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.
341	47	[Attachment 23: Article titled Modeling the effect of striped bass (<i>Morone saxatilis</i>) on the population viability of Sacramento River winter-run chinook salmon (<i>Oncorhynchus tshawytscha</i>)]	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.
341	48	[Attachment 24: Article titled The importance of physical habitat assessment for evaluating river health]	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,

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			General Comments, for the approach to addressing attachments to comments.
341	49	[Attachment 25: Article titled An evaluation of four Sacramento-San Joaquin River Delta juvenile salmon survival studies]	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.
341	50	[Attachment 26: Document titled Statistical procedures for detecting the CVPIA natural Chinook salmon production doubling goal and determining sustainability of production increases]	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.
341	51	[Attachment 27: Webpage titled Hatchery Programs - California]	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.
341	52	[Attachment 28: Article titled Did a Shifting Ecological Baseline Mask the Predatory Effect of Striped Bass on Delta Smelt]	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.
341	53	[Attachment 29: Article titled The effectiveness of non-native fish removal techniques in freshwater ecosystems: a systematic review]	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.
341	54	[Attachment 30: Sabal, M., Hayes, S., Merz, J. and Setka, J., 2016. Habitat alterations and a nonnative predator, the Striped Bass, increase native Chinook Salmon mortality in the Central Valley, California. North American Journal of Fisheries Management, 36(2), pp.309-320.]	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.
341	55	[Attachment 31: Article titled Population diversity and the portfolio effect in an exploited species]	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.

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341	56	[Attachment 32: Letter from City and County of San Francisco Office of the City Attorney to State Water Resources Control Board dated March 29, 2013 Re: Comment Letter – Bay Delta Plan SED]	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.
341	57	[Attachment 33: Letter from Turlock Irrigation District to State Water Resources Control Board dated March 29, 2013 Re: comment letter on the Bay-Delta Plan SED]	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.
341	58	[Attachment 34: Letter from Modesto Irrigation District et al to State Water Resources Control Board dated March 29, 2013 Re: Draft Substitute Environmental Document In Support Of Potential Changes To The Water Quality Control Plan For The San Francisco Bay - Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows And Southern Delta Water Quality ("SED")]	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.
341	59	[Attachment 35: Letter from Turlock Irrigation District to State Water Resources Control Board dated October 6, 2016 Re: Water Quality Control Plan (WQCP)]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	60	[Attachment 36: Letter from Turlock Irrigation District to State Water Resources Control Board dated March 16, 2017 Re: Comment to the Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Supporting Draft Revised Substitute Environmental Document (September 2016)]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	61	[Attachment 37: Letter from San Francisco Public Utilities Commission to State Water Resources Control Board dated March 16, 2017 Re: Comments by the City and County of San Francisco to the State Water Resources Control Board's Draft Substitute Environmental Document in Support of Potential Changes to the Bay-Delta Plan]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	62	[Attachment 38: Letter from Modesto Irrigation District to State Water Resources Control Board dated February 15, 2017 Re:	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or

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		Draft Revised Substitute Environmental Document in Support of Potential Changes to the Water Quality Control Plan for the Bay-Delta: San Joaquin River Flows and Southern Delta Water Quality (Revised SED)]	economic effect of the project. Refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	63	[Attachment 39: Letter from Modesto Irrigation District to Department of Fish and Wildlife dated February 13, 2017 Re: Public Records Act Request]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	64	[Attachment 40: Letter from Modesto Irrigation District to Department of Fish and Game dated February 14, 2017 Re: Public Records Act Request]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	65	[Attachment 41: Letter from Modesto Irrigation District and Turlock Irrigation District to State Water Resources Control Board dated March 17, 2017 Re: Comment to the Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Supporting Draft Revised Substitute Environmental Document (September 2016)]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	66	[Attachment 42: Letter from Modesto Irrigation District to State Water Resources Control Board dated March 13, 2017 Re: 2016 Bay-Delta Plan Amendment & SED]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	67	[Attachment 43: Document titled List of Submitters: Modesto Irrigation District-Employee Form Letter]	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 and for responses related to comments previously

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			submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	68	[Attachment 44: Email from Modesto Irrigation District to State Water Resources Control Board dated December 16, 2016 Re: Comment Letter – 2016 Bay-Delta Plan Amendment & SED]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	69	[Attachment 45: Letter from Modesto Irrigation District to State Water Resources Control Board dated March 17, 2017 Re: Comment to the Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Supporting Draft Revised Substitute Environmental Document (September 2016) (“DRSED”)]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	70	[Attachment 46: Letter from Turlock Irrigation District to State Water Resources Control Board dated February 15, 2017 Re: Comment Letter – 2016 Bay-Delta Plan Amendment & SED]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	71	[Attachment 47: Document titled List of Submitters: Turlock Irrigation District-Form Letter]	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 and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	72	[Attachment 48: Document titled San Joaquin River Agreement 2006 Annual Technical Report]	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.
341	73	[Attachment 49: Document titled Appendix H Final Report Chinook Salmon Otolith Study Report]	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

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			to comments and for responses related to comments previously submitted and addressed as part of the 2018 LSJR updates to the Bay-Delta Plan.
341	74	[Attachment 50: Article titled Quantifying physiological influences on otolith microchemistry]	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.
341	75	[Attachment 51: Article titled Eight Decades of Hatchery Salmon Releases in the California Central Valley: Factors Influencing Straying and Resilience]	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.
341	76	[Attachment 52: Williamson, K. S., and B. May. 2005. Homogenization of fall-run Chinook Salmon gene pools in the Central Valley of California, USA. North American Journal of Fisheries Management 25:993 -1009.]	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.
341	77	[Attachment 53: Article titled Historical Abundance and Decline of Chinook Salmon in the Central Valley Region of California]	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.
341	78	[Attachment 54: Article titled Response of juvenile Chinook salmon to managed flow: lessons learned from a population at the southern extent of their range in North America]	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.
342	1	I had to do something. I have channeled my love for our waterways by being a volunteer and supporter of the TRTs . My father was injured in WWII and eventually had his leg amputated. He could not do all the athletics he had done in the past but he discovered fishing. He chose the Delta for his maiden voyage in a plywood, pontoon houseboat that he built. And he painted it orange!! I was fortunate and got to go on that voyage. From then on, my dad starting buying bigger and better boats and introduced friends and family to the Bay Delta. When he died in 1997, he still had a boat there. It is a very mysterious and interesting water way. I have swum and or boated in rivers,	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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		creeks, oceans, canals, swamps, the everglades, and swimming pools but had never seen a waterway like this one. I know that my father would be very proud to know that I was fighting for the health and sustainability of his favorite place. And he would be very upset that the stewards of the bay delta have let it fall into a crisis.	
342	2	I know that you as board members have read the science and can see the future of the Bay Delta if you don't take immediate action. I believe that our Governor whose father was an environmentalist is working hard and making decisions not based on what is best for our state but what is best for his own career. Please do not let the governor sway your decision on how you vote today. I wonder how many of you would vote for him today after his abysmal and embarrassing debate last week? He will be gone soon if he has his way but we who live here will stay and watch the destruction of our waterways. Yesterday while reading the Modesto Bee, I sadly read the article titled "California's final report on disputed Delta tunnel project shows fish and farms at risk" We must stop this. Why do the scientists, environmentalists, fishermen and women and just average people like me understand how much we have to lose but the leader of our state does not? You all have the opportunity to stop him. Please give a vote for the future and health of our Bay Delta and for all the creatures great and small who rely on it to sustain our and their lives. Thank you	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 also see Common Response 1.2, Water Quality Control Planning Process, for more discussion on the State Water Boards' consideration of balancing beneficial uses and on the amended plan updates.
343	1	As a resident of San Francisco for over 53 years, I have been involved directly in trying to save the San Francisco Bay Delta since 2015 when I started a non-profit with several other interested San Franciscans to try educate Bay Area citizens about the harm that will come the Bay itself if tunnels or even one tunnel is built that will take water away from our Bary. Most of the bay Area is still in the dark about what will happened. It is on your shoulders that the health of the greatest estuary on the entire western cost of both Americas rest. PLEASE be responsible and make sure higher flows of water enter the Bay-Delta. Its survival depends on you.	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.
343	2	The tunnel (formerly "tunnels") are going to be a disaster for wildlife, fish, water supplies, the San Francisco Bay and Delta as	Please see Common Response 1.1, General Comments, regarding comments about other projects. See also Common Response 1.3,

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		well as the whales and other species that depend on the outflow of the Sacramento river to the Pacific Ocean. The Voluntary Agreements will not “fix” the disaster of the tunnel. We can save enough water to make up for any water diversion by fixing our current water delivery systems throughout California. The reuse of water is also needed. Leaks and overuse easily equal the amount of water that might be diverted through the tunnel. Spend the money to fix our infrastructure, not to make another mistake in building “the solution”. The tunnel – even with the Voluntary Agreements – will not fix the loss of salmon, the waster of water in agriculture, privatized water exports, and the vital water quality of the entire San Francisco Bay-Delta, tribal, recreational as well a commercial fishing. Our pets are dying in waters that have toxic algal blooms! Voluntary Agreements (Vas) are destined to fail. They do not include adequate adaptive management in case of a failure. On the other hand, the Bay Delta Plan could increase or decrease flow requirements based on whether biological goals are being met. The VAs would not meet even modest objectives of the proposed Bay Delta Plan. Please consider terminating them immediately. Then, you should also terminate the building of a tunnel.	Revised Proposed Plan Amendments, for information on the VA pathway and regarding comments on other water supply projects.
344	1	The District wishes to express its endorsement of the Agreements to Support Healthy Rivers and Landscapes [Footnote 1: The Agreements to Support Healthy Rivers and Landscapes are also referred to as the Voluntary Agreement (VA) Program, as described in Chapter 9 and Appendix G of the DSR.] (Healthy Rivers Agreements) alternative contemplated in the DSR, and urges the State Water Resources Control Board (Board) to approve and enhance that alternative as the program of implementation for the Bay-Delta Plan. Formed by a special act of the Legislature in 1987, CBDD is an independent special district specifically formed to respond to "the problems of flooding and winter drainage, irrigation drainage, and subsidence" in the Colusa Basin, CBDD is not a water user, nor does it supply water service within its one million-acre, tri-county service area. Rather, it serves as a central	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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		organizing point and clearinghouse for projects that respond to that statutory directive. Still, the District recognizes the dire impact that the Unimpaired Flows approach would have on the Sacramento Valley, both environmentally and economically. Those impacts, detailed in the comment letters submitted by NCWA and the Sacramento Valley Water Users, are not a viable solution for complicated hydrology and biology of the Colusa Basin. In contrast, CBDD also recognizes and supports the unique opportunity presented by the Healthy Rivers Agreements to implement sophisticated, thoughtfully crafted, and locally focused projects in the Sacramento Valley---projects that will inure to the benefit of fisheries, the environment, flood control, and water users alike. In recognition of that potential, CBDD is actively meeting with the Department of Water Resources (DWR) and other stakeholders to identify opportunities for CBDD to contribute to the on-the-ground efforts identified in the Healthy Rivers proposal. The District applauds the work of those stakeholders to date, and looks forward to future opportunities to support this effort in the Sacramento Valley. The District appreciates the opportunity to offer comments on this important issue, and urges the Board to support the Healthy Rivers alternative in its update to the Bay-Delta Plan.	
345	1	I strongly support these points made by Tuolumne River Trust - • The Plan acknowledges the need for Tribal Beneficial Use (TBUs), but does not include a plan to protect them. California's water rights are inherently racist – See this article. - The Plan fails to protect beneficial uses related to fisheries, including commercial, subsistence, tribal and recreational fishing - The plan fails to protect water quality for other forms of recreation, such as swimming and boating. - The plan is prejudicial toward agricultural interests at the expense of other beneficial uses.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses and the process to reasonably protect those beneficial uses. Also see Common Response 1.2, Water Quality Control Planning Process, for information on beneficial uses and public trust. 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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		- Agriculture uses 80% of CA's developed water, but only contributes 2% of our economy. - Agricultural exports privatize water – a Public Trust resource that is supposed to belong to the people of California – making a small group rich at the expense of our ecosystems and low income communities. - Agriculture wastes a lot of water and depletes groundwater because irrigation water is often too cheap to incentive innovation. We need to change the playing field to reward efficiency. Water is no longer an abundant cheap resource and the State Water Resources Control Board should be the heroes who take us boldly into a future taking care of our precious resource. I grew up in California and my legacy is to support all efforts to make sure there is a future that includes all beneficial uses of water for everyone.	
347	1	SacWAM Is Welcome • Independent Staff product & capacity • Reduces water-user bias: complete control of assumptions • Not cobbled-together CalSim adaptation • Each watershed at equal level of detail	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	2	“Reasonable Protection” standard for Board evaluation of flow alternatives • “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.” (Staff Rpt, p. 7.1-5) • Standard is NOT incremental improvement	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.

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347	3	SacWAM shows clear benefits of higher flow range • Based on achievement of key threshold flow benchmarks identified in scientific literature • Benefit acknowledged in Staff Report: – “[T]he required Delta inflows would be higher under the High Flow Alternative compared to the proposed Plan amendments and would provide ecosystem benefits ...” (p. 7.2-8).	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	4	Staff Report: 2 issues with “High Flow Alternative” • Carryover storage and associated water temp. • Water supply • Report draws unwarranted conclusion based on summary analysis: – “[T]he beneficial environmental effects 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 and water supply purposes.” (p. 7.2-8)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 347 for responses to oral comments related to this PowerPoint.
347	5	How the Board should use modeling done to date • Determine how to manage carryover storage and water supply impacts: – To achieve the flows needed for protection of fish and wildlife beneficial uses – So that provision of the needed flow protection is “reasonable” • Not to find fish “science” showing that less flow is adequate (Board should rely on its scientific findings in 2010, 2017)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	6	Staff Report alternatives are not a take-it-or-leave-it menu	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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		• The Board cannot simply pick and choose among different stated alternatives • The Board must refine alternatives to develop a decision starting from (not ending at) what the summary analysis shows Partial list, needed further modeling and/or policy and legal analysis • Especially of “High Flow Alternative” – “Almost every major tributary in the Sacramento River watershed, and each Eastside tributary, has unique features and issues that require specific consideration and analysis.” – CSPA comments on Scientific Basis Report, 2016	November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	7	Carryover storage & water temps. • The “High Flow Alternative” is framed to lose – Is it 65% or 75%? – Unlike Low Flow and Plan alternatives, High Flow Alternative contains no flow flexibility to manage carryover storage and water temps, needs it • App. A1c Res carryover, temp values are crude – Set to not exceed historical values (pp. A1-10, -11) – First cut shows need, requires serious refinement – CVP “buffer pools” show promise, also need work	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	8	Water supply impacts require additional analysis by the Board • Not sufficient: CEQA-ish approach bracketing the possible impacts by stating the worst case • Requirements of CEQA: – Analysis of impacts to evaluate alternatives; can’t overstate	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.

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		impacts to dismiss as infeasible – To analyze (as well as implement) mitigation of impacts to the extent feasible – The primary purpose of CEQA is to support informed decision-making	
347	9	The Board cannot defer further analysis of water supply impacts to a program of implementation • What is “reasonable” depends on particulars • Danger is that the particulars of water supply impacts will never be analyzed because the Board will conclude, based on first cut summary analysis alone, that water supply impacts make 65% or greater unreasonable • The Board must break this vicious circle	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	10	The Board cannot rely on water users to analyze water supply impacts • Water users will not collaborate with the Board or with NGOs to improve a percent-of unimpaired flow requirement – Not to optimize implementation – Not to mitigate water supply impacts • For ten plus years, every water-user response has been designed to make percent-of-unimpaired flow requirements look unreasonable and to challenge them on a legal basis • Water users cooperate only when in control	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	11	Consideration of different allocation rules: • For water users upstream of rim dams • Among different watersheds to achieve aggregate Delta inflow and outflow objectives	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.

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		• Between agricultural and M&I water users in various watersheds • Combining 2 or more watersheds (suggested only as possible “voluntary” option) Different rules for allocations to Settlement and Exchange Contractors • E.g., the assumptions already outlined as Alt.3 for modeling of LTO BiOp alternatives • Consider in the context of proactive drought alternative that limits deliveries in first dry year, before declaration of “emergency”	
347	12	Analysis of impacts to Bay Area water suppliers based on source of water • Report analysis (based on location of impacts) obscures opportunities for revising allocations or other actions within source watersheds • Staff Report lumps EBMUD (Mokelumne), SWP & CVP contractors (Delta pumps), CCWD (other in-Delta diversion)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 543 for responses to oral comments related to this PowerPoint.
347	13	Take-homes - The Board must require refinement of analyses in Staff Report, especially: - Water supply impacts - Carryover storage - The Board must make hard and complex decisions to implement a high flow alternative that will reasonably protect fish and wildlife beneficial uses and meet the Plan’s objectives - Answer question: How can we make this work?	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.

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348	1	Comments on the 2023 Draft Staff Report/SED re: Updates to the Bay-Delta Water Quality Control Plan. Jon Rosenfield, Ph.D., Science Director	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	2	[Exhibit 1: PowerPoint slide of four photos titled Comments on the 2023 Draft Staff Report/SED re: Updates to the Bay-Delta Water Quality Control Plan]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	3	Status Quo For Bay-Delta Fish and Fisheries Is Decline Small changes will not restore fish viability, fisheries, & water quality • Substantial increases in freshwater flow into and through the Delta are required “Flow is commonly regarded as a key driver or “master variable” governing the environmental processes in riverine and estuarine systems such as the Bay-Delta and its watershed” -State Water Board 2017 at p. 3-2	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	4	[Exhibit 2: Four graphs titled Delta Smelt 1967-2022, Longfin Smelt 1967-2022, Starry Founder Harvest (1980-2016), and Harvestable White Sturgeon 1979-2021, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	5	Freshwater Flow Drives Fish Viability Metrics To restore viability, frequency of higher flow levels must increase substantially; minimum flows must increase and occur only at low frequency	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	6	[Exhibit 3: Two graphs titled Longfin Smelt 1988-2022 and Longfin Smelt Population Growth 1988-2022, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	7	Freshwater Flow Drives Fish Viability & Fishery Metrics Frequency of higher Delta outflows and Delta inflows must increase substantially to restore viability and the fishery	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.

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348	8	[Exhibit 4: Two graphs titled White Sturgeon]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	9	Freshwater Flow Drives Fishery Productivity Frequency of higher Delta outflows must increase substantially to restore the fishery: Age 1+ index from CDFW-Interagency Ecological Program's Bay Study Harvest data from Pacific States Fisheries Management Council, PacFin database	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	10	[Exhibit 5: One graph titled Starry Flounder 1980-2022 and one graph described as fishery landings increases with estuary abundance]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	11	Staff Report flow thresholds for Chinook Salmon must be updated to reflect the best available science Staff Report flow threshold (20 kcfs at Rio Vista) is not protective	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	12	[Exhibit 6: PowerPoint table titled Staff Report flow thresholds for Chinook Salmon must be updated to reflect the best available science]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	13	Staff Report flow thresholds for estuarine prey items must be updated to reflect the best available science • Best available science demonstrates no support for Staff Report's existing outflow threshold (11.4-29.2 kcfs, Feb-June) • Spring flows >~30 kcfs and higher summer flows needed to support a robust food supply Frequency of Delta outflows that support abundant zooplankton prey items must increase to restore the estuarine habitat, viable populations of imperiled fish, and resilient fisheries	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	14	[Exhibit 7: PowerPoint slide of three graphs titled Staff Report flow thresholds for estuarine prey items must be updated to reflect the best available science]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.

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348	15	Proposed Project (55% UIF) will not support native fish viability or reasonably protect other beneficial uses	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	16	[Exhibit 8: Table 7.6.2-5, Frequency of Meeting Winter–Spring Delta Outflows to Benefit Estuarine Habitat and Species (percent of months), from the 2023 Draft Staff Report]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	17	Proposed Project (55% UIF) will not support native fish viability or reasonably protect other beneficial uses	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	18	[Exhibit 9: Graphic modified by commenter of Table 7.6.2-5, Frequency of Meeting Winter–Spring Delta Outflows to Benefit Estuarine Habitat and Species (percent of months), from the 2023 Draft Staff Report]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	19	Proposed Voluntary Agreements are Wholly Inadequate to Achieve Plan Objectives or Reasonably Protect Beneficial Uses Flow resources promised in the VA are meager (and not reasonably certain to occur) • Less of the flows required to support and maintain White Sturgeon, Longfin Smelt, Starry Flounder, & other species • On average, flows increase by 1.5%	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	20	[Exhibit 10: Graphic modified by commenter of Table 4-13, Water Year Type Averaged January–June Total Reference Condition Flow and VA Change from Reference Condition (TAF), Delta Outflow (Including Postprocessed Components), from the 2023 Draft Staff Report]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	21	Proposed Voluntary Agreements are Wholly Inadequate to Achieve Plan Objectives or Reasonably Protect Beneficial Uses VA “habitat” resources are meager (even if they actually materialize & perform as intended)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
348	22	[Exhibit 11: Graphic modified by commenter of Table ES-4, Projected Increases in Habitat Area for Delta Smelt, Longfin	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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		Smelt, and Salmonids within Relevant Seasons for Each Species, from the 2023 Draft Staff Report]	November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	1	Flow Needs to Prevent Degradation and Loss of Fish and Wildlife Beneficial Uses: Introduction Fish and wildlife beneficial uses are being drastically degraded, with potential for permanent loss of these uses of the Bay-Delta estuary • Cold Freshwater Habitat (COLD) • Commercial and Sport Fishing (COMM) • Estuarine Habitat (EST) • Migration of Aquatic Organisms (MIGR) • Rare, Threatened or Endangered Species (RARE) • Shellfish Harvesting (SHELL) • Spawning, Reproduction and/or Early Development (SPWN) • Water Contact Recreation (REC-1) • Wildlife Habitat (WILD)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	2	Current WQCP has failed to reasonably protect the viability of imperiled native Bay-Delta species and ensure preservation of the RARE (Rare, Threatened or Endangered Species) and related beneficial uses – nor will 55% UIF, let alone the VA.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	3	[Exhibit 1: PowerPoint table titled Current WQCP has failed to reasonably protect the viability of imperiled native Bay-Delta species and ensure preservation of the RARE and related beneficial uses]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	4	[Exhibit 2: Graph titled Delta Smelt 1967-2022]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.

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349	5	[Exhibit 3: Graph titled Winter-run Chinook Salmon 1970-2023* (*preliminary)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	6	Current WQCP has failed to reasonably protect the viability or productivity of commercial fisheries or to ensure preservation of the COMM and related beneficial uses - nor will 55% UIF, let alone the VA.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	7	[Exhibit 4: PowerPoint table titled Current WQCP has failed to reasonably protect the viability or productivity of commercial fisheries or to ensure preservation of the COMM and related beneficial uses]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	8	[Exhibit 5: Graph titled Harvestable population of Bay-Delta White Sturgeon]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	9	[Exhibit 6: Graphs titled Starry Flounder production in the Bay estuary affects commercial fishing catches in the nearshore ocean]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	10	Current WQCP has failed to reasonably protect underlying ecological conditions and processes that ensure preservation of EST (Estuarine Habitat), COLD (Cold Freshwater Habitat), MIGR (Migration of Aquatic Organisms), SPWN (Spawning, Reproduction and/or Early Development), REC-2 (Water Contact Recreation), etc – nor will 55% UIF, let alone the VA. Food Web Decline • Winder, Jassby, & Mac Nally 2011 • Kimmerer et al. 2017 Estuarine Temperature Impacts • Vroom et al. 2017 • Bashevkin and Mahardja 2022	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.

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		Water Quality Decline • Lehman et al. 2013, 2020 • Berg and Sutula 2015 • Kudela et al. 2023	
349	11	[Exhibit 7: Photo titled Delta Microcystis Blooms (HABs)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	12	Current WQCP has failed to achieve Salmon Protection (Doubling) – nor will 55% UIF, let alone the VA.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	13	[Exhibit 8: Graph titled Figure 3. Estimated yearly adult natural production, and in-river adult escapement, of spring-run Chinook salmon in Central Valley rivers and streams, 1952-2015]	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.
349	14	Current WQCP has failed to prevent the radical attenuation of flows to the estuary, with dramatic, well-documented effects on all fish and wildlife beneficial uses – nor will 55% UIF, let alone the VA.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
349	15	[Exhibit 9: Two graphs of Delta outflow, titled Unimpaired and Actual, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 542 for responses to oral comments related to this PowerPoint.
350	1	The Mokelumne River Agenda - Introduction - The Mokelumne River: - Science, Collaboration, Flow and Non-flow Measures Yield Positive Results - Impacts of Proposed Plan Amendments	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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		- Bad for the Mokelumne River - Bad for the East Bay - The Voluntary Agreements are a better choice UIF alternatives would have major impacts Threatens temperature management on the Lower Mokelumne River Unacceptable reductions in EBMUD's water supply Broad economic impacts Disproportionate impact on urban disadvantaged communities Jeopardizes the State's housing goals Impacts to SGMA, hydropower, agriculture	
350	2	[Exhibit 1: Photo of a lake and stream]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	3	[Exhibit 2: PowerPoint slide of a photo titled Who we are]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	4	[Exhibit 3: Image showing the Mokelumne River with the header: 'The Mokelumne River'.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	5	The Mokelumne River: Science, Collaboration, Flow and Non-flow Measures Yield Positive Results EBMUD Flow Release Obligations Over Time Temperature Management	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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350	6	[Exhibit 4: PowerPoint slide of a graph titled EBMUD Flow Release Obligations Over Time]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	7	[Exhibit 5: Two graphics titled Ideal Operation Summer/Fall Periods and Unimpaired Flow Operation Summer/Fall Periods, respectively]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	8	Spawning Habitat 1999-present Improves spawning habitat Increase slope/Sediment transport /geomorphic processes Improve ecosystem health and function Rearing Habitat Reconnect flood plain habitats Screening Diversions Improve outmigrant survival Mokelumne JSA is a model for VA Success Lower Mokelumne River Partnership • History of collaborative science and data sharing • Successes from combining Flow and habitat actions • One size fits all UIF does not work for the diversity of conditions in the Bay Delta Watershed	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	9	[Exhibit 6: Photo of a bulldozer in a river]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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350	10	[Exhibit 7: Photos described as rearing habitat]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	11	[Exhibit 8: Four images showing diversions protected with screens.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	12	[Exhibit 8: Photos described as screening diversions]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	13	[Exhibit 9: Photo of salmon]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	14	[Exhibit 10: Graph titled Chinook Salmon Returns to the Mokelumne River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	15	Unimpaired Flow - Impacts to Mokelumne Fishery • Unimpaired flow could be harmful to fish • Staff Report does not adequately address temperature management on the Mokelumne River or other tributaries	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	16	[Exhibit 11: Photo of a salmon]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	17	55% Unimpaired Flow Impacts to EBMUD Supply Greater than 25% rationing in most years • 50% or greater rationing in almost half of all years • In driest year, 88% rationing 35% Unimpaired Flow Impacts to EBMUD Supply	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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		• 25% or greater rationing in 37% of years • Long-term conservation framework will not result in enough demand reduction to offset these losses	
350	18	[Exhibit 12: Graph titled 55% UIF Annual Rationing (based on SWRCB modeling)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	19	[Exhibit 13: Graph titled 35% UIF Annual Rationing (based on SWRCB modeling)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	20	SWRCB Economic Analysis Is Flawed • Overstates feasibility of developing alternative supplies • Projects will take years or decades to develop • Achieving additional conservation will be more expensive than in the past • Brackish desal – water rights issues • Underestimates costs and environmental impacts of alternative supplies	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	21	[Exhibit 14: Image showing water works facility.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	22	Unimpaired Flow - Impacts on Disadvantaged Communities • Roughly 1 in 5 EBMUD customers lives in a disadvantaged community • Alternative supplies are very expensive (vs. ~\$20/AF for Pardee Supply) • \$1250/AF for transfers	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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		• \$1900-6300/AF for recycled water • \$1350/AF for San Joaquin groundwater banking • Rate increases would disproportionately impact low income customers	
350	23	[Exhibit 15: Graphic titled Disadvantaged Communities within EBMUD Service Area]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	24	Broad Economic Impacts In an average year, the 55% unimpaired flow requirement would cause: \$181 Million in direct economic impacts to EBMUD customers 42,000 lost jobs in EBMUD service area \$7.5 Billion in service area business losses \$69.6 Million in EBMUD revenue losses In the single worst drought year of the past century, the 55% unimpaired flow requirement would cause: \$1.9 Billion in direct economic impacts to EBMUD customers 333,000 lost jobs in EBMUD service area \$56 Billion in service area business losses \$487 Million in EBMUD revenue losses	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	25	Unimpaired Flow - Housing Impacts • ABAG RHNA allocated 138,040 housing units to Alameda and Contra Costa Counties (2023-2031) • EBMUD Demand Study estimates 180,432 new dwelling units between 2022 and 2050	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.

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		• Water shortages every year cannot support new housing	
350	26	[Exhibit 16: Graphic of document cover titled Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031]	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.
350	27	What About Other Alternatives All unimpaired flow alternatives are unacceptable - Significant, unreasonable impacts even at 35% - Drought modules are unacceptable - 5A: incompatible with existing water rights - 5B: doesn't recognize agencies who have invested in water conservation - Staff Report assumes switch to UIF in year 8 Why EBMUD Supports VAs The Voluntary Agreements are the Best Path Forward - We've been doing this for over 25 years on the Mokelumne - and we've been successful - The Vas follow the same model - The Vas would support the Delta without jeopardizing - Local economies - Statewide progress in other areas (like housing, affordability, groundwater)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	28	[Exhibit 17: Graphic of the cover from the 2023 Draft Staff Report]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.

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350	29	[Exhibit 18: Images showing water environment and people.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
350	30	[Exhibit 19: Image of a river.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 573 for responses to oral comments related to this PowerPoint.
351	1	Delta Plan comments. Dr. Steven White, Prof. Emeritus Dept. Biological Sciences San Jose State University. PRIMARY CONCERN: The Delta Plan's stated goal is to help sustainably manage the region's freshwater resources and protect the associated ecosystem and wildlife it supports. However, the current plan has several crucial flaws that must be remedied in order to realistically achieve this goal.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	2	[Exhibit 1: Graphic titled Bay-Delta Watershed]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	3	[Exhibit 2: Graphic titled Map of the Sacramento-San Joaquin Delta]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	4	[Exhibit 3: Graphic titled (c) Bethany Reservoir Alignment]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	5	The Current Delta Plan Fails to Account for the Expected Impact of Multiple Upcoming Projects. PROJECT 1: The Delta Conveyance Project The Delta Conveyance Project is expected to draw up to 6,000 cubic feet of water per second from the Sacramento River. Diverting that much fresh water away from the Delta will have a	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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		massive negative impact, and risks Delta ecosystem recovery. It is important to note that similar projects have been rejected by the majority of California voters whenever the issue appeared on a ballot, or died even before a vote due to massive public opposition. To address the voters' legitimate, repeated concerns about these kinds of projects, the expected impacts of the Delta Conveyance Project must be included in this Plan. The Sites Reservoir project is expected to divert an additional 2,000 cubic feet of water per second from the Sacramento River. The combined impact of these two projects will dramatically decrease the amount of freshwater flowing into the delta, and any plan claiming to safeguard our natural resources would be incomplete if it did not at least address these looming issues.	
351	6	[Exhibit 4: Graphic described as the Sites Reservoir Project]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	7	River and Delta Flows must be high enough to allow salmon to thrive and ecosystems to recover. Recent studies (using juvenile salmon fitted with acoustic tags) have shown that river flow levels that ensure about 50% survival of migrating juvenile salmon can be experimentally determined [Footnote 1: C.J. Micheal et al., Ecosphere, Nonlinear survival of imperiled fish informs managed flows in a highly modified river. (May 19, 2021)]. That means that river flows can now be logically and rationally specified to levels that allow at least 50% survival of salmonid fish during their various life cycle stages. Delta flows also need more rigorous, experimental determinations of optimal flows aimed to allow recovery of various aquatic species, removal of agricultural, industrial and municipal pollutants, more precise temperature control of Bay-Delta waters, reduction in the occurrence of harmful algal blooms etc. Until such rigorous experimental determinations can be carried out, and with the critical goal of restoring the Delta in mind, Delta flows should be set at 55% of unimpaired flow (but within a 50%-75% adaptive range).	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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351	8	[Exhibit 5: Excerpt from Section 5.4.2.3, Proposed Inflow Objective, from the 2023 Draft Staff Report]	This exhibit was included in a PowerPoint presentation at the hearings in November and December in 2023. The exhibit does not make a general comment or raise a significant environmental issue.
351	9	The Voluntary Agreements will not protect rivers or the Delta Voluntary Agreements (Vas) lack the enforcements and incentives necessary to properly protect the fragile aquatic ecosystem, nor are their stated “mitigation efforts” likely to significantly aid threatened animal and plant populations. Moreover, the harmful impact of repeated non-compliance will be profound and long-lasting. To accomplish its stated goal of protecting the Central Valley watersheds, the Bay-Delta and the vulnerable species they support, the Delta Plan must abandon these “optional” environmental recovery methods. The Delta Plan must create and implement MANDATORY environmental protection measures instead of voluntary ones, with stiff penalties for noncompliance that are strictly enforceable. In the absence of such safeguards, the consequences will be “disastrous”.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	10	[Exhibit 6: Excerpt from Los Angeles Times article titled Debate over options for California’s ailing Delta region reflects deep divisions over water]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	11	The Current Delta Plan Will Result in Deadly Salinity Levels for Vulnerable. As fresh water is withdrawn from the Sacramento River (decreasing flow into the Delta), an advancing salinity front will encroach further into the Bay-Delta, which will have severe consequences for a wide variety of vulnerable aquatic life within it. Note how both the range and abundance of the smelt are reduced as the salt gradient steepens and drives deeper into the Delta [Exhibits 7 & 8] . Delta inflows and outflows are important, and both should be specified to levels that together create an ecologically tolerable Bay-Delta salinity gradient more like that seen in 1983 (vs that seen in 2007).	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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351	12	[Exhibit 7: Graphic titled 1983 San Francisco Estuary Delta Smelt Catch and Seasonal Salinity Gradient]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	13	[Exhibit 8: Graphic titled 2007 San Francisco Estuary Delta Smelt Catch and Seasonal Salinity Gradient]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	14	The Current Delta Plan Fails to Limit Agricultural Pollutants to Safe Levels. Recent studies indicate we must do more to mandate upgrades to our water treatment plants and limits on the amount of fertilizers entering delta watersheds, or risk toxic algal blooms: [Exhibits 9 and 10]. Both nitrogen and phosphorous play critical roles in regulating plant and microbial growth in the Delta and Bay. If not limited, excess pollution can result in harmful algal blooms that are deadly to wildlife.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	15	[Exhibit 9: Excerpt from USGS study titled Sources of nitrogen and phosphorous to northern San Francisco Bay]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	16	[Exhibit 10: Excerpt from Estuaries and Coasts article titled Nutrient Status of San Francisco Bay and Its Management Implications]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	17	Effects of Harmful Algal Blooms Harmful algal bloom (HABs) killed tens of thousands of fish in the SF Bay-Delta in August of 2022 alone. Experts blamed concentrations of nutrients (from wastewater and Ag runoff) and increased water temp. We need to decrease the nutrient loads and increase the freshwater imports to the Delta (and flow through the Bay) in order to limit the occurrence of HABs.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to response to Comment Letter 539 for responses to oral comments related to this PowerPoint. Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to nutrients and HABs in the Delta. Please see Mitigation Measure MM-SW-a,f: 4 (Avoid or Reduce Harmful Algal Blooms and Invasive Aquatic Weeds) regarding nutrients and HABs.
351	18	[Exhibit 11: Excerpt of photos from SFGATE article titled 'We've never seen this before': Dead fish pile up as algal bloom consume SF Bay]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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351	19	The Current Delta Plan Does Not Include All Specific Temperature Requirements for Vulnerable Species. Many species require specific temperatures at specific times of year in order to survive. To properly protect these species, a comprehensive Delta Plan needs to include “trigger temperatures” at which nearby dams are mandated to release cold water to lower the temperature to the specified range. Without strict mandates in place and harsh penalties for noncompliance, these species won’t survive.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	20	[Exhibit 12: Excerpt from California Fisheries Blog titled Protecting Salmon Summer 2017]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	21	The Current Delta Plan Does Not Include Accurate Maps of Salmonid Spawning and Feeding Grounds. While the maps shown are useful in other aspects, they are insufficient as far as salmon are concerned. Given the mandate of the Delta Plan to preserve and support Salmon and Steelhead, any realistic Delta Plan MUST include up-to-date maps indicating where each seasonal run of salmonid fish spawns, rears, feeds, and “holds over” prior to migration. A few examples of useful maps in this regard are shown in the following slide. Examples of Improved Maps: FIGURE 1 (below) [Exhibit 15]: A portion of a NOAA map of the Sacramento River showing how only a small stretch of the river supports both spawning and rearing of salmon. All such regions should be clearly mapped for the Delta Plan. FIGURE 2 (left) [Exhibit 16]: Example showing how the Sacramento tributaries should also be examined and mapped to include spawning and rearing regions, holding areas, hatchery sites and release/migration routes etc. Maps including all this relevant information should be created for all 4 different salmon runs (Fall, Late Fall, Spring, Winter) and, ideally, for Steelhead and Sturgeon as well.70620	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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351	22	[Exhibit 13: Figure 7.6.2-1a, Critical Habitat in the Study Area (northern), Figure 2.1-4, Major Sacramento/Delta Tributaries and Watersheds, Figure 2.1-6, Annual Precipitation in Northern California, and Figure 2.1-8, Generalized Geologic Map of the Valley Floor, from the 2023 Draft Staff Report]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	23	[Exhibit 14: Photos titled Salmon are a “keystone” species]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	24	[Exhibit 16: Graphic captioned Figure 2 (left): Example showing how the Sacramento tributaries should also be examined and mapped to include spawning and rearing regions, holding areas, hatchery sites and release/migration routes etc.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	25	[Exhibit 15: Image of NOAA map showing portion of Sacramento R. that supports salmon spawning and rearing.]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	26	Closing Comments. The overwhelming majority of scientific studies examining the Bay-Delta agree that continued large diversions of water from the Sacramento River and Bay-Delta are not sustainable. This means that if we want to responsibly maintain our natural resources, water recycling, purification, and reuse are our best and most sustainable ways forward. In addition to encouraging water conservation across the state, I strongly urge the California Water Board to do everything in its power to fully invest in water reclamation. We must use all means at our disposal to encourage the state to: • Develop a state-wide system of water purification plants, turning undrinkable water into purified drinking water. • Develop efficient grey-water and storm water capture infrastructure across the entire state. • Develop more environmentally responsible ways to utilize or dispose of brine to minimize the harm done by desalinization plants dumping concentrated brine back into the ocean. Climate change is an ever-increasing threat to the citizens of our great	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.

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		state. Melting glaciers, shrinking reservoirs, and drying riverbeds will only grow worse, and California will feel these effects even more thanks to the long-term drought now affecting our region. We are at a critical decision point. Our current sources of fresh water are unstable and declining. We must shift our financial resources away from water diversion and towards water reclamation, purification, and reuse... and we must do so NOW, before it is too late.	
351	27	Our “water allocations” are irrational and unsustainable.	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.
351	28	Exhibit 18: Excerpt from research paper “100 years of CA’s water rights system: patterns, trends, and uncertainty”	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.
351	29	Defining “Adequate Flows” The idea shown here is to scientifically determine a flow range (along a particular stretch of the Sacramento River) that corresponds with juvenile salmon survival during migration. Is there some “minimum threshold” level they need simply to survive at all? Some level that corresponds with 50% survival? Delta and river flows need to be protected. The results of current studies show that river flows below about 4,300 cfs resulted in essentially no juvenile survival (3%), while “higher flows” (in the range of 11,000-22,000 cfs) could increase survival of juvenile salmon to about 50%. Interestingly, for this stretch of river, flows over about 23,000 cfs dropped the survival slightly (to about 40%).	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 539 for responses to oral comments related to this PowerPoint.
351	30	Exhibit 19: Excerpt of research published in Ecosphere “Nonlinear survival of imperiled fish informs managed flows in a highly modified 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.
351	31	Exhibit 20: Excerpt of research published in Ecosphere “Nonlinear survival of imperiled fish informs managed flows in a highly modified river” cont.	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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351	32	Exhibit 21: Image showing Super Critical Water Oxidation process	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.
351	33	Super Critical Water Oxidation (SCWO)? - SCWO takes advantage of the unique properties of SCW to destroy organic waste. - The organic content of the waste feed is quickly and efficiently converted to carbon dioxide, water, etc. Some Facts of Process: - Rapid & complete reaction. - Total conversion of organics to CO₂, H₂O, N₂ - Halogens converted to the corresponding mineral acids - No harmful by-products	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.
352	1	[Exhibit 1: Graphic titled Celebrating Black Environmental Leaders Black History Month]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	2	Direct Link Between Environmental Injustice and Mass Incarceration. There is a worrisome overlap between environmentally toxic communities and mass incarceration. (Yale Review 2021). [Exhibit 1].	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	3	[Exhibit 1: Photo titled Yale Environment Review]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	4	HABs and E.coli Effects on Water Quality and Tribal Events	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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		Past Issues Hired in March 2023 to help address water quality concerns by the tribe. Blooms seen in the past during tribal events on the Sacramento River. Concern for the well being of tribal elders and youth. Harmful Algal Blooms Began testing in April 2023 June 2023 – 3 parts per billion -- Language camp canceled due to threat of HABs -- Cultural knowledge was not able to be passed down on the tribe's ancestral territory September 2023 – 3 parts per billion Minimal HABs presence this year due to high flows	November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	5	[Exhibit 2: Photo of a HABs test]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	6	[Exhibit 3: Graph titled Sacramento River Flows near Nicolaus, CA]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	7	[Exhibit 4: Graph titled Sacramento River at Verona (VON) (2023)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.

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352	8	[Exhibit 5: Graph titled Sacramento River at Verona (VON) (2022)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	9	[Exhibit 6: Graph titled Sacramento River at Verona (VON) (2021)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	10	[Exhibit 7: Graph titled Sacramento River at Verona (VON) (2020)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	11	HAB Incidents Blooms reported in Sacramento County - Excluding reports where no cyanotoxins were detected. Significantly lower number of HABs incidents seen during the high flow season in 2023. Less awareness of HABs issue in 2020 is likely the cause of fewer reports.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	12	[Exhibit 8: PowerPoint slide of three graphics and a table titled HAB Incidents]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	13	E.coli • Large spike in mid-July, but low levels more recently. • Cancellation of an event for tribal elders due to health concerns from very high e.coli levels in the Sacramento River.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint presentation.

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		• Sacramento River is still impaired with higher flows, but HABs reduced.	
352	14	[Exhibit 9: PowerPoint slide of four graphs titled E.coli]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	15	HABs Concerns for the Delta • HABs were first spotted in the Delta in 1999 and have since become a recurring problem in the summertime for Stockton. • The Stockton Deep Water Shipping Channel is listed as an impaired water body in the 303(d) List of Impaired Water Bodies. • At Restore the Delta, a HABs monitoring program was developed in 2022 that focused on collecting toxin data for Microcystis. • Funding is limited, so only testing in Stockton. • In 2022, there were several outbreaks of HABs throughout Stockton from May to September. • In 2023, no blooms were observed. So, what was different between last year and this year? • Water temperatures were similar between years. • Last year, blooms were present in water temperatures between 80-82°F. • This year, temperatures reached that range. • There has been no significant difference in nutrient concentrations in Stockton's Deep Water Shipping Channel within the last few years.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to instream flows and cyanobacteria harmful algal blooms in the Delta.

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		• Light availability did not differ year over year. • Flow down the San Joaquin River; however, was the most significant change between 2022 and 2023. • This was due to the Ark storms early in the year with record snowpack, that increased flow throughout the Delta during the summer.	
352	16	[Exhibit 10: Photo of people testing water]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	17	[Exhibit 11: Graph titled San Joaquin River at Garwood Bridge (SJG) (2019)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	18	[Exhibit 12: Graph titled San Joaquin River at Garwood Bridge (SJG) (2020)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	19	[Exhibit 13: Graph titled San Joaquin River at Garwood Bridge (SJG) (2021)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	20	[Exhibit 14: Graph titled San Joaquin River at Garwood Bridge (SJG) (2022)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	21	[Exhibit 15: Graph titled San Joaquin River at Garwood Bridge (SJG) (2023)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.

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352	22	The Staff Report's Analysis of HABs Promotes Disparate Impacts on Disadvantaged Communities • The Staff Report acknowledges that “nutrients are generally high in the Delta, and other factors such as low flows (in part by increasing residence time) and high temperatures are thought to be more important in driving HABs.” • Staff Report focuses on HABs problems related to reservoir storage and water exports, rather than the estuary. • Decreased instream flows throughout the Delta increase stressors for HABs. • The Staff Report lists HAB impacts on recreation as less-than-significant. • From the Staff Report: “based on the number of other available recreational areas and the temporary nature of closures, this shift would not likely be in sufficient numbers of recreationists or a period of time to result in substantial deterioration of recreational facilities at alternate locations.” • Making the claim that temporary closures and other recreational facilities are available is discriminatory and continues disparate impacts on disadvantaged communities.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	23	The Need for a Protective HABs Standard • The alternatives should increase instream Delta flows through June to minimize formations of HABs for later in the season. What has happened on SJ River side will happen to Sacramento River side. • The 75% unimpaired flows alternative is preferred for overall estuary health. • 65% unimpaired flows alternative as the absolute minimum for drought years. (This would lessen the proliferation of HABs) • A numeric HABs standard must be developed for both	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to instream flows and cyanobacteria harmful algal blooms in the Delta and water quality standards for cyanotoxins and State Water Board efforts to address HABs in the Delta.

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		recreational and drinking water impacts following the USEPA's 2019 standards. • From the Staff Report: "USEPA has developed water quality criteria for some harmful algal bloom (HAB) toxins (USEPA 2019) and draft aquatic life criteria for some chemicals of emerging concern (CEC) (USEPA 2022), but there are not yet recommended water quality criteria for most CECs." • The USEPA's 2019 HABs standard is the best available standard for the present. • Delaying implementation of a HABs standard for managing the water quality and flow in the phase II document creates disparate impacts. State can continue its own program/research.	
352	24	Little Manila Rising: Social and Environmental Justice • Social Justice Legacy • Community represents the highest percentiles of pollution burden and sensitive populations • Embrace interdisciplinary lens → relationship between air quality and water quality through Partnership • Outcomes: • Local and Regional Interdisciplinary collaboration (additional dimensions to EJ): • DTEC EPA petition (alienation recreation activities while living in close proximity to polluted/impaired waterways) • UNC study (using local data samples)	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	25	[Exhibit 16: Photo of speakers presenting a PowerPoint slide titled Little Manila Rising Growing Plants Growing People]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.

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352	26	[Exhibit 17: PowerPoint slide of a graphic titled Little Manila Rising: Social and Environmental Justice]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	27	Phase 1 Low Flows: HABs Impacts on Air Quality • Phase 1: Low flow in urban and rural Delta areas • 40% flow framework adopted in 2018 • Phase 1 - Local impacts in Stockton (urban delta). • Low flow regimes in the SJ river side are inadequate and contribute to stressor in air quality tied to HABs. 75% unimpaired flow with minimum flow of 65% is needed in Phase 2 so air pollution burden does not spread. University of North Carolina (UNC): Air Quality and HABs Their findings in the Delta suggest that gasses that sometimes evaporate off toxic blue green algal blooms can lead to aerosol formation in the atmosphere, forming particulate matter that is unhealthy to inhale.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see also Common Response 4.1, Harmful Algal Blooms, regarding harmful algal blooms, including their relationship to streamflows and potential implications for air quality and environmental justice communities.
352	28	[Exhibit 18: PowerPoint graphic titled Phase 1 Low Flows: HABs Impacts on Air Quality]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	29	• Phase 1 Concern - Replication of Stockton conditions in broader Delta due to inadequate flow standards. To compensate for existing stressors, Phase 2 standards are critical. • Phase 2 – Flow explanations have been addressed by Shingle Springs and Restore the Delta science team. • The Bay-Delta Plan’s preferred 55% framework regime is inadequate and will contribute to HABs air quality challenges when low flows standard are used during drought.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. See also Common Response 4.1, Harmful Algal Blooms, regarding harmful algal blooms, their relationship to streamflows, and their potential implications for air quality, DACs and environmental justice communities. Regarding the comments that reduced streamflows will

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		• Voluntary agreements perpetuate inequalities across the Delta for DACs and EJ communities because they do not have preventive flow standards for HABs. Conclusion: Low flow regime with tunnel construction will lead to the similar air pollution challenges in the rural communities → prolonged exposure to pollution due to construction activity as in urban Delta.	contribute to air pollution and construction emissions in the rural communities and the urban Delta, please refer to Section 7.5, Air Quality, Section 7.21, Habitat Restoration and Other Ecosystem Projects, and Section 7.22, New or Modified Facilities, of the Staff Report. Impact AQ-a-b-c in Section 7.5 evaluates the potential for the proposed Plan amendments to conflict with air quality plans, contribute to violations of air quality standards, or cumulatively degrade air quality. Mitigation Measure MM-AQ-a-c is required to reduce emissions from groundwater pumping and groundwater storage and recovery activities. Potential air quality impacts from construction activities from habitat restoration and new or modified facilities are assessed in Sections 7.21 and 7.22, respectively, of the Staff Report. Air quality impacts associated with construction activities would be potentially significant and can be avoided or reduced by implementation of Mitigation Measure 7.21 MM-AQ-a-e: A (CMM-AQ-a-e), Mitigation Measures 7.21 MM-AQ-a-e: B and C, Mitigation Measure 7.22 MM-AQ-a-e: A (CMM-AQ-a-e), and Mitigation Measures 7.22 MM-AQ-a-e: B-C.
352	30	65% Unimpaired Instream Flow is Bare Minimum for Fish Recovery During Dry Years Low Flow Alternative = 55% Unimpaired Flow Does not stop fish extinction, only delays it. High Flow Alternative = 65% Unimpaired Flow Minimum Flow required for fish recovery during dry periods; 75% is correct standard for recovery and salmon doubling objective.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	31	[Exhibit 19: Photo of a river]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	32	Failure to Preserve Healthy Fisheries is Causing Ethnocide According the Your Delta Your Voice survey produced by the Department of Water Resources, 90 percent of Delta	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410,

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		Environmental Justice respondents disclosed that they rely on Delta fish to feed their families on a nearly costless basis, AKA subsistence fishing. Tribes, Southeast Asian and Latino communities really on the Delta to conserve traditional practices.	411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	33	[Exhibit 20: Table of census tracts with minority populations and number of census tracts]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	34	No Fish Recovery, No Justice for Tribes and EJ Communities -- Kimmerer, W.J. et. al., 2008 -- Under higher flow conditions, there is a more rapid entrainment of estuarine organisms or "more rapid transport to their rearing grounds." -- Flows in the main water column create habitat for fisheries. -- Habitat restoration alone will not get us to fish recovery. -- More important than habitat restoration may be habitat quality. Habitat quality increases with adequate freshwater flow (75% unimpaired flow) in the system.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	35	The Board must listen to tribes on how to proceed with the adoption of Tribal Beneficial Uses. Tribes need to drive this process.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	36	Tribal water rights must be addressed and quantified in order for the Board to formulate equitable, reliable, long-term water usage plans to protect cultural, spiritual, and economic practices for all Tribes. The Board must meaningfully engage tribes as partners in this process.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to

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			tribal reserved water rights. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate tribal and Traditional Ecological Knowledge into the State Water Board's Bay-Delta Plan update and implementation processes.
352	37	The Voluntary Agreements turn water quality standard-setting and attainment over to water agencies and irrigation districts, ignoring the existence of Indian tribes. The VAs thereby act as another instance of the erasure of Indian tribes from water governance.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to tribal comments on the VAs. Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.
352	38	SJ River and early data from Shingle Springs show low flows contribute significantly to HABS production. We know that low flow conditions on the SJ River are a predictor of what 45% unimpaired flows in dry years and VAs will manifest in the interior Delta along the Sacramento system.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint. Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to instream flows and cyanobacteria harmful algal blooms in the Delta.
352	39	The Board must consider new HABS and air quality science to protect environmental justice communities. Not paying attention to and incorporating the best available science causes disparate impacts.	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410, 411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
352	40	The Staff Report as written is for the benefit of water exporters and to protect the status quo and does not account for disparate	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letters 410,

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		impacts and impacts to tribes and environmental justice communities.	411, 413, 414, 441, and 442 for responses to oral comments related to this PowerPoint.
353	1	Agreements to Support Healthy Rivers and Landscapes December 1, 2023 State Water Resources Control Board Public Hearing for Phase 2 of the Bay-Delta Water Quality Control Plan Update Early Habitat Implementation: We are here today to help reassure the State Water Board, other agencies, and the public that the Agreements to Support Healthy Rivers and Landscapes will be implemented! ● Alternatives being considered by the SWRCB have been incorrectly characterized as a choice between “flows or habitat” ● Scientists are telling us we need BOTH flows and physical landscape to improve conditions for fish and wildlife, thus the Agreements to Support Healthy Rivers and Landscapes ● The addition of these habitat projects in concert with flows creates habitat values that do not currently exist when these flows move rapidly through channels ● The additional flows proposed in the Agreements to Support Healthy Rivers and Landscapes are targeted to increase the habitat value and function of these projects • This Holistic Approach works to achieve the balancing of beneficial water uses, as required by the WQCP Process • Avoids adverse impacts that are created by the unimpaired flow alternative to drinking water, sanitation, groundwater supplies, fire suppression, farms, salmon and other fish species, birds and wildlife along the Pacific Flyway, hydroelectric generation and recreation	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.

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		• Provides more benefits and less impacts than proposed Plan amendments ● The Agreements will contribute to a Holistic Approach to improve freshwater conditions for all four runs of Chinook Salmon and other native species ● Early implementation is already underway ● We are working hard with state and federal agencies and conservation organizations to create momentum on project implementation to ensure environmental targets in the agreements are achievable during the term of the agreement ● Since December 2018, 33 projects have been completed ● Projects are being implemented by collaborative partnerships of local water management entities, conservation organizations, and state and federal fisheries and water management agencies ● These partnerships are very inclusive and we welcome additional parties to help advance this work ● Collaboration is expediting project completion and we are working through the “Cutting Green Tape” initiative and with many partners to accelerate restoration Feather River: • 1 project implemented since 2018 • Many projects implemented under other mandates • Gravel Supplementation Project: • Phase I: 7,000 cubic yards added in 2023 • Phase II: Up to 9,000 cubic yards to be added in 2024 • In progress:	

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		• Sunset Weir and Pumps (2026) • Remove rock weir and backwater • Improve 10-miles riverine habitat • Install fish screens Mokelumne River: • 10 Actions Implemented since December 2018 • Rearing Habitat Restoration • Early Implementation: • Floodplain Restorations (3.67 acres) • Diversion Screens – EBMUD/USFWS – Relative Risk Model (RRM) • 3 Diversion Screens – Complete (RRM – 3rd, 4th, & 7th) • 3 Diversion Screens – Design (RRM – 1st, 2nd, & NR) Spawning Habitat Restoration and Maintenance • Early Implementation: • Spawning Restoration (1.27 acres) • Spawning Maintenance (2.04 acres) Yuba River: • Three projects implemented since 2018 • Total areal footprint of over 200 acres, a significant portion of which contributes instream and floodplain rearing habitat Since Feb 2022 the following has been done:	

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		-45,000 tons of spawning gravel placed, -4 acres of spawning habitat created, -5 acres of rearing habitat created, -Establish design criteria and monitoring process to ensure success and adaptation. In the next 3 years, already planned: -45,000 tons of spawning gravel, -9 acres of spawning habitat creation, -22 acres of rearing habitat/side channels created or reconnected. American River: • Five (5) EIP projects implemented since 2018. 32 acres spawning* [*VA commitment exceeded.] 21 acres instream rearing • Why these restoration actions were selected? • Nexus with Water Forum's ongoing Habitat Program (since 2008) precedes and extends beyond VA term. • Extensive hydraulic and biological analyses/monitoring inform implementation success in a watershed affected by variable inter-annual hydrology and systemwide operational constraints. • Design process and resulting habitat effectiveness documented in peer-reviewed journals [Footnote 1: Merz, J. et. al (2018). Balancing competing life stage requirements in salmon habitat rehabilitation: between a rock and a hard place: Optimizing salmon spawning and incubation success. Restoration Ecology.	

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		27. October [Footnote 2: Sellheim, K. et. al. (2015). Juvenile Salmonid Utilization of Floodplain Rearing Habitat After Gravel Augmentation in a Regulated River. River Research and Applications. February.] [Footnote 3: Zeug, S. et. al. (2013). Gravel Augmentation Increases Spawning utilization by Salmonids: A Case Study from California. River Research and Applications. July.] • Adaptive management = annual implementation of habitat that is suitable and effective for adult and juvenile salmonids over a range of flows and water year types. • American River Habitat Program actions (non-flow) and Modified FMS (flow) are implemented in a complementary manner. American River - Spawning Success: • Habitat Program restored sites support 30% - 50% of all natural spawning on the river.* [*Accounts for inter-annual variability.] • 2021 EIP Example – Ancil Hoffman Site • Documented redd increase immediately post-project. • 2021-2022 Monitoring Results • Fall-run Chinook salmon • Pre-project (3 yrs) = 1-3% of total redds in river • Post-project Year 1 and 2 = Increased to 8-14% of total redds • Steelhead trout**[** High flows/turbidity precluded Year 2 steelhead surveys.] • Pre-project = 0% of total redds in river	

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		• Post-project Year 1 = Increased to ~30% of total redds American River - Rearing Habitat Utilization: • 2022 EIP Example – Nimbus Basin Site • Suitable rearing habitat occurs and is utilized by juveniles over a range of flows. 0 Total suitable area increases/decreases as flow changes. • Project designs are optimized for existing hydrology and provide juvenile refugia during variable conditions. • Juvenile salmonid observations at constructed sites coincide with areal suitability changes. Floodplain Reactivation: • Increase connectivity between main river stems and their historic floodplains • Increase the frequency and duration of shallow inundation in the winter months • Improve juvenile salmon migration and access to productive rearing habitat • Grow 'Fish Food' for migrating juveniles remaining in the main stems • Reduce adult fish passage impediments • Improve Pacific Flyway bird populations • Improve groundwater recharge • Over 500,000 acres of historic floodplain currently being evaluated for reactivation feasibility	

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		• 13,000 acres of floodplain reactivation is ready for early implementation with landowner support (Sutter Bypass) • For 2023, almost 70,000 flood-drain acres of 'fish food' is already under contract. • In 2022, 50,000 flood-drain acres of 'fish food' was delivered. • Floodplain Adult fish passage impediments are now being evaluated (Weir 1 & Giusti Weir). Delta: • Focal region for habitat restoration and food production • Delta and longfin smelt, salmonids, and sturgeon • Many projects implemented under other mandates • Significant investment in studying benefits of floodplain and tidal habitat • Apply lessons learned from monitoring of constructed projects • Improved channel and levee breach designs • Reduce predation risk • Improve invasive vegetation management Healthy Rivers and Landscapes Program • Restore 5,228 acres of tidal wetland and floodplain habitats in North Delta Arc and Suisun Marsh	

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		• Early Implementation Projects: • Tides End - 2,000 acres floodplain and tidal • Prospect Island – 1,600 acres tidal • LEBLS – 1,200 acres floodplain • Implement additional habitat projects after the 8-year term Early Habitat Implementation ● Water agencies have been leading implementation of habitat improvements using best available science. This would not be possible if unimpaired flows are implemented ● The Agreements to Support Healthy Rivers and Landscapes include secured funding from state, federal and local sources ● The Agreements to Support Healthy Rivers and Landscapes provide a clear path to the timely implementation of flows and habitat that promote species recovery	
353	2	[Exhibit 1: Graphic titled A Holistic Approach to Healthy Rivers and Landscapes]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	3	[Exhibit 2: PowerPoint slide of a photo titled Feather River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	4	[Exhibit 3: PowerPoint slide of four photos titled Mokelumne River]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	5	[Exhibit 4: Graphic described as 10 actions implemented since December 2018]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.

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353	6	[Exhibit 5: Graphic titled 2021 Spawning Restoration Sites]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	7	[Exhibit 6: Graphic titled Hallwood Side Channel and Floodplain Restoration Project]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	8	[Exhibit 7: Graphics described as Yuba River habitat projects and a location map]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	9	[Exhibit 8: Graph titled Flow (2000)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	10	[Exhibit 9: Photos titled Habitat (2005-2015)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	11	[Exhibit 10: Graph titled Salmon Return (2014)]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	12	[Exhibit 11: Graphic described as five EIP projects implemented since 2018]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	13	[Exhibit 12: Graphic described as the Ancil Hoffman site]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	14	[Exhibit 13: Photo of snorkelers]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	15	[Exhibit 14: Three graphics titled 2023 Juvenile Observations and Modeled Rearing Flow Suitability]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in

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			November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	16	[Exhibit 15: Graphic titled Floodplain Benefits Cycle]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	17	[Exhibit 16: PowerPoint slide of a graphic titled Floodplain Reactivation]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	18	[Exhibit 17: PowerPoint slide of two graphics titled Delta]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	19	[Exhibit 18: PowerPoint slide of a photo titled Delta]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
353	20	[Exhibit 19: Graphic titled A Holistic Approach to Healthy Rivers and Landscapes]	This PowerPoint presentation was submitted to accompany oral comments presented during the public hearing held in November and December 2023. Refer to Comment Letter 559 for responses to oral comments related to this PowerPoint.
354	1	The purpose of this letter is to provide comments from Yolo County Flood Control and Water Conservation District (District) on the State Water Resources Control Board's (State Water Board) September 2023 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 (Bay-Delta Plan) for the Sacramento River and Its Tributaries, Delta Eastside Tributaries, and Delta (DSR), pursuant to the State Water Board's related November 14, 2023 Revised Notice of Availability and Opportunity For Public Comment, Hearing, and Staff Workshops on the Potential Sacramento/Delta Updates. The District appreciates this opportunity to provide comments to the DSR and welcomes the State Water Board to engage in discussions and/or site visits to assist in a better understanding of the Cache Creek system and the District's perspective relative to 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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		elements proposed in the DSR and the District's comments contained in this letter.	
354	2	Based on the information contained in this letter and the associated supporting documentation reviewed, including the DSR, the following are the District's findings: • The District urges the State Water Board to adopt and advance the Agreements to Support Healthy Rivers and Landscapes [Footnote 1: The "Agreements to Support Healthy Rivers and Landscapes" is the updated name and reference for the "Voluntary Agreements" or "VA's" as described and detailed in the DSR Chapter 9 and Appendix G.] (Healthy Rivers Agreements). - o The District believes that the Healthy Rivers Agreements provide more benefits and less impacts using the best available science, collaboration with agencies to adapt to changing conditions and science, and with fewer impacts as compared with the State Water Board's Proposed Plan Amendments [Footnote 2: For purposes of this letter, "Proposed Plan Amendments" (PPA) includes an inflow objective from the Sacramento River and Delta tributaries to the Delta at 55% of unimpaired flow (UIF), within an allowed adaptive range between 45% and 65% of unimpaired flow (DSR, 5-17).] (PPA) identified in the DSR; and that those benefits will be implemented to help protect all beneficial uses in the Bay-Delta watershed under a timeframe that is less than the time to implement the PPA. - o The District is proposing to participate in the Healthy Rivers Agreements to assist in providing enhanced environmental flow contributions in Putah Creek, in collaboration with contributions from Solano County Water Agency (SCWA), for salmon habitat and other benefits. - o The District has been coordinating with SCWA and the Department of Water Resources (DWR), as well as with fishery agency/experts and the Yocha Dehe Wintun Nation regarding the proposed approach under the Healthy Rivers Agreements.	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 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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354	3	• The State Water Board's PPA creates significant and adverse impacts. - o Diversion reductions pose a significant adverse risk and economic impact on the surrounding communities of Clear Lake, which are already designated as Disadvantaged Communities and Severely Disadvantaged Communities, and pose a significant adverse risk to sustainable power generation at the Geysers.	The environmental impacts and economic effects of the proposed Plan amendments are analyzed in Staff Report Chapters 7, Environmental Analysis, and 8, Economic Analysis and Other Considerations, respectively. Also see Chapter 10 and Common Response 10.1, Economically Disadvantaged Communities, regarding disadvantaged communities.
354	4	- o Reduced diversions by the District at Capay Diversion Dam under the PPA for a 55% unimpaired flow create significant and adverse impacts: • Reduced diversions in 54 years out of the 94-year period of analysis; in 14 of those 54 years, diversions are reduced by more than one-half, • Reduced diversions would occur in several consecutive years; particularly, in two consecutive years (1947 and 1948), District diversions are reduced to zero in both years, although the DSR does not analyze the PPA's water-supply impacts during multi-year droughts. • Reduced diversion of nearly 140,000 AF per year in three years analyzed.	Please see the response to comment 354-3. Also see Common Response 4.2, Drought and Climate Change, regarding multi-year drought analysis.
354	5	o Reduced storage in Indian Valley Reservoir adversely impacts the District's deliveries for irrigation and other beneficial uses, as well as timing for hydropower generation.	Please see the response to comment 354-3.
354	6	o Reduced diversions will likely result in additional groundwater pumping by landowners, which could delay or jeopardize the Yolo Subbasin Groundwater Agency's efforts (with the District's technical support) to maintain sustainability of Yolo County's groundwater system under the Sustainable Groundwater Management Act (SGMA).	Please see the response to comment 354-3. Also see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, regarding SGMA.
354	7	o Land fallowing as a result of the PPA will intensify adverse economic impacts to areas currently identified as Disadvantaged Communities and Severely Disadvantaged Communities.	Please see the response to comment 354-3.
354	8	o The DSR identifies the State Water Board cannot be certain there could be sufficient mitigation of the potential mercury	Please see the response to comment 354-29.

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		impacts that would occur under the PPA as a result of the increased flows from Cache Creek to the Yolo Bypass.	
354	9	District Background The Legislature created the District by a special act in 1951 “for the acquisition, controlling, conservation, diversion, storage and disposition of storm, flood, and other surface waters....” (Cal. Statutes 1951, ch. 1657, pp. 3772-3791.) The District’s service area is located in Yolo County west of the City of Sacramento. As Figure 1 below shows, the District’s service area includes nearly all of Yolo County’s irrigable lands west of the Yolo Bypass. To serve this large area of Yolo County, the District owns and operates the Cache Creek Dam at Clear Lake and Indian Valley Reservoir in Lake County (Figure 1). Releases from those reservoirs commingle with additional inflow in Cache Creek, which traverses downstream approximately 65 miles to the town of Capay. The District owns and operates the Capay Diversion Dam to divert water into its 160-mile canal system for beneficial uses within its service area. Collectively, the District’s water rights and claims provide a water supply for municipal, industrial, domestic, irrigation, fishery maintenance and enhancement, hydropower, recreation, and flood control beneficial uses. The water supply investments and operations that the District and its predecessors have conducted for over 167 years have benefitted the region for those purposes and associated activities. This includes benefits for areas served by the District that are identified as Disadvantaged Communities and Severely Disadvantaged Communities. The District coordinates with its customers, neighboring water right holders, Yocha Dehe Wintun Nation, agencies, nongovernmental organizations, and others within the region in order to achieve its mission: The District’s mission is to plan, develop, and manage the conjunctive use of the District’s surface and groundwater resources to provide a safe and reliable water supply at a reasonable cost, and to sustain the socioeconomic and environmental well-being of Yolo County. In addition to the water rights and claims identified above, over	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 last nine years, the District has been one of the state's leaders in operating to divert and use high streamflows to augment groundwater recharge. The District has received 180-day temporary permits from the State Water Board to divert excess storm flows in Cache Creek at the Capay Diversion Dam into the District's unlined canals to recharge the groundwater aquifer. The District's canal system, as represented in Figure 2, acts as a retention basin to distribute and hold the surface water diverted from Cache Creek, allowing for percolation into groundwater over time. Incidental groundwater recharge also occurs each year through the District's deliveries to its customers. A summary of the District's diversions from Cache Creek for groundwater recharge under temporary permits is provided in Table 1. Surface water deliveries and groundwater recharge within the District assist in achieving the conjunctive use mission of the District while also assisting to meet the objectives under the SGMA. The surface water deliveries to growers provide for in-lieu groundwater recharge by assisting to meet crop water demands through a source of surface water supply in order to minimize groundwater pumping. In addition, the surface water deliveries provide for incidental groundwater recharge that occurs throughout the District's unlined canal system. The additional groundwater recharge efforts conducted by the District further assist to maintain a reliable source of groundwater, particularly during drier years when there is little or no surface water available for the District's customers. Collectively, the District's groundwater recharge activities assist to avoid undesirable results under SGMA for the benefit of the Yolo Groundwater Subbasin. In addition, the District organizes, and provides technical support for, the Yolo Subbasin Groundwater Agency, which is a groundwater sustainability agency under SGMA.	
354	10	Regulatory Backdrop In 1995, the State Water Board adopted water quality objectives for the Bay-Delta Plan. As part of implementing that plan, the State Water Board adopted Revised Decision 1641 [Footnote 3: Available at:	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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		https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1641_1999dec29.pdf] (“D-1641”) to impose flow objectives and changes to water rights that store water upstream of the Delta. The District participated in the D-1641 proceedings and ultimately, the State Water Board concluded that Cache Creek did not need to contribute flows to meet the Bay-Delta Plan objectives. (D-1641, § 8.4) In reaching its conclusion, the State Water Board relied on three grounds discussed below. First, the State Water Board has a long history of recognizing the lack of hydraulic continuity between Cache Creek and the Delta. (Order WR 81-15 [Footnote 4: Available at: https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/1981/wro81-15.pdf], ¶ 15.) (D-1641, p. 71) Second, the Board received testimony from the District’s engineer, Francis “Fran” Borcalli, regarding the lack of hydraulic continuity between Cache Creek and the Delta during times relevant under then-relevant water quality objectives, specifically the months of February, April, May, June, July, August and October. Mr. Borcalli testified that Cache Creek flows of approximately 600 cubic-feet per second (cfs) at the Cache Creek diversion structure—located about 20 miles upstream of the Yolo Bypass—would be required to establish hydraulic continuity with the Delta. (Ibid.; Testimony of Borcalli, ¶¶ 12-13) [Footnote 5: A copy of Mr. Borcalli’s testimony is submitted with these comments.] Third, the State Water Board reviewed and approved a stipulation between the District, DWR, and the State Water Contractors that agreed the District would not be required to provide water to help meet the Bay-Delta Plan objectives. (D-1641, pp. 70-71.) Based on that evidence, the State Water Board concluded that the lack of significant hydraulic continuity between Cache Creek and the Delta during relevant time periods meant that the District should not be required to contribute flows to meet the Bay-Delta Plan objectives. (D-1641, p. 72.)	
354	11	While the State Water Board’s approach to Cache Creek flows in the current Bay-Delta Plan update proceedings differs from its prior approach in the proceedings associated with D-1641, Mr. Borcalli’s analysis on which the State Water Board relied in D-1641 largely still applies to Cache Creek’s relationship with the	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the rationale for the regulatory pathway requirement.

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		Delta. The State Water Board's changes relative to Cache Creek appear to be as follows. First, based on the DSR, the State Water Board has refocused its analysis from Cache Creek's hydraulic continuity with the Delta to Cache Creek's contribution to water supply for habitat in the Yolo Bypass. Second, the timing of desired flow contributions has changed since the 1995 Bay-Delta Plan. The PPA, however, still largely focus on flows to the Bay-Delta. For example, the proposed Inflow Objective states that one of its goals is for "Sacramento River/Delta tributaries... to contribute to Delta outflows." Mr. Borcalli's analysis of Cache Creek's lack of hydrologic connection to the Delta therefore remains relevant.	
354	12	Although the District does not agree with all elements in the DSR, there are aspects that the District supports, as indicated in the following two sections of this letter. In regard to channel losses within Cache Creek, the DSR identifies that "[d]ownstream of Capay Dam, Cache Creek loses surface water to the ground until Dunnigan Hills, where it is briefly a gaining reach before becoming a losing reach again all the way to the Yolo basin". (DSR, 2-78) The DSR also states, based on modeling using the Sacramento Water Allocation Model (SacWAM), that "[c]urrent condition simulations estimate an average 1 TAF/yr of streamflow is lost to groundwater from Cache Creek". (DSR, 2-78) This appears to conflict with Table A7-4 of the DSR, which identifies that stream losses along Cache Creek are estimated to be 22.3% of the inflow, which is the second highest estimated stream loss for the tributaries analyzed in the DSR. (DSR Appendix A7, p. A7-27) Based on the information presented during the proceedings for D-1641, as indicated above, the District believes that the simulated losses identified on page 2-78 of the DSR are significantly underestimated and should be examined by the State Water Board in additional detail with sufficient supporting evidence. That review likely would better inform how much contribution, if any, changes in diversions from the Cache Creek system could provide to the Delta or even the Yolo Bypass.	Chapter 2, Hydrology and Water Supply, of the final Staff Report has been corrected to show that SacWAM estimates 89 TAF per year is lost to groundwater from Cache Creek for the current conditions or baseline scenario. The values shown in Table A7-3 show the stream losses for the unimpaired flow scenario. The losses are higher in the unimpaired flow scenario because the streamflows are higher in the unimpaired flow scenario. SacWAM stream loss estimates are based on the best publicly available information. For Cache Creek, the stream losses are based on simulations by DWR's C2VSIM model as described in Section 6.3.2.4 of the SacWAM Documentation.
354	13	Support for Coalition Comments The District is a member of the Northern California Water Association (NCWA) and is a signatory to a coalition of	Please refer to comment letters 260 and 267 to review responses to the comments incorporated by reference. Also see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		comments submitted by NCWA on behalf of its members relative to the DSR. The observations raised in NCWA's comments, including the associated supporting documentation, are incorporated herein by reference. Agreements to Support Healthy Rivers and Landscapes The District has been engaged in numerous discussions relative to the Healthy Rivers Agreements. Although the District is not currently a signatory to the Memorandum of Understanding Advancing a Term Sheet For the Voluntary Agreements Update and Implement the Bay-Delta Water Quality Control Plan, and Other Related Actions, March 29, 2022 (MOU), the District is actively involved in discussions with DWR to participate in the MOU and Healthy Rivers Agreements. The District and DWR have made significant progress to develop an approach to enhance the District's conjunctive use operation summarized above in order to assist in achieving the objectives under the Healthy Rivers Agreements.	
354	14	In summary, the District's participation in the Healthy River Agreements would involve conducting groundwater recharge, and later utilizing a portion of the banked groundwater from its recharge efforts to provide enhanced environmental flow contributions in Putah Creek for salmon habitat and other benefits identified under the approach for the Healthy Rivers Agreements. This approach will provide more benefits to native fish, with significantly lower impacts to the District's water supplies, than attempting to benefit those fish through attempts to increase flows into the Yolo Bypass through Cache Creek under the PPA. The conveyance losses in Cache Creek, summarized above and recognized by the State Water Board in prior proceedings, are significant. In addition, relative to water quality, the District's proposed approach will assist in minimizing transport of mercury-laden sediment in Cache Creek to the Yolo Bypass, considering that the State Water Board acknowledges that it cannot be certain the efforts to address potential mercury impacts under the PPA can be mitigated to a less-than-significant level. (DSR, pg. 7.12.1-65) Further, the focus of the habitat benefits identified in the DSR are within the Yolo Bypass and downstream. Thus, the District believes contributing	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway and the rationale for the regulatory pathway requirements. Also see the response to comment 354-29.

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		to flows in Putah Creek provides benefits for salmon by augmenting the efforts proposed by SCWA under the Healthy Rivers Agreements. The District has been coordinating with SCWA and DWR, as well as with fishery experts with the Department of Fish and Wildlife and the University of California at Davis, in order to assist in identifying potential periods, rates, volumes, and reaches of Putah Creek that would benefit from additional flow contributions from the District to assist with enhancing habitat conditions for salmon, including factors such as flow depth, velocity, and temperature. In addition, the District is seeking input from the Yocha Dehe Wintun Nation regarding the proposed approach under the Healthy Rivers Agreements, and encouraging guidance from Yocha Dehe Wintun Nation's traditional ecological knowledge of the Putah Creek watershed.	
354	15	The District is coordinating with DWR and SCWA to incorporate elements of its proposed contribution into a draft Implementing Agreement that will be provided to the State Water Board. The District's proposed flow contributions include up to 5,000 AF per year during water year types classified as Above Normal, Below Normal, Dry, and Critical. Those proposed contributions via Putah Creek are in addition to and will complement the flows identified in Appendix 1 Flow Tables of the MOU for Putah Creek. Thus, the District's proposed approach is intended to be consistent with the Healthy Rivers Agreements by collaborating with other parties to the Healthy Rivers Agreements. This also includes, but is not limited to developing alignment of the District's proposed flow contributions with the Putah Creek Accord and other regulatory requirements. The District intends to work with SCWA as potentially covered parties who may ultimately become signatories to the Putah Creek Implementing Agreement under the Healthy Rivers Agreements.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.
354	16	Specifically, the District's proposed participation in the Healthy Rivers Agreements involves conducting groundwater recharge when water is available from Cache Creek under a long-term water right permit. District representatives and State Water Board staff have had discussions over the past few years regarding the District's intent to file a long-term water right permit, without the need to apply for a temporary permit on an	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		annual basis. As part of implementing a long-term recharge program, the District believes there is significant potential in expanding the area of recharge and incorporating farmers' ponds and fields for increasing the scale or extent of surface area involved, and enhancing the total annual quantity of water recharged. The District believes that groundwater recharge would occur during wetter periods, similar to conditions during 2016, 2017, and 2023, and in accordance with the terms of a permit issued by the State Water Board. The District would pump a portion of the groundwater recharged to provide flow contributions into Putah Creek measured at outlets from District's University Canal. The contributions by the District are intended to occur between November 1 and March 31 when water is available from the District's conjunctive use operation. One advantage of the District's proposed approach is the flexibility to provide flows into Putah Creek during the periods necessary to benefit fishery habitat upon request with short notice. In addition, the recharge of groundwater will assist to avoid undesirable results under SGMA. As indicated above, the flow contributions by the District into Putah Creek would be in lieu of flow contributions in Cache Creek, due to significant losses experienced in Cache Creek and the creek's significant contributions of mercury to the Yolo Bypass. Volumes of water would be protected from downstream diversion under the Healthy Rivers Agreements. The instream flows contributed by the District would be coordinated with SCWA, together with the governance and science structure proposed under the approach for the Healthy Rivers Agreements. In addition, the District will coordinate with SCWA to provide staffing support for SCWA's efforts to expand available spawning habitat and conduct additional monitoring in accordance with the best available science.	
354	17	Overall, the District looks forward to collaborating with the State Water Board and other parties in order to advance the Healthy Rivers Agreements. The District hopes that the information contained in this letter will help reassure the State Water Board, other agencies, and the public that the District's participation in the Healthy Rivers Agreements, including the many other components proposed by other parties thereunder, will be	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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		implemented to help protect all beneficial uses in the Bay-Delta watershed under a timeframe that is less than the time to implement the PPA. In addition, and importantly, the District believes that the Healthy Rivers Agreements provide more benefits and less impacts as compared with the State Water Board's PPA identified in the DSR.	
354	18	Unimpaired Flow and Significant Adverse Impacts to the District As indicated above, the water supply investments by the District have provided numerous benefits to the environment, groundwater conditions, District's customers, local and state economy, disadvantaged communities, and regional sustainability. Under the State Water Board's proposed Bay-Delta PPA identified in the DSR, the unimpaired flow approach significantly and adversely threatens those benefits.	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.
354	19	The potential injury resulting from the PPA would be compounded by an unclear purpose of the unimpaired flow approach for Cache Creek. The DSR does not include detail regarding potential benefits under the PPA to critical habitat of a specific species within Cache Creek. For example, Figure 7.6.2-1a of the DSR does not identify critical habitat within Cache Creek upstream of the confluence with the Yolo Bypass. The DSR only identifies critical habitat within the Yolo Bypass. As indicated previously in this letter, the potential contributions by the District under the Healthy Rivers Agreements would assist in providing benefits for critical habitat within the Yolo Bypass downstream of the confluence with Putah Creek.	Please see Staff Report Chapter 3, Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations, for a description of the benefits of increased flow. Also see Common Response 1.3, Revised Proposed Plan Amendments, regarding the rationale for the regulatory pathway requirements, and Common Response 3.1, Fish Protection, regarding flow benefit analyses.
354	20	This section of the District's letter therefore is intended to provide comments on the DSR's analysis of the PPA to better identify the PPA's potential impacts and provide associated details that the District believes are important for the State Water Board to consider in relation to the PPA. The District's consulting hydrologists at MBK Engineers extracted modeling results from the SacWAM modeling; however, separate modeling was not conducted. For additional information regarding technical review and findings of the DSR and associated modeling, see the comments submitted to the State Water Board by NCWA on January 19, 2024 which include a report titled Technical Review of the Draft Staff Report/Substitute Environmental Document in Support of Potential Updates to the	Please see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the level and scope of analysis. Also see Staff Report Chapters 7, Environmental Analysis, and 8, Economic Analysis and Other Considerations, for the analyses of environmental impacts and economic effects, respectively. That analysis is fully supported by substantial evidence. Yolo County Flood Control & Water Conservation District is located in SWAP Region 6 of the SWAP model. Detailed results by SWAP region are provided in Appendix A3, Agricultural Economic Analysis: SWAP Methodology and Modeling Results, and show that on average for the 55 scenario, reductions in agricultural revenues and cropped acreage for Region 6 are

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		Water Quality Control Plan and Associated Modeling (Technical Report), dated January 2024. The DSR itself does not describe the impacts of the PPA's on the District's water supplies. The District was required to employ its consulting hydrologists to extract the relevant results from the actual SacWAM modeling results reflected in the DSR. This in and of itself means that the DSR did not adequately disclose those results. Based on the information that MBK Engineers extracted from the SacWAM modeling, the reduced diversions from Cache Creek by the District at Capay Diversion Dam [Footnote 6: Section 3.9.3.10 on page 3-21 of the Draft Sacramento Water Allocation Model, Model Version 2023.06.12 Documentation, September 2023, identifies that "SacWAM represents all agricultural water use by a single diversion at the Capay Diversion Dam at RM 30, where water is delivered to the Yolo County FC&WCD service area (A_20_25_NA1)."] that the PPA would cause would be very significant, as indicated in Figure 3 below. On an average basis for each and every water year type, the DSR indicates reduced diversions from Cache Creek by the District under a 55% unimpaired flow (UIF) during water years 1922 through 2015. Those reduced diversions range from an average of 10,000 AF per year during Wet and Above Normal water year types (approximately 5% reduction in diversions from the DSR baseline), up to an average of 45,000 AF during Below Normal water year types (approximately a 27% reduction in diversions from the DSR baseline). The average reduced diversions for each water year type are shown in Figure 3 as the differently colored bars; changes in diversions for individual water years are represented by the points in Figure 3 corresponding to the associated water year type. The diversion reductions [Footnote 7: Section A.3.9 on page A-32 of the SacWAM documentation identifies that "The calibration period average annual bias is -16.2%. Much of the under-prediction occurs during March and October." Thus, the simulated DSR baseline for the District's diversions are less than the observed diversions. The difference may result in the DSR reporting less impacts to the District's diversions under an unimpaired flow requirement than would occur in actual operations.] shown in Figure 3 vary widely on an individual year	about 4.9 percent and 8.1 percent, respectively. According to its public financial documents, the District generates revenue from several sources including water sales, property taxes, non-operating sources, grants, and hydropower generation. According to its financial documents, water sales were approximately 57 percent of the District's revenue in 2024 and 2025, and several other revenue sources appear not to be directly related to water supply (YCFCWD 2025). In most years, the combined total revenue has allowed the District to contribute excess revenues to its Net Position, including an "unrestricted" fund (YCFCWD 2025; YCFCWD 2023; YCFWD 2022). Based on the year-to-year financial position presented in the District's recent publicly available financial documents, and considering the magnitude of the change in agricultural revenue estimated by the SWAP model, the District's financial viability is unlikely to be greatly affected by the flow scenarios. 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 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. The revised proposed Plan amendments also provide for a VA pathway for an eight-year term with the possibility of extension that reduces the required flow contributions for VA water rights, which would include the commenter.

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		basis. For example, the DSR identifies reduced diversions of nearly 140,000 AF during some water years that are classified as Wet, Below Normal, and Dry. The reduced diversions for each water year under a 55% UIF are illustrated in Figure 4. Based on the results shown in Figure 4, the District's diversions are reduced under a 55% UIF in 54 years out of the 94-year period. During 14 of the 54 years, the District's diversions are reduced by more than one-half of the DSR baseline diversions. In 15 of the 54 years, diversions are reduced between one-quarter and one-half of the DSR baseline diversions. Volumetrically, there are 22 years out of the 94-year period of analysis in the DSR when the reduced diversions are 50,000 AF per year or more. A volume of 50,000 AF represents approximately one-third of the District's average annual diversions identified in the DSR baseline. Reduced diversions also occur in several consecutive years. Perhaps a stark example of this are two consecutive years (1947 and 1948) when the District's diversions are both reduced to zero under a 55% UIF. These sorts of shortages that, according to the SacWAM modeling reflected in the DSR, would result from the PPA's implementation would threaten the District's financial viability as the district the Legislature specially created to provide water supplies for Yolo County. The District's revenues from its agricultural water sales are its primary source of revenue. The District knows from its experience during the recent 2014-2015 and 2021-2022 drought sequences that, in years in which it is unable to deliver substantial agricultural supplies, it has been necessary to draw on the District's financial reserves in order to maintain its operations. It is at best unclear whether the District would be able to financially survive similar sequences of years more frequently with the kind of water-supply shortages that implementation of the PPA would involve. Such impacts on the District's financial viability under the PPAs would be inconsistent with the Legislature's intent in creating the District by special legislation in 1951.	
354	21	Relative to storage of surface water, Figure A1-85 of the DSR identifies reduced storage in Clear Lake [Footnote 8: Section A7.3.2 of the DSR states: "The annual average evaporation for Clear Lake with the limited operations described in Section	Appendix A7, Modeling Approaches Used to Develop Unimpaired Watershed Hydrology, of the final Staff Report has been corrected to refer to Section A7.2.3 Clear Lake Evaporation as the comment suggests.

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		A7.2.5, Unimpaired San Joaquin Inflow at Vernalis, is 155 TAF/yr.” It appears the reference to Section A7.2.5 is in error and should be corrected to identify Section A7.2.3.] at the end of September in nearly each year, up to approximately 33,000 AF per year under a 55% UIF. Greater reductions in storage in Clear Lake are identified in the DSR for some other months. (DSR, Table A1-377) The DSR identifies storage differences at Clear Lake from baseline under a 55% UIF (and other unimpaired flows evaluated in the DSR) expressed as a percentage. (DSR, Tables 6.3-6 through 6.3-9) The percentage difference is measured from the baseline, which includes the total storage in Clear Lake. The percentage difference is misleading because water cannot be physically released from the lake into Cache Creek below the natural rim. The DSR therefore does not apply a relevant metric by relying on the PPA’s impact on all storage in Clear Lake. Section 6.3.2.1 of the DSR therefore incorrectly states that there would be “little change” in carryover storage at Clear Lake under the PPA. (DSR, p. 6-42) Presumably, this conclusion is made by the State Water Board based on the percentage difference relative to the total storage in Clear Lake, reported as an average of 3% due to an average storage decrease of 21,000 AF.	As the commenter points out, the Staff Report presents changes in storage in Clear Lake in multiple ways to explain to the reader how reservoir levels may change under the proposed Plan amendments. The model results presented in Chapter 6, Changes in Hydrology and Water Supply, of the Staff Report show the average change in critical year end of September storage. Table 6.3-9 shows the average baseline critical year storage and the change from baseline for each scenario. The baseline storage for Clear Lake is 836 TAF which is below the modeled operable storage volume; therefore, it would not make sense to present the change in storage as a percent of the operable storage as the commenter suggests. Chapter 6 correctly describes the modeling results for carryover storage in Clear Lake and acknowledges that the entire reservoir is not controllable “Clear Lake (Figure 6.3-26) and Pardee Reservoirs show little change in storage. Clear Lake shows little change from baseline because it is a natural lake with limited control of reservoir level”. The impact analysis for various resource areas is presented in Chapter 7, Environmental Analysis, of the Staff Report. General effects on recreation, aesthetics, municipal water supply, fish and wildlife, and disadvantage communities are considered in the various environmental impact analysis chapters such as Section 7.18, Recreation, Section 7.3, Aesthetics, Section 7.20, Utilities and Service Systems, and Section 7.6, Biological Resources.
354	22	Because, however, the only relevant metric of impacts on Clear Lake storage is impacts on its operable storage, the District strongly disagree with the DSR’s statement that the average storage in Clear Lake under the PPA would be a “little change”. From the perspective of the District’s average annual diversions at Capay Diversion Dam identified in the DSR baseline, the decrease in storage represents over 13% of those diversions. The differences in storage can be greater during some years, as noted above relative to Figure A1-85. In addition, it is unclear from the DSR as to how constraints under the Solano Decree are incorporated into the analysis. The District believes this is an important consideration relative to the allotment of 150,000 AF under the decree as a result of beginning with a lower elevation in Clear Lake under the PPA. Further, the DSR should clearly	Please see response to comment 354-21 regarding the impacts associated with Clear Lake storage. The Solano Decree is included in the SacWAM operational logic which is described in Section 7.9.1.8 Solano Decree of the SacWAM Documentation available on the Board’s website. The inflow requirements are a requirement to bypass a percent of unimpaired flow rather than a release of previously stored water. Therefore, it would not be the responsibility of any one party to release water but instead a question of who could store the remaining unimpaired inflow, which would be based on water rights and other agreements such as the Solano Decree.

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		identify the responsible party to release water from Clear Lake to meet the PPA, as the District does not have that authority. Overall, the DSR should rely upon a change from the baseline using the operable storage above the natural rim in order to assess impacts to storage in Clear Lake; and the DSR should incorporate the limitations under the Solano Decree and evaluate the effects to water supplies thereunder as a result of the PPA.	
354	23	The reduced storage in Clear Lake under a 55% UIF may adversely impact local residents and the disadvantaged communities around the lake through reduced access for beneficial purposes such as, but not limited to recreation, aesthetic, and diversions for municipal, industrial, and domestic uses. The District has contracts with the water suppliers that serve those communities around the lake to provide water under the District's water rights. In addition, the reduced lake levels may adversely affect environmental conditions for fish and wildlife in and around the lake. Additionally, water from Clear Lake that the District makes available by contract under its Clear Lake water rights is critical to ensuring sustainable power generation via the Southeast Geysers Effluent Pipeline at the Geysers, which is the largest geothermal power producer in the United States [Footnote 9: The DSR does not analyze impacts to geothermal power production as a result of reduced supplies under the DSR. The DSR's Chapter 7.8 concerning the PPA's energy impacts generally discusses geothermal production as an energy source, but does not discuss the PPA's impacts on that energy source at all.]. According to USGS, the Geysers "is the largest complex of geothermal power plants in the world". According to NASA, "As of 2018, turbines in the Geysers area produced 50 percent of California's geothermal power." [Footnote 10 The information from USGS is available online at https://www.usgs.gov/volcanoes/clear-lake-volcanicfield/science/geysers-geothermal-field] NASA's relevant information is enclosed with this letter. A related report from the State Land Commission is also enclosed with this letter. The DSR indicates, based on details contained in the SacWAM modeling, that the withdrawals from Clear Lake to the surrounding communities [Footnote 11 Results are identified from SacWAM modeling node U_CLLPNT_NU.] decrease by up to approximately	The 2023 draft Staff Report analyzes impacts at a regional scale. Please see Common Response 6.1, Sacramento Water Allocation Model and Changes in Hydrology and Water Supply, regarding the SacWAM scope, scale, and application as well as Common Response 7.1, General CEQA and Approach to the Analysis, for a discussion on the level and scope of the analysis. General effects on recreation, aesthetics, municipal water supply, fish and wildlife, and disadvantage communities are considered in the various environmental impact analysis sections such as Section 7.18, Recreation, Section 7.3, Aesthetics, Section 7.20, Utilities and Service Systems, and Section 7.6, Biological Resources. Additionally, please see Chapter 10, Economically Disadvantaged Communities. While the changes in diversion to the communities that divert from Clear Lake are much smaller than the level of analysis, water supply for The Geysers geothermal facility, which is only partially supplied by wastewater originating from Clear Lake, is not expected to change. SacWAM results show that in the 55 scenario, changes to raw water diversions are very small. In 85 percent of the years, reductions in water supply to the Clear Lake communities are less than 1 TAF per year and reductions of over 2 TAF per year only occurs in about 4 percent of the years. The changes in wastewater effluent resulting from these small reductions in raw water supply to the communities would be much smaller because it is unlikely that the small changes in raw water supply would result in a reduction in indoor water use. Lastly, the revised proposed Plan amendments include provisions to address human health and safety needs and other possible reasons for short-term and long-term exceptions to curtailments to allow continued diversions for minimum human

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		3,500 AF per year under the 55% UIF approach. This represents nearly one-third of the diversions in the DSR baseline for those surrounding communities, which is significant. The reduced diversions are less than 3,500 AF in other years; however, on an average annual basis for each and every water year type, the SacWAM modeling indicates reductions in diversions to those communities. Those diversion reductions pose a significant adverse risk and economic impact on the surrounding communities of Clear Lake, which are already designated as Disadvantaged Communities and Severely Disadvantaged Communities, and pose a significant adverse risk to sustainable power generation at the Geysers.	health and safety water supplies where alternate supplies are not available. See Common Response 1.3, Revised Proposed Plan Amendments, for more information on the regulatory pathway.
354	24	Relative to Indian Valley Reservoir, Figure A1-103 of the DSR indicates that end of September storage is reduced under a 55% UIF during the vast majority of years, up to as much as approximately 60,000 AF per year. It is unclear as to the reason the DSR does not evaluate the effects to Indian Valley Reservoir as a “rim reservoir” in Section 6.3.2.1, as there is not a reservoir located downstream [Footnote 12: Clear Lake is identified in Section 6.3.2.1 of the DSR as a “rim reservoir” and the effects evaluated by the State Water Board are presented in the DSR.]. The DSR should indicate the reason for omitting effects to Indian Valley Reservoir for that section of the DSR. Also, Table 2.1-1 of the DSR identifies that there are no instream flow requirements for Indian Valley Reservoir; however, the District’s Permit 12848 (Application 11389) identifies a minimum of 10 cfs to be maintained at the toe of the dam. Table 2.1-1 and the analysis for the DSR should include the correct instream flow requirements for Indian Valley Reservoir. The reduced storage in Indian Valley Reservoir impacts the District’s deliveries for irrigation and other beneficial uses, as well as the timing for hydropower generation. It also would impact the District’s financial viability as a district specially created by the Legislature, for the reasons discussed above.	While results for Indian Valley Reservoir are not presented in Chapter 6, Changes in Hydrology and Water Supply, due to it being the smaller of the two rim reservoirs on Cache Creek and because it represents a smaller portion of the watershed, modeled results for Indian Valley Reservoir are presented in the SacWAM modeling appendices. Please see Appendix A1, Sacramento Water Allocation Model Methods and Results, Section A12.1.6.21, Indian Valley Reservoir (Cache Creek Watershed), of the 2023 draft Staff Report, and Section H1a2.5.18, Indian Valley Reservoir (Cache Creek Watershed). Effects associated with changes in timing of hydropower generation are considered in Section 7.8, Energy. The Indian Valley hydropower facility is a small facility that did not meet the 10 MW capacity threshold used for choosing facilities for individual analysis. However, effects at small facilities were considered in aggregate for Impact EN-d in Section 7.8. Please see response to comment 354-27 regarding economics. Table 2.1-1 lists flow requirements that are included in SacWAM, which does not include the 10 cfs below Indian Valley Reservoir. This flow requirement is relatively small on the scale of the Sacramento/Delta watershed and including it would not change any of the environmental impact or economic effect analyses or conclusions.
354	25	Overall, the State Water Board’s PPA results in significant reductions in the District’s diversions for multiple beneficial	The proposed Plan amendments do not encourage or require increased groundwater pumping to offset reductions in surface

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		purposes. During drier years, the District's diversions already are limited, based on the District's experience and as reflected in the DSR baseline. The simulated diversion reductions shown in Figure 4 under a 55% UIF approach largely occur during periods when water would have been available to the District absent that approach. Thus, the 55% UIF approach, together with existing hydrology during drier years, significantly impacts the District's conjunctive use operation in nearly every year, which will result in additional groundwater pumping by its customers and/or land fallowing. The District operates a conjunctive use system that relies on available surface water in order to offset, or minimize, groundwater pumping. Under the State Water Board's proposed Bay-Delta PPA identified in the DSR, the reduced diversions from Cache Creek under the unimpaired flow approach will likely result in additional groundwater pumping by landowners, which could delay or jeopardize the District's other efforts to maintain sustainability of the groundwater system under SGMA, create economic impacts (groundwater pumping expense), cause adverse environmental impacts (groundwater dependent ecosystem impacts), exacerbate regional or State electrical power supply constraints (increase electricity use by growers to pump groundwater), and other consequences. Estimated additional groundwater pumping, expressed in the DSR as "maximum replacement groundwater pumping" within the region analyzed that includes the District, is over 95,000 AF for an average year (DSR Appendix A3, Table A3-15) and a dry year (DSR Appendix A3, Table A3-15). Similar to other findings in the DSR, these are expressed as an average; and thus, the impacts will be greater in certain years, resulting in potential detrimental effects to the groundwater aquifer as a result of the State Water Board's PPA. Moreover, as discussed in NCWA's comments, the "dry" year used to identify "maximum replacement groundwater pumping" in the DSR is only an average of dry and critical years, so it does not capture the high levels of groundwater pumping that would occur in multi-year droughts under the PPA. (DSR, p. 7.4-36.)	water supplies. The Staff Report acknowledges, however, that depletion of groundwater (excluding prolonged groundwater depletion from historical pumping) may occur if the local response to reduction in surface water supplies is to increase groundwater pumping. The impact analysis for groundwater is presented qualitatively, with numerical modeling results from SacWAM and SWAP used for context and support in the discussion and conclusions. The potentially significant impacts identified for groundwater levels (GW-b) and its mitigation measures (MM-GW-b) were discussed in Sections 7.12.2 and 9.7.12.2, Groundwater. The mitigation measures identified for these sections include the implementation of SGMA. While the State Water Board can ensure that the mitigation measures are implemented for actions within its statutory authority, other mitigation measures are largely within the jurisdiction and control of other agencies. For more discussion regarding the methods used to inform the groundwater impact analysis (including groundwater modeling, SWAP and agricultural analysis), the current implementation of SGMA, including GSA Roles and Duties, as well as the consideration of groundwater dependent ecosystems, please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act. Please see Common Response 7.8, Energy and Hydropower, regarding possible energy expenditure to replace surface water supplies, including increased groundwater pumping.
354	26	The PPA identified in the DSR will reduce water available for the District's ongoing efforts to facilitate groundwater recharge	Please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for a discussion on

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		within its service area under temporary permits, or a long-term permit that may be sought in the future. This adverse effect is compounded by: 1) reduced water supplies for deliveries during the irrigation season, which would otherwise be used to minimize groundwater pumping by growers, and 2) reduced incidental groundwater recharge that would otherwise occur with surface water deliveries. Those adverse effects resulting from the PPA, together with the additional groundwater pumping identified in the DSR, groundwater levels within the Yolo Groundwater Subbasin will decline and will likely result in adverse impacts to other undesirable results under SGMA, such as land subsidence [Footnote 13: Table 1-1 of the DSR identifies potentially significant impacts to Geology and Soils as follows: "Lower groundwater levels could exacerbate existing problems associated with ground subsidence"]. For example, in the recent 2020 through 2022 drought, groundwater levels declined within the Yolo Subbasin as a result of limited surface water supplies, which resulted in some land subsidence [Footnote 14: See groundwater level data and subsidence data contained in DWR's SGMA Data Viewer: <https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#l andsub>]. Additional groundwater pumping under the PPA could exacerbate land subsidence, which threatens sustainability of the Yolo Subbasin to meet the requirements under SGMA, as well as potentially resulting in adverse economic impacts.	groundwater recharge and recharge opportunities. Also see response to comment 354-25 for response to the Staff Report's analysis of impacts to groundwater. Section 7.9, Geology and Soils, acknowledges that lower groundwater levels from increased groundwater pumping and reduced incidental recharge from irrigation could exacerbate existing problems associated with ground subsidence and identifies mitigation measures (MM-GW-b and MM-GEO-c) that could reduce impacts. The Staff Report provides extensive analysis and sufficient consideration of the economic effects that could occur as a result of the proposed Plan amendments. Chapter 8, Economic Analysis and Other Considerations, analyzes the economic effects of changes in hydrology and water supply under the proposed Plan amendments on agricultural and municipal use. In addition, Chapter 8 provides information regarding the costs to modify or build facilities such as groundwater wells.
354	27	In addition, reduced diversions by the District as a result of the PPA may result in land fallowing that creates adverse environmental impacts (increased dust emissions from dry fields; reduced habitat for terrestrial species), and adverse economic impacts to the District, its customers, region, and State (reduced agricultural economy and associated effects to businesses and people servicing the agricultural economy). There will also be resulting economic impacts to the District, such as reduced water sales to customers. As a result of these impacts, the State Water Board's PPA will have an adverse economic impacts in areas associated with the District's surface water deliveries, intensifying those impacts to areas currently identified as Disadvantaged Communities and Severely Disadvantaged Communities.	The Staff Report adequately analyzes and discloses the environmental impacts and economic effects that could result from land fallowing, as required by CEQA and the Porter-Cologne Water Quality Control Act. For example, Section 7.5, Air Quality, explains that reduced Sacramento/Delta supplies to agriculture could lead to land fallowing, which may increase fugitive dust emissions if crop or vegetation stubble does not remain or if vegetative regrowth does not occur. However, the fact that these lands may no longer be irrigated at current levels does not mean they would necessarily be permanently fallowed or converted to non-agricultural uses. Section 7.6.1, Terrestrial Biological Resources, acknowledges that changes in water supply could negatively affect special-status wildlife species that rely on Sacramento/Delta water supplied to wildlife refuges and certain agricultural lands. In addition, surface water transfers based on

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			cropland idling could affect special-status terrestrial species that use agricultural fields for forage, cover, and nesting habitat. Section 7.9, Geology and Soils, acknowledges that changes in water supply could lead to changes in agricultural land use or the fallowing of agricultural land, resulting in bare soils that are more susceptible to erosion by wind or surface water. Chapter 8, Economic Analysis and Other Considerations, adequately evaluates the potential agricultural economic effects of the proposed Plan amendments, including economic effects relevant to DACs. Section 8.4.3, Regional Economic Effects, presents the results of a regional economic analysis that was conducted to estimate how changes in water supply and resulting changes at the local agricultural economy would affect regional economic activity in the Sacramento/Delta and the state as a whole. Section 8.4.4, Agricultural Economic Effects on Economically Disadvantaged Communities, discusses potential agricultural economic effects of the flow scenarios on DACs. Section 8.5.9, Economically Disadvantaged Communities and Drinking Water, discloses the potential municipal water supply economic effects on DACs. 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. These and other funding sources could potentially be leveraged to help municipal water suppliers and DACs. Chapter 10, Economically Disadvantaged Communities, also discusses various financial and technical assistance programs available to public water suppliers serving DACs. These programs are designed to ensure access to safe, clean, and affordable water supplies and maintain compliance with applicable laws and regulations. Please see Common Response 8.1, Economic Analysis and Other Considerations, for additional discussion of potential economic effects and updated information on sources of funding for municipal water suppliers.
354	28	Relative to effects upon crop acreage from the PPA, the DSR includes results from the Statewide Agricultural Production (SWAP) model. The SWAP model evaluates effects by region; the District and other neighboring areas are within SWAP model region 6. Table A3-3 of Appendix A3 to the DSR identifies that	The environmental and economic analysis provided in the Staff Report is appropriately detailed for the scope of the project. The SWAP model uses a multi-region approach, with Yolo County Flood Control & Water Conservation District located within SWAP Region 6. Detailed results by SWAP region are provided in

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		region 6 includes “Yolo, Solano Counties, CVP Users: Conaway Ranch, Sacramento River miscellaneous users”. This includes Lake Berryessa, Putah Creek, and other areas/water sources that are not applicable to the Cache Creek watershed. Thus, the potential impacts to crops and groundwater pumping within to the District due to the PPA are not separately defined for the Cache Creek watershed. This is an important consideration, as Cache Creek is the District’s source of surface water supply; and those supplies are already limited during drier years. The additional adverse impacts to the crops and groundwater pumping within the District as a result of the PPA should be separately identified and assessed in the DSR. Comparing the available results from Table A3-29 and Table A3-32 of the DSR for SWAP model region 6, the total reduction in crop acreage is estimated to be 22,000 acres during a dry year without groundwater replacement pumping under a 55% UIF approach. A similar result is shown for an average year. (DSR Tables A3-17 and A3-20). The DSR also shows results for a dry year and an average year with maximum replacement groundwater pumping of over 95,000 AF in each of those types of years which results in no change to crop acreage under a 55% UIF approach. However, additional groundwater pumping may have adverse impacts, as noted above; and thus, some fallowing may be unavoidable in order to maintain sustainability of the Yolo groundwater subbasin pursuant to SGMA. The DSR identifies that, in the SWAP model, dry years are estimated as the average of Dry and Critical water year types. (DSR, p. 7.4-36; DSR Appendix A3, A3-8). The effects to crop acreages on an average basis do not reflect the changes to crop acreages or groundwater pumping that may occur in years when supplies are reduced further than the averages. As indicated in Figures 3 and 4 above, the water supplies can vary dramatically for each year. For example, during a Dry year when the deliveries by the District are reduced by 100,000 AF under a 55% UIF approach, instead of an average of 43,000 AF for a Dry year, the effects to crop acreages and groundwater pumping may be much greater than identified in Table A3-29 and Table A3-32 of the DSR. In addition, those adverse impacts and effects may be compounded during multi-year drought [Footnote 15: See	Appendix A3, Agricultural Economic Analysis: SWAP Methodology and Modeling Results. The SWAP model provides results at an appropriate geographic level of analysis, as identifying specific lands to be impacted would be speculative given uncertainty in predicting individual farmer responses. Please see Common Response 7.4, Agricultural Resources, for further discussion on the geographic scope of the SWAP analysis. Because of the uncertainties about groundwater availability and water users’ response to Sacramento/Delta supply regarding groundwater pumping, two bookends were evaluated using SWAP: maximum replacement groundwater pumping and no replacement groundwater pumping. Actual conditions would likely fall between these extremes, with water users increasing groundwater pumping to offset some surface water reductions, but not enough to fully replace lost supplies. In this way, the analysis captures the breadth of likely responses. Actual conditions would likely fall between these extremes, with water users increasing groundwater pumping to offset some surface water reductions, but not enough to fully replace all of the reduced surface water supplies. The maximum replacement groundwater pumping bookend is not a directive that farmers and ranchers should or would replace Sacramento/Delta reductions with groundwater pumping, especially in light of requirements to achieve sustainability in basins subject to SGMA, but a good faith attempt to capture the potential maximum impacts on the groundwater basin from replacement pumping. Please see Section 7.4, Agriculture and Forest Resources, and Appendix A3, Agricultural Economic Analysis: SWAP Methodology and Modeling Results, of the Staff Report for a more detailed description of the SWAP model and methods used to estimate agricultural economic effects. Also see Common Response 8.1, Economic Analysis and Other Considerations, for additional discussion of the replacement groundwater pumping bookends in SWAP. Please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act, for further discussion of consideration of SGMA in the analysis. Agricultural impacts and agricultural economic effects in any particular year may be greater or less than the SWAP model results for the “Dry Year” condition. In response to comments

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		coalition of comments submitted by NCWA for additional comments relative to multi-year droughts, which are incorporated herein by reference.] periods.	received on the SWAP analysis presented in the Staff Report, supplemental SWAP model runs were conducted for: (1) critically dry water years; and (2) the driest water year (1977) intended to represent the last year of a multi-year drought. These supplemental SWAP model results are presented in Common Response 7.4, Agricultural Resources, for changes in crop acreage, and in Common Response 8.1, Economic Analysis and Other Considerations, for the corresponding changes in crop revenue. Overall, these supplemental results provide additional information requested by commenters, but are consistent with the analyses already presented. The 2023 draft Staff Report already identifies potentially significant impacts on agricultural production and adverse agricultural economic effects. These supplemental analyses do not change the conclusions of the environmental and economic analyses presented in the Staff Report.
354	29	Relative to water quality, a key consideration in the Cache Creek watershed is mercury. The DSR identifies that “Cache Creek drains about 2 percent of the Sacramento River watershed but contributes approximately 30 percent of all the mercury from the watershed”. The DSR also identifies that the increased flows in Cache Creek under the PPA “could result in increased deposition of mercury-laden sediment”. Further, the DSR identifies that increased flows from Cache Creek under the PPA “could affect the transformation of mercury into methylmercury due to floodplain inundation.” (DSR, pg. 7.12.1-61 and 7.12.1-62) In fact, the DSR identifies the State Water Board cannot be certain that efforts to address potential mercury impacts under the PPA can be mitigated to a less-than-significant level. (DSR, pg. 7.12.1-65) Thus, the District believes that the State Water Board should identify a defined, reliable plan in the DSR to mitigate for potential mercury impacts as a result of increased flows in Cache Creek under the PPA. The District believes this is one of the key reasons that the State Water Board should adopt the Healthy Rivers Agreements alternative, whereby the District’s proposed approach identified in this letter would not contribute to increases of mercury within Cache Creek.	As described in Section 7.12.1, Surface Water, mercury impacts can be reduced through implementation of Mitigation Measure MM-SW-a,f: 2. Mercury is a statewide water quality issue that exists independently of the potential incremental effects from the proposed Plan amendments and is being addressed through various state and federal water quality efforts. Specifically for Cache Creek, Mitigation Measure MM-SW-a,f: 2.iii would require that the State Water Board coordinate with USACE, DWR, and other appropriate agencies to ensure that implementation of flow requirements does not interfere with the functioning of the Cache Creek settling basin in reducing mercury inputs to the Sacramento/Delta. Resolving mercury issues is expected to take time and will occur on multiple fronts; however, the State Water Board cannot be certain that these efforts will mitigate all potential mercury impacts associated with the proposed Plan amendments to a less-than-significant level. Unless and until the mitigation is fully implemented and proven effective, the impacts remain potentially significant. Please see Common Response 1.3, Revised Proposed Plan Amendments, regarding the voluntary agreement pathway.
354	30	The District urges the State Water Board to adopt and advance the Healthy Rivers Agreements alternative as the program of implementation for the updated Bay-Delta Plan. The District	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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		believes that the Healthy River Agreements provide an approach to implement additional flows and habitat projects to enhance the environmental conditions earlier in time, with best available science, collaboration with agencies to adapt to changing conditions and science, and with fewer impacts as compared with the State Water Board's PPA. The District strongly believes that the Healthy Rivers Agreements approach is the only alternative in the DSR that provides a reasonable balance of the considerations identified by Water Code Section 13000, including "considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible."	raise specific economic effects of the project. Also see Common Response 1.2, Water Quality Control Planning Process, regarding the consideration of beneficial uses.
355	1	As a 6th gen. Petaluman, & 4th gen. (Retired because of the current fisheries failures) we are very concerned for our future generations. It's so frustrating and disappointing to witness what is happening to ALL of our natural resources that are currently in decline or complete failure! One has to wonder if "money, ignorance, and arrogance!" May be contributing to many of these failures? Having fished salmon & crabs from Bodega for 24 yrs. I would like to suggest that the people in control of managing our wildlife actually solicit families and crews that were successfully surviving on very moderate incomes from our commercial fishery. One ex. Is for many years crabs weren't fished off our Sonoma Coast were never fished beyond 20 fathoms, until all of the bigger boats from out of town and states targeted our fishery! HELP	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.
356	1	We are running out of time to save California's salmon. Winter- and Spring-run salmon are facing a growing extinction risk. The commercially and recreationally critical Central Valley Fall-run is also in decline. The 2023 California salmon fishing season is closed for just the third time in state history and it appears likely that the 2024 fishing season will be closed as well. Allowing the State's salmon runs to continue their catastrophic downward trajectories amounts to the sanctioned theft of the people's natural resource – a resource that tribes, coastal towns, families, river ecosystems, the fishing industry, and many tens of thousands of jobs in California and Oregon depend on.	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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		Additionally, we have witnessed hazardous algal blooms making people sick and killing pets and wildlife, and the listing of six species of fish as threatened or endangered in our Delta. Since the Board is the only agency with legal authority to set flow and temperature protections for Fall-run Chinook, it is imperative that science, not politics, drives a plan to restore salmon. We need a plan that saves people. The Board must update the current failed standards that were adopted in 1995 to reverse declines of salmon so I strongly urge you to adopt an “unimpaired flow” approach. As we all know, fish need water and flows that are allowed to come down Central Valley rivers and through the Delta directly impact critical salmon issues such as water temperature, water quality and accessible and functional floodplain habitats that baby salmon need to survive and thrive.	
356	2	For the Bay Delta Plan Staff Report, I encourage the Board to listen to California's Native American tribes regarding their concerns. Tribal Beneficial Uses must be included in the Bay Delta Plan and should apply them to the entire watershed in order to offer the most protection for tribal cultural resources and minimize the burden put on tribes for designations. Additionally, Traditional Ecological Knowledge should be integrated into the Bay Delta Plan because it will ensure that tribal cultural resources will be protected in a meaningful way. Many tribes have also been very vocal around the proposed Voluntary Agreements. The Voluntary Agreements were created through an exclusionary process that left out tribes, communities of color, environmental justice groups, conservation groups, and fishing groups. Many California tribes have supported the democratic and science-based Bay-Delta Plan updates thus far that would provide more water for salmon. Salmon are a vital part of the culture of the California tribes whose traditional lands surround the waterways that salmon travel. The severe loss of salmon has had extreme health and cultural impacts on California's native peoples who have already suffered having our land and water rights taken from them through colonization. California's water rights system was meant to support miners and large landowners, not tribes. Now, Voluntary Agreements are threatening to further exclude the original water rights holders of the state, which means California tribes must fight	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the designation of CUL and incorporation of Tribal and Subsistence Fishing Beneficial Uses. Chapters 11 and 13 also provide additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes. Please see Common Response 10.1, Economically Disadvantaged Communities, and Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments on the VAs, including the development process. Also see Common Response 11.1 for responses to comments on Tribal Beneficial Uses, and Traditional Ecological Knowledge/tribal knowledge.

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		harder for their water rights and for the rights of their salmon relatives. The Voluntary Agreements will not provide enough water for proper habitat for salmon and the maximum flow alternative should be used instead.	
356	3	The unimpaired flow approach would mimic the natural hydrographic of which salmon are adapted. The Board must set a standard requiring a minimum of 65% of unimpaired flow from January to June, combined with temperature protections at major Central Valley reservoirs, if Central Valley salmon are to be restored. Moreover, the Board's 2010 Flow Criteria Report found that 75% of unimpaired flow on the Sacramento River and its tributaries and 75% of unimpaired Delta outflow are needed to protect the Bay-Delta ecosystem. The only way to restore and sustain Central Valley salmon runs is to require flow and temperature protections that enable them to survive.	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.
357	1	This Peripheral Canal 2.0 is no better than the first one. We stopped that one and we'll stop this one too. No more theft of our water! Spend that money on conservation instead.	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.
358	1	The VAs were made by water wasters for the benefit of water wasters. The people, wildlife, fish, Native Americans, and recreation area users were totally ignored as subservient contributors to the water wasters? greed.	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.
359	1	How can California Forever, a newly planned City of 50K get water. How is it that Water Districts can hoard water underground only to resell it for a profit, like Kern County? How is it that so much water is directed to farmland in the arid parts of Central California to grow nut crops? Why is CA still pushing the \$16 BB Delta Water project to send water to farmers and Cities in the south? The cost per acre foot will be hideous. I believe you are all smart people. Taking more than we have is simple math. You know the financial impacts your actions or lack thereof have caused to thousands of Californians associated with	Please see Common Response 1.3, Revised Proposed Plan Amendments, regarding the VA process and descriptions of the regulatory pathway and the VA pathway. See also Common Response 1.1, General Comments, for a response to comments expressing general opposition to alternatives analyzed in the Staff Report, and Common Response 6.3, Water Supply and Other Water Management Actions.

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		fishing for recreational and commercial purposes. The thousands of people that supply these businesses. Gas Stations, restaurants, hotels, private guides. Packing houses, marina's, mechanics. I listened to the Dec testimony. I couldn't figure out what a VA was. Then the person described this as a Voluntary Agreement between a user i.e. farmer and the Water Board where considerable Resources from the State are transferred to the farmer. While he did not say the word money, it was obvious a select group of people will be paid for their "excess" water rights. How is that fair to the environment? I do not understand how you can sleep at night knowing the decisions you are making are harming people and killing valuable natural resources that have been here for centuries. It is time to seriously rethink water rights and flows and prioritize this valuable run of salmon. The World is rethinking how we power everything for climate change. I'd thing you all could figure out how to regulate the flow and use of water.	
360	1	Living on the SF Bay in Alameda, I'd expect the fish to be plentiful. Instead many of them are endangered because we aren't giving them enough water! Fish should be considered more important than agricultural profits. Entire cities should not be deprived of their 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.
361	1	I recently read a report that the delta smelt is basically extinct now, based on recent monitoring reports by CA Fish and Wildlife. This small fish is a keystone species with many other larger fish relying on it for the survival. I remember as a child growing up in Sacramento how this fish was made out to be insignificant by the media and those that wanted its environment (the delta water) for their own. Now as a Sacramento area senior I see the true effects of this disregard for it and the other species that live in the delta. The delta is dying and you are hastening it's demise instead of helping it recover. Mr. Newsom, how would you feel it some other life form took your home from you and your family because they think they are	Please also 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 also see Common Response 3.1, Fish Protection, for more discussion on the consideration of federally listed endangered species.

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		more entitled to it than you are? But, I guess all the money you receive from SoCal and it's monopoly utilities means more to you than acting on the behalf of the endangered delta smelt and other struggling species. After all, fish don't vote, but \$\$ talks.	
362	1	I want to see the habitats for wildlife and eco-systems prioritized. This means using science-based targets to ensure the Delta is managed with sustainability and long-term environmental health as the primary goal.	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.
363	1	As a lover of the San Francisco Bay and its fascinating ecosystem, I believe it is imperative that the State and water managers get it right in determining adequate flow regimes to maintain the Delta and Bay ecosystems. The only way to do that is by using the best available science. Voluntary Agreements tie the Bay and Delta to an outdated system that puts these systems in danger. Please look at the science that shows that the current system is not adequate for the needs of wildlife the Bay and Delta have supported for centuries.	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 3.1, Fish Protection, on the use of best available science.
364	1	Diverting more water for farmers to grow almonds and pistachios to export while endangered fish populations continue to decline is not good science, it's just politics.	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.
365	1	Reducing fresh water to the Delta is not a good plan. Thousands of acres of almond trees watered with rain-bird type sprinklers wastes water. Why not conserve the water that's now available?	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.
366	1	We need real rules and standards, not "voluntary agreements" to keep the Bay Delta healthy. Voluntary agreements are more like a puff of smoke. Interested parties don't follow them and just take advantage of not having to comply with workable rules and 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. Also see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including enforceability.
367	1	We in Southern CA have been spoiled with almost free water. The Delta shouldn't suffer from their neighbors to the south.	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.
368	1	Please stop pandering to big agribusiness interests and SoCal water agencies. Business as usual must stop.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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			raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
369	1	Protecting California's water resources is no place and this is no time for experiments in volunteerism. California's water policy must be guided by science and law. It's time for the Newsom Administration to consider the rights and values of all Californians and wildlife who depend on water resources. Abandon the voluntary agreements and go forward with science-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.
370	1	It is clear that Delta ecosystems are in great peril. What will be lost if we don't prioritize this ecosystem is priceless. We cannot afford to prolong business as usual. Time is running out for California to change our ways and avoid mass extinction.	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.
371	1	It seems to me in that in the past 40 years that I have lived in the Bay area that the tunnel through the delta keeps rearing its ugly head. It has never been a good idea for the delta and it isn't now. Please don't destroy the delta ecosystem for some short-term gains for our water supply. CA needs to figure out a better system than the old water rights to allocate water for our state. The current delta plan is not the solution.	Please see Common Response 1.1, General Comments, regarding comments on other projects.
372	1	The Bay Delta is critical for health of our water supply and water system of California. An updated plan for the Bay Delta is needed and long overdue. With climate change impacting our state through droughts, wildfires, and extreme heat, recovery and restoration of our nature spaces is a necessary solution.	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.
373	1	Take REAL action instead of the usual LAZY bureaucratic do-nothingness. And STOP acting as corporate whores for morally bankrupt corporations!!!	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.
374	1	California's water management desperately needs an update in order to meet the hydrologic demands of the twentyfirst century. Voluntary agreements harken back to an era of unprecedented water diversions that held absolutely no regard for the consequences that befell upon the surrounding environment. The only factor that was deemed important was uninterrupted economic and fiscal growth. California can no longer afford to take such an approach. Some water districts do not even have a way to measure how much water local farmers are using for agriculture. Voluntary agreements will simply not be enforced 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. Also see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including enforceability.

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		there is no way to actually measure how much water is being consumed by local water districts. The health of many ecosystems in California are decaying due to the lack of consistent in-stream flows that help ensure a sustainable water quality. Agriculture should and always will be important for California, but all citizens of California need to abide by enforceable water standards.	
375	1	We have decimated too many species; we need to start to take actions to offset the ecological harm we've done, not accelerate it. Continuing to divert water to the extent proposed by the Draft Staff Report is grossly irresponsible. Please support measures that protect the Bay Delta. Thank you.	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.
376	1	Since the time of my Oral Comments, I have had the opportunity to review the release of the "Category 5 2020 California 303(d) List of Water Quality Limited Segments" (the 303(d) List) (See-Exhibit 1- for Water Bodies that are in the Colusa Basin and Cache Creek Watersheds) and I believe my concerns about the potential contamination of the Bay Delta and the Yolo Bypass from mercury, elevated TDS and other redox related contaminants are empirically supported by the List of Water Bodies listed in the 303(d) List. I am submitting this supplemental Comment Letter to provide more scientific background for these concerns and my empirical inferences. As I mentioned, my family has been farming in the Colusa Basin for over 160 years and I personally have over 50 years of experience managing our family property on the Colusa Basin Drain.	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.
376	2	303(d) Waterbodies in Colusa Basin and Cache Creek Watershed Discussion The primary focus of my comments concerns the apparent data gaps regarding the "Potential Sources" in the 303 (d) List [Attachment 1]. It is my opinion that many of the Potential Sources are KNOWN and have been known of for many years rather than" A Source Unknown" as stated in the 303(d) List. These KNOWN contaminants and their KNOWN sources are present in the Colusa Basin and Cache Creek Watersheds and may be a determinative factor in the historical loss of fish and other aquatic life in the Bay/Delta ecosystem and the potential source of contamination for the Colusa and Sacramento National Wildlife Refuges. These KNOWN contaminants such as mercury,	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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		chromium, TDS and redox and biotic related contaminant byproducts may have become more prevalent and more transmissible due to poor drainage infrastructure and practices that have been in place since as early as the 1950's. The decline in fish populations circa the 1960's coincides with the implementation of the poor drainage practices implemented in the Colusa Basin such as the establishment of the Davis Weir Dam on the south side of the Colusa National Wildlife Refuge.	
376	3	European Settler Historical Mining and Hot Spring Chemical Analysis While mercury is ubiquitous, a KNOWN source is from artesian salt springs in Colusa County. Arsenic and sulfur are historically known to be present in artesian salt springs in Colusa County as recorded in History of Colusa County [Attachment 2] by Justus H. Rogers 1891) In addition to being present in artesian salt springs, mercury was discovered in 1865 and mined in the 1860's. Sulfur was mined in Colusa County in 1866 (Rogers Page 324) and Chrome was mined during the same period in what was then Colusa County and now present day Glenn County during the same period (Rogers Page 324). Arsenic was present in artesian springs since there was a mineral spring called "Arsenic Springs" near the Fouts Springs Resort in Colusa County { Rogers Page 326). Regarding mercury - both " .. the soil and the waters " were "impregnated " with mercury near the hot springs resort at Sulfur Creek in Colusa County (Rogers Page 329). Contamination could occur since the presence of both sulfur and mercury is the prerequisite for the production of methylmercury via the biotic processes of methylmercury reducing microorganisms that are present in poor drainage areas.	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.
376	4	Reviewing and Validating Historical Knowledge And the Perils of Poor Drainage and Redox The following sections are historical and USGS reports which I believe documents that mercury and salt has been contaminating the Bay/Delta since time immemorial. Historically, this contamination would be minimized because of the natural drainage of seasonal flooding. I believe that the primary problem is poor drainage that has been aggravated by the reuse and retention of irrigation water in the historical	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 1.3, Revised Proposed Plan Amendments, for information on the VA pathway.

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		channel of the Colusa Trough - the worst example is the drainage at the Colusa National Wildlife Refuge and the operation of the Davis Weir Dam at the south end of the Colusa National Wildlife Refuge. An emerging issue is the extraction of saltier and saltier water from groundwater wells. There are significant areas in the Sacramento Valley where deep wells should be prohibited especially areas where there is already salty groundwater that is being thrust up by artesian pressure. Today, some groundwater pumpers next to surface water conveyance canals blend salty ground water with surface water - this practice should be minimized and it should be prohibited if a well is used for "groundwater substitution". The Voluntary Agreements should require any well used for groundwater substitution to have an independent verification that the EC of the water extracted be 900 or less. Finally there should be a through focus on the redox reactions from overpumping especially the desorption of arsenic and manganese that comes with the introduction of oxygen into previously anoxic groundwater aquifers.	
376	5	The Salt Pomo Story - Before There Were Water Wars There Were Salt Wars. [Attachment 3] The presence of artesian salt water which was present in the numerous salt water springs has been KNOWN since time immemorial and was the source of the salt trade of the Northeastern Pomo tribe known as the Pomo Salt Tribe. The Salt Pomo tribe was located north of the present day Stonyford and next to Snow Mountain. The Salt Pomo gathered salt from the salt springs in the present day Salt Springs Valley in southern Glenn County. See www.saltpomo.org for a current day photo of the salt springs and some historical reference. Like most if not all of the indigenous people's history the history of the Salt Pomo people is a tragic one but is important and interesting to know that this tribe were ancient salt traders and collected the natural salt springs in the area. See the 1908 publication of "The Ethno-Geography of the Pomo and Neighboring Indians" by S.A. Barrett. The whole of the section regarding the Salt Pomo beginning on Page 239 is interesting but the reference to the salt deposits on Page 240 and the chemical results by a UC Berkeley Chemistry	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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		Professor on page 241 are very interesting from a hydrochemical perspective. If one reads the whole section you will learn that there were "salt wars" before there were " water wars" in California.	
376	6	Picnic At Sites Salt Mine in 1892 Which Was Discovered By John Bidwell in 1844 [Attachment 4] The presence of artesian salt water which is occurs as salt springs was first discovered by John Bidwell on July 1844 in his autobiography recorded in Justus Rogers' History of Colusa County. Bidwell mentions water so "...salty that neither ourselves nor our animals could drink it..". (Rogers Page 49) As referenced in the footnote of Page 49, this site which had become to be known as Salt Lake near the town of Sites actually became a commercial salt mine known as the Crystal Salt Company. The April 30, 1892 edition of the Colusa Sun newspaper had the following account of a picnic at the salt mine for the ladies of Colusa - here is the excerpt from the newspaper edition in Exhibit 5 : On Monday, the Directors of the Crystal Salt Company moved the principal place of business to Colusa. Wells are being sunk, vats built, and other work done to develop the business. The works are three miles north of Sites. Water will be pumped into a lake covering some 10 to 16 acres and drawn off into vats after it has become almost strong enough to begin to form salt. In addition to the employment of solar heat in making the salt, the natural gas that is found in great abundance will be used. The solar heat will be put in operation first. The supply of gas is inexhaustible as well as the supply of water from 15 to 40 per cent salt; the sea being only 3 per cent. The salt when made is some 3 per cent, purer than any other salt known to commerce. The bittern, or the water left after it has quit making salt, has from 20 to 30 grains of iodine to the gallon. This is stronger in iodine than any known water. The iodine is freed from the other substances by distillation and the natural gas will furnish the fuel for that. The outlook/or the company is splendid. The Colusa and Lake railroad took the Directors of the company out on a special Monday morning, and returned in the evening, and Superintendent Harrington took occasion to extend a free	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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		excursion to the ladies. A number went out and took provisions for a picnic. Mr. Peter Peterson on whose farm the works are located, and Mr. J. P. Rathbun the company's Superintendent, were on hand with conveyances and took most of the ladies over to the works, where a dinner was served which was enjoyed by all. The ladies request us to extend sincere thanks to Superintendent Harrington/or the courtesy of the trip, and to Messrs. Peterson and Rathbun for the pleasure of the trip from Sites to the works.. The ladies were emphatic in praise of Peter Peterson Jr., who took so much pains to contribute to their pleasure.	
376	7	1923 USGS Report Documenting Artesian Salt Water and Warning About The Use Of Wells With Excess Salt Near Arbuckle Over 100 Years Ago. [Attachment 5] Artesian wells and an excessive salty well was also discussed in 1923 USGS Water Supply Paper 495 "Geology and Ground-Water Resources of Sacramento Valley, California" by Kirk Bryan where he mentions several artesian wells in the Sycamore/Dry Slough areas east of Arbuckle (Bryan Page 207) Bryan also mentions and a problematic well southeast of Arbuckle where Bryan where it was reported that the well " ..represents a highly mineralized water that is not well suited for any purpose, although in the absence of better water it can be used. Special care would be necessary in using it for irrigation to prevent the accumulation of alkali." (Bryan Page 215). On Page 98, this Arbuckle well is identified as one of three of the worse water quality wells in the Sacramento Valley as of 1923) Kirby also created a topographical map of the Sacramento Valley as of circa 1914 before the Colusa Basin Drain was dug in the historical Colusa Trough - it is important to note the tight elevation grades creating an east -west ridge between the historical Upper Basin and Lower Basin north of College City at 14N R 1W and the presence of the historical Upper and Lower Sycamore Sloughs. The Upper Sycamore Slough created a natural levee at the east west ridge north of College City and the Lower Sycamore slough was a place of drainage for the Sacramento River at its confluence with the Lower Sacramento River at Knights Landing. (See Map On Last Page of Exhibit 6).	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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376	8	Drilling Exploration Work by JM Kirby of Standard 011 Documenting Lithology of Coast Range and Specific Reference to Artesian Mineralized Salt Water Near Williams and Arbuckle. [Attachment 6] In 1943, JM Kirby who was the Chief Geologist of Standard Oil Company of British Columbia documented the lithology of most of the watershed of the Colusa Basin by drilling a series of wells and publishing a paper in the Bulletin of the American Association of Petroleum Geologist Vol. 27 No. 3 entitled " Upper Cretaceous Stratigraphy of West Side of Sacramento Valley South of Willows, Glenn County California. The Paper is very interesting because it identifies the uncertain potential for more groundwater contamination due to future fault activity especially in the area south of Williams identified as the " Salt Creek Section"(Kirby Page 292) but also mentions that the Salt Creek Section as being " This locality is of particular interest because of the presence of oil seeps and the so-called "medicinal oil" wells in Sec. 31, T. 15 N., R. 4 W. The oil seeps occur along with springs of brackish salt water in beds of the Shasta series which lie about 2,500 feet stratigraphically below the base of the Chico series." (Kirby Page 293). Note that the oil seeps bring an element of organic matter along with the presence of mercury and sulfur in this area of poor drainage especially at the Colusa National Wildlife Refuge. Another empirical source for the mercury contamination present.	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.
376	9	USGS Charles Berkstresser 1968 Report Documenting 17 Salt Water Springs in Colusa County - Including 3 with Artesian Mercury Contamination [Attachment 7] Charles F. Berkstresser Jr. of the USGS published two Open-File Reports addressing water quality issues in the Coast Range and in the Sacramento Valley. In his October 1968 Publication " Data For Springs In The Northern Coast Ranges And Klamath Mountains of California" he recorded data for 17 Springs in Western Colusa County. Oil Spring is 14N R 1W, Cold Mannesia Spring is 14N RS W, Wilbur Springs 14N RS Wand Salt Spring 18N R4W (Berkstresser 1968 - Pages 15 and 16) and Wilbur Spring recorded a mercury level of 2 ppm (which is consistent with the description of the spring water in the Justus Rogers	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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		History - Page 329. Wilbur and Old Magnesia Springs recorded EC levels of 36,100 and 35,700 respectively. Salt Spring which is located near the traditional home land of the Salt Pomo people recorded a mercury level of 17 ppm and a EC level of 72,300 (Berkstresser 1968 - Page 36). All of the observations tie into the historical record in the Justus Rogers History of Colusa County and the Samuel Barret Ethnology of the Salt Pomo people. Another historical and scientific validation - more salt draining into an area of poor drainage and mercury draining into the Colusa Basin Watershed, Cache Creek Watershed and likely the Stony Creek Watershed for the Salt Spring site.	
376	10	From Red Bluff to Dunnigan - Coast Range FootHill Groundwater 3000 EC Base of Fresh Water at 800 feet. A Humongous Salt Load If it is Artesian or Extracted. [Attachment 8] On December 1973, Berkstresser also prepared USGS WRI 40-73 Open File Report "BASE OF FRESH GROUND WATER - APPROXIMATELY 3,000 MICROMHOUS-IN THE SACRAMENTO VALLEY AND SACRAMENTO-SAN JUAQUIN DELTA, CALIFORNIA". The results of this Map are quite striking especially when you consider that he identified a strip of the Coast Range foothills stretching approximately 120 miles (T 29 in the North to T 9 in the South - Red Bluff to Dunnigan) where the groundwater EC was 3000 at a depth no more than 800 feet -specifically 400 to 800 feet. Like Bryan - his USGS predecessor before him - he identified problematic water quality in the area between Williams and Arbuckle. One well in the foothill portion of T14 N R 1W had a 3000 EC BFW at 288 ft ABOVE sea level. He also identified elevated EC levels in the groundwater near the Colusa Refuge around Colusa and around the Sutter Buttes. Definitely do not want groundwater substitution wells in the 800 to 400 BFW band. These wells should also have limited use for blending groundwater and surface water - remember that the Minimum Threshold for the Colusa Subbasin is an EC of 900 - and Berkstresser mapped to a 3000 EC!	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.
376	11	USGS Tehama- Colusa Service Area and Sacramento Valley Reports Documenting Artesian Pockets of Salt Water, Elevated Sulfates and Other Redox Related Natural Contaminants. Perfect	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		Setting For Methylmercury Biotic Responses and Undesirable Redox Desorption. [Attachment 9] In 1976 and 1978 there were another two USGS Papers published that were relevant to water quality for the Colusa Basin Watershed. The first paper by Gilbert L. Bertoldi "Chemical Quality of Ground Water In The Tehama-Colusa Canal Service Area, Sacramento Valley, California" - Water Resources Investigations 76-92 mentions that Kirby continually encountered "pockets" of excessive pressures and large amounts of flowing saline water from the wells that they drilled into the marine Cretaceous Chico Formation" Most of the exploratory wells were drilled in the flood plain or in the stream bed of Salt Creek near Arbuckle or Petroleum Creek. One of the exploratory wells, at the head of Petroleum Creek, discharged 10,000 barrels of saline water (conductivity 27,000 micro-mhos per centimeter) per day for an unknown period of time" (Bertoldi Page 39). On Page 43, Bertoldi states" It is believed that the source of the mineralized water is discharged from numerous mineral springs and seeps in the headwater areas of each creek" Note that these creeks flow into the Colusa Basin Drain which flows into the Lower Sacramento River. In 1978, Ronald P. Fogelman published USGS Water- Resources Investigations 77-133 "Chemical Quality of Ground Water in the Central Sacramento Valley, California". Fogelman's Paper had an expansive report on groundwater quality issues in the Sacramento Valley but highlighted the high concentration of sulfates in the Salt Creek drainage that Bertoldi recorded. (Fogelman Page 31). On Figure 9, the presence of high concentrations of sulfate in the Salt Creek drainage area which includes the Colusa National Wildlife Refuge area and at the Lower Sycamore confluence with the Lower Sacramento River are set out due to the elevated levels. Please note that the Salt Creek drainage are is due west of Sulfur Creek in western Colusa County which was mentioned above for its historical sulfur mines and sulfur hot springs. Also note the connection to the potential for biotic reduction of methylmercury.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
376	12	1989 USGS Report Documenting Water Quality at Issues at the Kletsel Dehe Wintun Rancheria Near Arbuckle Validating Previous USGS Work and Work Done by Kirby Regarding His Salt	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		Creek Section Lithology Analysis. [Attachment 10] In 1989, Eugene B. Yates of the USGS prepared Water-Resources Investigation Report 89-4004 " Water Quality and Supply on Cortina Rancheria, Colusa County, California" documenting the very poor water quality for the Kletsel Dehe Wintun Nation. This property is approximately 13 miles west of Arbuckle in T 14N. R 4 W. and from a point of historical context within the Salt Creek Section identified by Kirby and in between the historical Sulfur Creek/Wilbur Springs hot springs and the Colusa Trough drainage topographical depression. On Page 16 - Table 2 Yates validated elevated surface water specific conductance observations of 1850 to 2120 for Freshwater and the Salt Creek near Williams (Upper) and the Salt Creek near Arbuckle (Lower). He also documented a 1800 specific conductance observation for Stone Corral Creek which would drain the old salt mine at the Salt Lake site near the town of Sites. On Page 15 " In some streams, the high salinity associated with low flow results from concentrated brines emerging from saline springs scattered throughout the eastern part of the Coast Ranges." On Page 19 regarding groundwater samples" The concentration of dissolved solids ranged as high as 3,340 mg/L.". On pages 20 and 21 - Table 3 - one Spring had a specific conductance observation of 4630 - mercury was also detected but at very low levels in the Springs on the Rancheria.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
376	13	2008 & 2013 USGS Reports Confirm 1891 Historical Observation of Mercury in Sulfur Hot Springs Groundwater and Berkstresser's 1968 Observations of Mercury in Artesian Salt Springs [Attachment 11] In 2008, Aaron J. Slowey and James J. Rytuba prepared USGS Open-File Report 2008- 1179" Mercury Release from the Rathburn Mine, Petray Mine and Bear Valley Saline Springs, Colusa County, California 2004-2006" ("2008 USGS Report"). Also, in 2013, Roger L. Hothem, James J. Rytuba, Brianne E. Brussee, and Daniel N. Goldstein prepared USGS Open-File 2013-1056 " Assessment of Mercury and Methylmercury in Water, Sediment, and Biota in Sulphur Creek in the vicinity of the Clyde Gold Mine and the Elgin Mercury Mine, Colusa County, California" ("2013 USGS Report"). The 2008 USGS 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.

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		confirms the presence of mercury in the groundwater effluent that was mentioned in the 1891 Justus Rogers History of Colusa County and reobserved by Berkstresser in 1968. On Page 9 of the 2008 USGS Report " Saline groundwater may also contribute to Bear Creek via seepage/surface runoff and subsurface flow." On Page 37 of the 2008 USGS Report the source of the saline water is identified as being from the Bear Fault since it was connate in nature - this is new information and it applicable to all the tectonic faulting in both the Cache Creek and Colusa Basin Watersheds generally. The 2013 USGS report picked up the foundation laid by the 2008 USGS report and specifically identified highly saline effluent as being a material source of mercury. On Page 1 of the 2013 USGS Report " It is likely that highly saline effluent from nearby hot springs contribute more Hg to the West Fork of Sulphur Creek than the mine waste material at the Elgin Mine.". On Page 13 " This hot-spring effluent is likely a natural source of Hg to the watershed because the thermal water formation is likely related to the mineralization." (bold face added) From 1861 to 2013 - it has been KNOWN that mercury is present in artesian water as confirmed in 1968 by Berkstresser. From the salt wars of the Pomo Salt tribe in time immemorial, it has been KNOWN that artesian salt water has been flowing into the Colusa Basin and Cache Creek (and watersheds north to Red Bluff -including Stony Creek Watershed) and making its way to the Bay/Delta. The difference is that we have drastically changed the natural drainage system of the Sacramento River and drastically so since the 1950/60 era.	
376	14	Mineralized salt water with mercury and other redox related desorbed metals from springs, faults and wells will make its way to the Lower Sacramento River and the Yolo Bypass - what will the Voluntary Agreements do about this problem?	Please see response to comment 376-4.
376	15	How detrimental has this been on fish and aquatic life in the Bay/Delta and how detrimental will it be going forward?	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 Section 4.3.1, Contaminants, in the 2023 draft Staff Report.
376	16	Are we just wasting money reestablishing the flood plain in the Yolo Bypass and reestablishing habitat on the Sacramento River if the poor drainage regime in the Colusa Basin and Cache Creek watersheds are a breeding ground for methylmercury reduction	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. Water quality,

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		and hydrochemical redox desorption of harmful natural contaminants?	including contaminants, is evaluated in Section 7.12.1, Surface Water, and Section 7.21, Habitat Restoration and Other Ecosystem Projects, for habitat restoration.
376	17	[Attachment 1: Document titled 1. 303(d) Waterbodies in Colusa Basin and Cache Creek Watershed Discussion]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
376	18	[Attachment 2: Document titled 2. European Settler Historical Mining and Hot Spring Chemical Analysis]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
376	19	[Attachment 3: Document titled 4. The Salt Pomo Story – Before There Were Water Wars There Were Salt Wars]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
376	20	[Attachment 4: Document titled 5. Picnic at Sites Salt Mine in 1892 Which Was Discovered by John Bidwell in 1844]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
376	21	[Attachment 5: Document titled 6. 1923 USGS Report Documenting Artesian Salt Water and Warning About the Use Wells With Excess Salt Near Arbuckle Over 100 Years Ago]	This attachment was included with the comment letter. The attachment does not raise a specific environmental impact or economic effect of the project. Please refer to Common Response 1.1, General Comments, for the approach to addressing attachments to comments.
376	22	[Attachment 6: Document titled 7. Drilling Exploration Work by JM Kirby of Stanford Oil Documenting Lithology of Coast Range and Specific Reference to Artesian Mineralized Salt Water near Williams and Arbuckle]	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.
376	23	[Attachment 7: Document titled 8. USGS Charles Berkstresser 1968 Report Documenting 17 Salt Water Springs in Colusa County – Including 3 with Artesian Mercury Contamination]	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.

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376	24	[Attachment 8: Document titled 9. From Red Bluff to Dunnigan – Coast Range Foot Hill Groundwater 3000 EC Base of Fresh Water at 800 feet. A Humongous Salt Load if it is Artesian or Extracted.]	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.
376	25	[Attachment 9: Document titled 10. USGS Tehama- Colusa Service Area and Sacramento Valley Reports Documenting Artesian Pockets of Salt Water, Elevated Sulfates and Other Redox Related Natural Contaminants. Perfect Setting for Methylmercury Biotic Responses and Undesirable Redox Description.]	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.
376	26	[Attachment 10: Document titled 11. 1989 USGS Report Documenting Water Quality at Issues at the Kletsel Dehe Wintun Rancheria near Arbuckle Validating Previous USGS Work and Work Done by Kirby Regarding His Salt Creek Section Lithology Analysis]	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.
376	27	[Attachment 11: Document titled 12. 2008 & 2013 USGS Reports Confirm 1891 Historical Observation of Mercury in Sulfur Hot Springs Groundwater and Berstreser's 1968 Observations of Mercury in Artesian Salt Springs]	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.
377	1	There needs to be a better plan in place to ensure protection to environment ... for humanity and the planet for generations to come ... we must think about long-term health and goals ...	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.
378	1	Too many plant and animal species have gone extinct in the last few years. We MUST do better!	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.
379	1	Voluntary agreements must include all concerned parties not a narrowly focused subset.	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.
380	1	We only have one Delta and we must protect it. Years of withdrawing too much water have taken a dangerous toll on important habit for fish and wildlife. It is time to update the Bay	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		Delta Plan with current science and significant public input, including that of local tribes.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
381	1	We need to follow the science to create a plan which will help endangered species survive in the Delta and which will help protect the waterways and water quality in these times of the Global Climate Catastrophe! All stake holders must be included and considered.	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 also see Common Response 1.2, Water Quality Control Planning Process, for more discussion on reasonable protection of fish and wildlife and the consideration of other beneficial uses.
382	1	The Bay Delta needs help now. Voluntary Agreements have never solved any of our problems.	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.
383	1	?Voluntary? is a way to say no 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.
384	1	The Bay-delta is in serious trouble! Voluntary Agreements have been ineffective. We need much stronger protections for the health of the whole system!!! Higher water 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.
385	1	We need conservation now not in the next generation	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.
386	1	VAs do not work. Don't use them or agree to them.	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.
387	1	Clean air, clean water, and clean soil for everyone.	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.
388	1	Protect the Bay Delta. Keep Tulare Lake.	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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389	1	Voluntary agreements are ridiculous. The greedy rich will not protect the community any more than they will share their riches.	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.
390	1	Rely on science not politics.	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.
391	1	Voluntary Agreements do not work! A government agency needs to set enforceable rules!	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 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including enforceability.
392	1	The decisions you make will affect generations to come. Act wisely please.	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.
393	1	The Delta is important to this area and too much has already been irrevocably lost due to past negligence. Though it is not what it once was, it still teems with life and can do even more if given the chance and support it needs. Please think of the future.	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.
394	1	I am strongly opposed to the proposed "voluntary agreements" in lieu of a real update to the Bay Delta Plan. The Voluntary Agreements will do nothing to aid in the critical recovery of this precious estuary.	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.
395	1	Time is not on our side (emphasis added). Act aggressively and responsibly now (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.
396	1	We have to do something about the present and future water crisis, but relying on Voluntary Agreements is the wrong way to go. Furthermore, science tells us over and over that our best ally in protecting our water supply is NATURE. We need to work with nature not against it. By providing water for stream flows and resulting biodiversity, we best help ourselves.	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.
397	1	In the updated plan please emphasize the real importance of protecting our Treasured Wildlife and all living beings!!	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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			raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
398	1	As a person who lives near the Bay and Delta, and whose water comes from the Delta, I ask you to take stronger measures than the proposed Voluntary Agreements. Eight years is too long to just hope for the better? All signs of climate change and water quality decline require real action. What has created real turn around in watersheds and species protection is the inclusion of Indigenous tribes and fishermen as well as farmers and city governments. It takes work, but the results are worth it: a flourishing watershed is important in every way, to everyone, including species of all kinds .	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.
399	1	***Ultimately we must do all we can to maintain or even repair the environment in any projects we engage in going forward. We no longer have the luxury of "ignorance" or "convenience" not to make sure that we do all we can to care for the planet we live on.***	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.
400	1	The tunnel needs to DIE. It is never going to be "the" solution. It will be just another environmental disaster in the making.	Please see Common Response 1.1, General Comments, regarding comments about other projects.
401	1	I fully support an updated Bay Delta Plan that includes strong science-based standards, addresses ongoing water quality challenges in the Bay Delta and incorporates an implementation plan that can achieve recovery of imperiled species.	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.
402	1	The Bay Delta's health and ability to support Mother Nature at her best is not being properly protected and is further threatened by VA's that are not meeting standards that demonstrate what we humans should be doing to make up for our previous obliviousness and carelessness. I greatly appreciate all that you might do to rectify this scenario.	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.
403	1	As a long-time resident of San Francisco and an attorney who has worked to protect coastal resources for 40 years, I urge the Board adopt a strong Bay Delta Plan that provides an unimpaired flow standard that allows the recovery of imperiled species, addresses proliferation of Harmful Algal Blooms (HABs) and protects public trust resources.	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. Also see Common Response 1.2, Water Quality Control Planning Process, for information on the

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		I urge the Board NOT to approve Voluntary Agreements (Vas) that do not address the concerns of Tribes, Delta and environmental justice communities, and environmental and fishing groups. The proposed VA's fail to protect public trust resources, in-stream flows, water quality, imperiled fish and wildlife, and exacerbate HABs that endanger human health and wildlife. The 2010 Delta Flow Criteria Report found that a 75% unimpaired flow standard was needed to protect the Bay-Delta ecosystem and imperiled species. During drought conditions barely 33% of unimpaired flows reach the Bay and the Draft Staff Report recommends only a 55% unimpaired flow standard. The Board must ensure the Bay Delta Plan update prioritizes a higher unimpaired flow standard so that local communities and wildlife do not continue to bear the burden of unsustainable water diversions, and the Bay Delta ecosystem can recover and remain resilient in the face of climate change.	reasonable protection of fish and wildlife beneficial uses and public trust.
404	1	San Francisco Bay is the most critical environmental resource that California has and we must protect it from human activities which destroy everything	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.
405	1	Protection for native species is imperative for a healthy ecosystem!	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.
406	1	The Bay Delta is a treasured part of Northern California, linking the central valley with the San Francisco Bay. We must do everything in our power to ensure that the update to the Bay Delta Plan is completed with strong science based standards. We deserve the best outcomes for fish and wildlife and have this one chance to get it right. Thank you.	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.
407	1	Voluntary agreements do not work. Surely, we have seen that time and time again. Water resources in California and the Delta are too important to leave to unenforceable "Voluntary Agreements" that everyone knows will not progress recovery of	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 Bay Delta. Support the Bay Delta plan with strong science-based standards.	
408	1	The Voluntary Agreements agreement fail to provide the meaningful improvements to in-stream flows, water quality, and species conditions in the Bay Delta required for a sustainable water supply and Bay Delta ecosystem. "Voluntary" means promises easily made and easily broken. The 2010 Delta Flow Criteria Report found that a 75% unimpaired flow standard was needed to protect imperiled fish and reduce sea water intrusion in the Bay Delta. A minimum 75% unimpaired flow standard is required to reduce the damage caused by sea water intrusion. May you do ONLY that which is truly best for the environment and the vast majority of people living in California.	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. Also see 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 information on the voluntary agreement pathway, including enforceability.
409	1	Please reject the proposed Voluntary Agreements the sacrifices the wondrous and delicate Delta. habit and livelihoods of the many who depend on it for the benefit of a small group of agricultural business.	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.
410	1	And so with that being said, what happens to those rivers is very, very important to us, but most importantly, it's a responsibility that we have to protect those spaces. And so when we talk about protecting the health of our rivers and watersheds, we are simultaneously talking about protecting and preserving our culture, our indigenous life ways, and our identity. Culture is ecology, ecology is culture. It is all connected. I want to thank you for providing the time and space today to hear from California tribes on the Bay-Delta Plan draft Staff Report. However, more outreach to tribes, more tribal engagement, more opportunities for dialogue and exchange of information is required. In an effort to problem solve, we have met with your staff and have even spoken with some of you about the importance of tribal engagement and how you can improve your processes. We've offered suggestions and highlighted best practices, such as going beyond an outdated tribal contact email and mailing lists,	The State Water Board has conducted extensive public and tribal related outreach and appreciates the significant input from tribes and environmental justice communities related to the Sacramento/Delta Update to the Bay-Delta Plan. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments about tribal outreach and engagement. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes.

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		making calls to tribal offices, conducting follow-up, getting to know tribes within the watershed, even asking neighboring tribes about who appropriate contacts might be that you aren't aware of. And more importantly, meeting tribes where we are in our preferred method of engagement, whether it's virtual or in-person. You must find ways to be responsive to and inclusive of tribes. The inclusion of tribal voices in any planning process where outcomes and impacts can be detrimental to us is necessary if you are to uphold your obligations to ensure adequate water quality for all California communities. It is particularly important that tribes are engaged in this process and consulted on the various elements of the proposals included in the draft Staff Report that would impact tribes, especially when those impacts are potentially and fundamentally inequitable. There has not been enough engagement and consultation with tribes throughout the Bay-Delta watershed. One virtual tribal-only meeting and one in-person tribal meeting for our watershed that spans roughly half the state is severely inefficient.	
410	2	In some cases, tribes have been intentionally excluded, such as through the voluntary agreement process. We are disappointed and concerned that the draft Staff Report includes the voluntary agreements at all. We do not believe consideration should be given to any proposed approach to managing our waterways that, one, exclude tribes and consideration for our tribal cultural resources and uses, lacks an implementation plan for tribes to evaluate, three, relies on an eight-year experiment with questionable flow regimes based on pseudoscience controlled by water agencies and irrigation districts with no adequate oversight, four, lacks proper instream flows to protect the environment and uses narrative as a replacement for quantifiable water quality and flow standards, and five, that further jeopardize our salmon and native fish populations already on the verge of extinction. There is no justice for tribes without the recovery of our fish species.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including oversight; Common Response 3.1, Fish Protection, for information on the use of best available science; Staff Report Chapter 9, Proposed Voluntary Agreements, for an analysis of the impacts and benefits of the VA pathway; and Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses.
410	3	We oppose the voluntary agreements fundamentally.	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		They are exclusionary and inequitable in nature, and we urge the Board to reject the staff recommendation that they be considered as a viable proposal.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project. See also Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses.
410	4	We also urge you to revisit your racial equity resolution and apply a racial equity lens to your decision-making process going forward.	Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments related to the State Water Board's Racial Equity Resolution and Racial Equity Action Plan.
410	5	There is no way to include tribal perspectives without having tribes present to speak for ourselves. There's no other way to incorporate our indigenous knowledge, tribal values, or even begin to understand the protections we need for our Tribal Beneficial Uses without collaborating with us directly, genuinely, and intentionally.	Meaningful engagement with California Native American Tribes is fundamental to the mission of the State Water Board. The State Water Board also recognizes that close coordination and collaboration with California Native American Tribes is a vital part of the process to designate Tribal Beneficial Uses. Additional information on tribal outreach and engagement, Traditional Ecological Knowledge, and Tribal Beneficial Uses can be found in Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate tribal and Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes.
410	6	In closing, I'd like to add that we appreciate the draft Staff Report's recommendation to include the incorporation of TEK and indigenous knowledge into the Bay- Delta Plan update. However, further discussion, engagement, and consultation with tribes is necessary to ensure that incorporation of our knowledge is not an exercise of extraction, misuse, or commodification of our knowledge. There must be protections in place in a way that honors and holds sacred what we choose to share.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Traditional Ecological Knowledge/tribal knowledge and tribal engagement and outreach. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes.

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411	1	I'm the Executive Director of With Our Words, here for the group's presenting for the HABS and Environmental Justice Panel. They are part of a coalition known as the Delta Tribal Environmental Coalitions. Now I don't work full-time in water advocacy. With Our Words is a Stockton-based nonprofit working with youth in the areas of journalism, advocacy, spoken word, and creative writing. I do interface daily with young people engaging with and writing about the Delta and our general environment, primarily youth of color, mostly from our large environmental and social justice communities. Quoting Lisa P. Jackson, the first Black woman administrator of the Environmental Protection Agency, "It's time to be clear about this misconception that environmental issues are incompatible with civil rights issues. The truth is that environmental issues are civil rights issues." With Our Words is on record with US EPA Rulemaking for Completion of the Bay-Delta Plan filed by the Delta Tribal Environmental Coalition. I was present and engaged in water advocacy in December 2018 when the Board went and voted on the adoption of the final SED for Phase 1 update to the Bay-Delta Plan. While 40 percent unimpaired flow for the San Joaquin River wasn't the best protective standard and the weakening of the salinity standard worried us, we were hopeful that a solid proposal for restorative flows on the Sacramento River during the Phase 2 process, along with the development of a strong protective standard dealing with harmful algal blooms, and the Board's rejection of the voluntary agreement, that we were at least collectively moving in the right direction.	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.
411	2	I warned the Board then on behalf of the hundreds of youth that I worked with in Stockton, that the VA process was exclusionary. Our students, many engaged for the first time in high school environmental action clubs, couldn't miss school to attend the Board's daytime public hearings. I further warned the Board that	Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments on existing environmental conditions and the CEQA analysis including a discussion of the 2021 Yale Environment Review

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		the VAs wouldn't improve water quality, wouldn't protect fisheries or improve environmental conditions for our young people. In 2018, our colleague Anthony Robinson courageously spoke truth to power when he told this Board how our degraded environment becomes internalized degradation for the people. Who feels worthy when nothing surrounding a person is healthy, normal, safe, beautiful or accessible in the natural world? There's a direct line between EJ and mass incarceration. The 2021 Yale Review documented this worrisome overlap between environmentally toxic communities and mass incarceration. My work in education and literary arts seeks to break that pipeline, but the disparate impacts caused by delays and inadequate proposed standards as described in this plan are making my work so much harder.	article. Also see Common Response 10.1 for responses to comments on the VAs.
411	3	We waited five years for Phase 2 due to delays to allow for the advancement of the voluntary agreements, yet that implementation plan is still forthcoming. How do we evaluate an incomplete environmental document? DWR promised in 2018 during the vote for Phase 1 that the voluntary agreements would be ready for implementation in 90 days.	The 2023 draft Staff Report includes a sufficiently detailed description of the proposed program of implementation for the purposes of the analysis. 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 further information.
411	4	2023 is ending, yet the voluntary agreements will worsen flows through the Delta on both the Sacramento and San Joaquin River systems. Without a numeric HAB standard, the problems in Stockton will be replicated into other areas of the Delta, further destroying our natural world. The current Staff Report for Phase 2 before us today prioritizes HAB's assessments for water exporters, not for environmental justice communities in the Delta. Without a HAB standard, the low range for Sacramento flows will impact the more rural areas where a number of the Delta's 72 small drinking water systems exists. According to recent surveys completed by the Department of Water Resources, the Delta in its entirety is a majority disadvantaged community. And the voluntary agreements described in the Staff Report will exacerbate HAB's conditions	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to water quality standards for cyanotoxins, and to economically disadvantaged communities and cyanobacteria harmful algal blooms (HABs). As explained in Staff Report Chapter 9, Proposed Voluntary Agreements, the Voluntary Agreements would not affect tidal and net flow in dead-end sloughs and other Delta channels with poor circulation where HABs are most likely to occur and, therefore, it is unlikely that HAB formation would be affected in these areas of the Delta.

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		because flow conditions to the Sacramento River and Eastern tributaries will worsen without instream flow standards.	
411	5	The Board's actions prioritizing the concerns of water exporters and water districts creates disparate impacts for people of color and tribes in all Delta communities, both urban and rural. What the Board has demonstrated to me these past five years is that EJ communities do not matter. Marginalized communities don't need recreational opportunities, and fishing for sustenance and culture don't need protection. I've watched my community and its youth become alarmingly more disconnected from the natural environment. We're here today advocating for the same things we advocated for five years ago. Hopefully, this time you'll listen and implement.	Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments on existing environmental conditions and the CEQA analysis.
412	1	I'm the Environmental Director for the Big Valley Band of Pomo Indians. And our tribe has been working diligently for a number of years alongside other tribes, and also the California Indian Environmental Alliance, to move the work of tribal beneficial use development forward through both the state process and the Regional Board process. But I'm here today to comment on the Bay-Delta Plan and kind of the Staff Report that is being developed to protect the water quality of the Bay-Delta. On Clear Lake, we've been grateful for the collaboration between agencies who have pulled together for the Clear Lake hitch, or the chi. The silos that existed between the different agencies, even between the Water Boards and the Regional Board, between CDFW, all of these agencies that have a hand in protecting water quality or protecting uses and fish and other, you know, other life that the tribes and also the general community that they care about, these silos have started to break down. And there has been a tremendous effort to coordinate equipment, monitoring, funding, restoration projects, fish rescues, and other, and scientific modeling and using these things to work together efficiently to do all we can collectively to protect the fisheries. Protected fisheries has a broad positive impact on tribes and the local community. And I'm bringing this up because it sounds like	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments on tribal outreach and engagement. The State Water Board will continue to look for opportunities to collaborate with the regional water boards, other agencies, tribes, and stakeholders to improve water quality in California's waterways and protect beneficial uses of water through basin planning processes or other control programs.

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		this effort of thinking outside the box, and also remembering why we're all here, that this model that has been playing out in Clear Lake for the chi should happen here. There are multiple players in this conversation. There's the Region 5 and Region 2 Basin Plans, and the water that they send that goes through the Bay-Delta that is impaired, you know? The waters of most of the regions, I guess probably all of the regions of California, have some, you know, some standards of water quality objectives that they're not meeting and some beneficial uses that are being impaired. And so to work together with the tribes and the Regional Boards and the State Water Resources Control Board to really come up with solutions that work for the Bay-Delta, I believe, is critically important because there's a lot at stake.	
412	2	So I want to talk a little bit about the voluntary agreements and then also just, you know, the kind of the realities of Bay-Delta. There's, you know, a saying, and I'm just saying this like as a private person, trust Allah but tether your camel, you know, trust but verify. Voluntary agreements have -- you know, there are problems with voluntary agreements. And we believe that if you're going to include those in the Plan, that they should be telemetered. You should be using telemetry so that everybody can see what the flow is in those areas, or just like what we're doing on Clear Lake, you have a coordinated effort where there's flow being monitored by outside entities. We were able to, we were loaned, the Big Valley Band of Pomo Indians was loaned a flow gauge to monitor flow, measure flow, and we have -- we'll be returning that loan because we received some funding from Department of Water Resources to purchase a flow gauge. So that is, you know, a way to verify that voluntary agreements are happening instead of just trusting it's going to happen.	Please see Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including monitoring and enforceability.
412	3	You know, the state has a history of trusting private property owners to do the right thing. And I don't think that evidence is really good that they've been -- that people are doing the best	Please see Staff Report Chapter 13 and Common Response 1.3, Revised Proposed Plan Amendments, for information on the VA pathway, including monitoring and enforceability.

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		that they can. For example, looking at the water rights reports, statement of water and diversion -- use and diversion, sorry, that private property owners who are pulling surface water from a water body, they're supposed to be submitting those to the state every year. Well, we made a very large, you know, point of those being inaccurate for the review of the Clear Lake hitch and there's since been estimations from Water Board staff in the Enforcement Division that over half of the reports that were turned in for Clear Lake use, Clear Lake watershed use, were incorrect and inaccurate. And then the other half weren't even turned in. So my point is that, you know, voluntary agreements make it easier for the Water Boards, but actually the reality is that many people don't have the time and the training or even the inclination to be doing the right thing and submitting the information that they're supposed to. So I would suggest that if you're going to use those to have real actual verification elements in those voluntary agreements.	
412	4	The second is that, you know, when I first learned about the Bay-Delta Plan, I got concerned because it seems like you're using minimum flow requirements as a proxy to meeting all of the water quality objectives. But because the water is coming from, you know, the two regions, Region 5 and Region 2, there's -- and we know that those are impaired waters, there doesn't seem to be a mechanism between how the Delta works with those two regions to ensure improved water quality. We're just stuck in, you know, these very long and ineffective TMDLs, ineffective. So that means that the water -- so as long as you're just doing minimum flow requirements and flow monitoring, it's very, very questionable that the water is actually meeting the water quality objectives of the uses that are there. And, you know, so I'm curious, like what kind of components that this Plan has and, you know, moving forward with mitigation measures if the water quality that's coming from Region 5 and Region 2 are not meeting the standards that even their own	The State Water Board and the nine regional water quality control boards administer the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) to achieve an effective water quality program for the state and are responsible for the regulation of activities and factors that may affect the quality of the waters of the state. The Bay-Delta Plan, adopted and implemented by the State Water Board, supplements both the Central Valley Basin Plan and San Francisco Bay Basin Plan, which were adopted and implemented by the Central Valley Regional Water Quality Control Board and the San Francisco Bay Regional Water Quality Control Board, respectively. These plans are intended to work in harmony, but the Bay-Delta Plan supersedes the regional water quality control plans to the extent there is any conflict. Sections 7.12.1, Surface Water, and 7.12.2, Groundwater, of the Staff Report include discussions of the potential environmental impacts to surface water and groundwater quality, and list the mitigation measures to avoid or reduce those impacts. Section

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		standards, so what's next? Flow doesn't fix everything. It fixes some things.	13.7.12.1, Surface Water, and Section 13.7.12.2, Groundwater, of the final Staff Report include additional environmental analysis related to the revised proposed Plan amendments and their potential effects on surface water and groundwater. Final Staff Report Section 13.3, Revised Proposed Plan Amendments, contains a description of the water quality objectives and program of implementation provisions to achieve those objectives. Also, see Common Response 1.3, Revised Proposed Plan Amendments, regarding the annual and periodic review processes under which the Plan is reviewed to assess implementation progress and effectiveness of water quality objectives, and regarding continuation, modification, or termination of the VA pathway.
412	5	So, you know, ultimately, and just, you know, the previous speakers, the other colleagues did a fantastic job explaining the details of why tribal consultation is so important, and the development of Tribal Beneficial Uses is also so important because we're talking about basically unmonitored waters that are, have the potential for affecting the health of individuals. And, you know, this is 2023, we're better than that. You know, we need better water quality to be able to continue traditional activities that really require good water quality. So tribal consultation is critical, and it's also critical to be working together to ensure that the water in the Delta beats the water quality standards that are connected to tribal beneficial uses and even just the other uses that exist there. And I would be very interested in working with your staff to understand what exists to ensure that, as I said, there are mitigation measures in place and whether that means fewer permits for discharge are, should be considered so that the water is meeting those standard, I think you should be willing to look at any of the -- you know, any of those options because right now there's no compromise. Basically, the short end of the stick is always gotten by the tribes and the environment. So we're better than that and we need to work harder.	The State Water Board has conducted extensive public and tribal related outreach and appreciates the significant input from tribes and environmental justice communities related to the Sacramento/Delta Update to the Bay-Delta Plan. The State Water Board is interested in working with tribes and stakeholders to ensure beneficial uses of water are protected. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments about tribal outreach and engagement and Tribal Beneficial Uses.

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413	1	I was initially brought on to work for the tribe in March of this year because over the past few years, there have been harmful algal blooms observed at some of the tribe's ancestral sites throughout the Sacramento area, and that was of concern for the health of tribal elders, and youth at events that were occurring. Next slide [no slides provided in transcript]. I began testing for harmful algal blooms in April of this year. Over this past summer, the presence of HABs was pretty minimal due to high flows in the Sacramento River along the sites that I was testing at. However, even so, several incidences still did occur. There was, firstly, a language camp that was canceled in June due to cyanotoxins being detected in the river. This directly prevented cultural knowledge from being able to be passed down on the tribe's ancestral land and caused a significant harm to this tribal beneficial use. Additionally, HABs were detected in September of this year. Although it did not cancel a specific event, it was still something of concern.	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to California Native American tribes and cyanobacteria harmful algal blooms.
413	2	Next slide [no slides provided in transcript]. Getting into the science a bit here, here is a graph showing flows on the Sacramento River. It's from a USGS station near Verona Marina. The flows from 2023 are seen in yellow and are quite clearly significantly higher than in the previous several years. Next slide. Breaking this down year by year, this graph shows a bit more detail for the flows that occurred in 2023. You'll see that the flows reached a peak of over 66,000 cubic feet per second and remained quite high throughout the summer, staying above 20,000 cubic feet per second throughout mid-June. Next slide. This graph shows the flows from the previous year in 2022. Note the significantly lower peak, which is below 11,500 CFS. The levels averaged around 7,000 CFS throughout the summer, which	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to instream flow and cyanobacteria harmful algal bloom formation.

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		is about half of what was seen in this year of 2023. Next slide. Stepping back another year, here is the flows in 2021. Besides that large spike in late October, the flows otherwise stayed pretty low between 5,000 and 12,000 CFS during the HAB season. And next slide. Going back another year to 2020, the flows this year peak just below 20,000 CFS, which was higher than in 2021 or 2022, but was still significantly lower than in 2023. Next slide. So now I'm going to dive a bit into some of the specific HAB incidents that occurred over these past few years. So there's a lot going on this slide, but the table on the right shows the number of reported blooms that occurred each year in Sacramento County. And I excluded those where testing was conducted and no cyanotoxins were found. You'll see that 2023 is pretty notable because it had significantly fewer blooms present than the previous two years, likely due to significantly higher flows. 2020 also had fewer reports than the two years afterwards. And this is likely due to a combination of, first of all, less awareness of this issue back then. And secondly, higher flows were seen compared to 2021 or 2022. So it's likely due to a combination of those two factors.	
413	3	Next slide [no slides provided in transcript]. In addition to HABs, I also want to discuss the threat of E. coli contamination a bit as well. These plots show the E. coli levels that I tested for at four of our tribal locations. The red lines show the geometric mean at each location. And although the geometric mean for these sites is generally below the EPA recommendation level of 100 CFU per 100 milliliters, there was still a significant spike that occurred in late July at several of these locations, which is visible on all four of these graphs.	The State and Regional Water Quality Control Boards are committed to preserving, enhancing, and restoring 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 water resource allocation and efficient use, for the benefit of present and future generations. The State Water Board and the nine regional water quality control boards (regional water boards) administer the Porter-Cologne Water Quality Control Act to achieve an effective water quality control program for the state and are responsible for the

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		One impact of these high E. coli levels was that an event for tribal elders was not able to take place on the tribe's ancestral territory, once again, causing an impact to a tribal beneficial use. Even though flows were high this year, it still did not prevent these high E. coli levels from being seen.	regulation of activities and factors that may affect the quality of the waters of the state. Under the Porter-Cologne Water Quality Control Act, the state and regional water boards formulate and adopt basin plans that designate beneficial uses and a program of implementation to meet the objectives. Please see Section 7.12.1.2, Environmental Setting, of the Staff Report which contains a discussion on the role of basin plans and protecting beneficial uses designated in those basin plans, including the Central Valley Regional Water Quality Control Plan for the Sacramento and San Joaquin River basins. That plan contains specific numeric water quality objectives for constituents such as bacteria (E. coli). Please also see the Central Valley Regional Water Board's Surface Water Ambient Monitoring Program (SWAMP) and the Lower American River Bacteria Study on their efforts related to identifying bacteria sources. Please refer to Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses. Also see Common Response 10.1, Economically Disadvantaged Communities, for responses to comments on existing environmental conditions and the CEQA analysis.
413	4	So just to summarize, I want to really emphasize the tie here between high flows seen this past year with lower incidences of harmful algal blooms, and just emphasize the importance of looking at flows when we consider this issue.	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to instream flow and cyanobacteria harmful algal bloom formation.
413	5	And secondly, I want to emphasize the importance of how harmful algal blooms as well as the E. coli here are directly tied to harming Tribal Beneficial Uses, and this is something that actually needs to be taken on.	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments about Tribal Beneficial Uses and harmful algal blooms. Please see the response to comment 413-3 for more information on the State and Regional Water Board's efforts related to E. coli contamination.
414	1	We joined the Delta Tribal Environmental Coalition in filing the Title VI complaint and petition for the rulemaking with the US EPA because tribes and other EJ communities in the Delta, like South Stockton residents, are alienated from a regional waterways. We stand in solidarity with our partners because like myself and the community that we represent at Little Manila, we	The Staff Report adequately evaluates the environmental impacts that could occur as a result of the Sacramento/Delta update to the Bay-Delta Plan, including in Chapter 7, Environmental Analysis, Chapter 9, Proposed Voluntary Agreements, and Chapter 13, Revised Proposed Plan Amendments. Impacts are evaluated for each resource area,

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		have been impacted by polluted and impaired waterways that are a legacy of genocide and redlining. As illustrated on the screen, CalEnviroScreen identifies Stockton to be within the 90th percentile for cumulative environmental impacts and air pollution. There is a rising concern over the link between particulate matter, PM, and harmful algae blooms, toxins, especially for communities like Stockton who experience high levels of air pollution already. Our experience will be replicated along the Sacramento riverside of the Delta if the wrong water management decisions are made. Failing to acknowledge how water management creates disparate impacts for Delta communities will turn rural Delta communities into environmental justice communities.	including air quality, surface water, and recreation. Please refer to Common Response 4.1, Harmful Algal Blooms, for responses to comments related to harmful algal blooms and air quality. Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments related to existing environmental conditions and the CEQA analysis.
414	2	Next slide, [slides not available in transcript] please. Our interdisciplinary collaboration with academic institutions such as the University of North Carolina, and community experts such as Restore the Delta, has allowed us to question the multiple dimensions of pollution in our EJ community. While the San Joaquin County and Stockton are directly impacted by the San Joaquin River flows, the mixing of water at the confluence of the San Joaquin River and the Sacramento River impacts water quality for a significant part of the estuary. Currently, low flows during dry years on the San Joaquin River contribute to air pollution linked to HABs in Stockton. With the proposed preferred flow alternative in Phase 2, we can expect the same air quality problems to manifest along the Sacramento River side of the Delta when unimpaired flows drop to 45 percent. The low end of this flow range will potentially exacerbate HABs problems downstream of the San Joaquin Sacramento confluence. The University of North Carolina has been researching how HABs impact air quality. Their findings in the Delta suggests that gases that sometimes evaporate off toxic blue-green algae blooms can lead to aerosol formation in the atmosphere, forming particulate matter that is unhealthy to inhale. Next slide.	Please see Common Response 4.1, Harmful Algal Blooms, regarding harmful algal blooms, including their relationships to streamflows and potential implications for air quality and environmental justice communities.

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		This illustration on the screen provides a greater understanding about the interaction between air and water quality, and it is useful to contextualize my comment in regards to the research. UNC collected air filters and water quality samples from areas in Stockton, Antioch, and Discovery Bay to identify toxins and other compounds that originate from HABs. While UNC's research did not identify the presence of HABs toxins in the air filter samples their first year of testing, they were able to identify taste and odor compounds that originate from HABs that can lead to aerosol formation. These aerosols originating from HABs can potentially be inhaled by people not interacting in the waterways, but who are located in the general vicinity. It is known that the inhalation of aerosols negatively impacts respiratory health. It is important to be aware of this study. It is important to be aware that this study is a first of its kind and unveils an air quality concern pertaining to HABs that is not addressed in the Staff Report. The new research has opened the door for more studies on the link between HABs and air quality. That being said, further research is needed to know what chemicals, what chemical changes do the taste and odor compounds undergo when they reach the atmosphere? Are the taste and odor of volatile organic compounds attaching themselves to already existing particulate matter or are they contributing to the production of particulate matter exacerbating the already existing air quality concerns? Most importantly, what are the public health concerns? Ingested cyanotoxins are already known to cause liver issues. So do these odor and taste compounds cause additional health issues? While the Staff Report acknowledges, and I quote, "Reduced flow at some locations may increase the formation of HABs which could produce odor compounds," end of the quote, it fails to analyze the complexity between air quality and HABs and the air quality research gap.	
414	3	Next slide [slides not available in transcript].	Please refer to Common Response 4.1, Harmful Algal Blooms, regarding harmful algal blooms, including their relationship to

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		UNC research was conducted within the Phase 1 project area that I addressed earlier, but it can be applied to water management decisions for the Sacramento riverside of the estuary. Preliminary research by Shingle Springs is already revealing that reduced flows on the Sacramento system result in more HABs incidents. UNC is establishing the link between HABs incidents and air pollution. Consequently, we [Little Manila Rising] know reduced flows lead to HABs which then leads to increased air pollution concerns. Air pollution from HABs is yet another disparate impact experienced by Delta environmental justice communities when unimpaired flows are too low to support a healthy estuary. This is why the preferred flow alternative for Phase 2 will not work. The bottom range is too low to protect public health and the voluntary agreements contain no analysis at all of this impact challenge and are therefore rejected by this coalition.	streamflows and potential implications for air quality and environmental justice communities.
416	1	I'm a resident of Los Angeles and I don't have any personal agenda calling, but I want to call in to support our state scientists who are striking today and support tribes, indigenous people in Northern California, EJ communities who are suffering from all the algae blooms and the deterioration --	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. Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments related to economically disadvantaged communities and Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to California Native American Tribes. Please refer to Common Response 4.1, Harmful Algal Blooms, for responses to comments related to harmful algal blooms.
416	2	And I also want to oppose the VAs, which are backroom deals negotiated between water agencies and the state and big ag and big oil behind closed doors and without input from tribes, communities and environmental fishing groups, or even regular member of the public. And that should not be -- and you should not consider that as a alternative to the Bay-Delta Plan that your own scientists have been working hard on. And I see that as a devaluing of science and the scientists who are striking today.	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 reasonable protection of fish and wildlife beneficial uses.

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		And I would also want to support at least 65 percent unimpaired flow on the Sacramento River, like many environmental and EJ groups have said before me, because the 55 percent standard is not sufficient.	
416	3	And don't forget that the tribes have senior water rights, even though it's not illegal, but if you want to do the right thing, they came here before us. So you should proactively reach out to them about the Tribal Beneficial Uses and respect them.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to tribal outreach and engagement, tribal reserved water rights, and Tribal Beneficial Uses.
417	1	Today I want to emphasize why I firmly believe that the Agreements to Support Healthy Rivers and Landscapes are the right course of action. More than a decade ago, I transitioned from being a policy analyst at the California Department of Food and Agriculture, and I leapt into farming full-time. I had saved every penny. I bought 60 acres of farm bare ground in Dunnigan, California, and I planted 60 acres of almonds and contributed to the growth of Henderson Farms, our family's farming operation management company. The picture you have is all of our employees there. And I assure you we're better at farming than taking group photos, because it's not great. Today, Henderson Farms employs 46 year-round employees and the decisions that we make impact their lives every day. Our communities in Arbuckle and Dunnigan, as well as those around us, rely heavily on water allocations from Shasta Dam. These allocations support groundwater recharge, provide habitat for waterfowl, and irrigate our cropland, which supports the jobs of the majority, in fact, I think Tim said, 70 percent of the people in our communities. If the Board chooses unimpaired flows, our surface allocations may be reduced to zero in many years, and our communities, the waterfowl habitat, and domestic well users will suffer greatly. The Dunnigan Water District, orchards in both Dunnigan and Colusa, but specifically in Dunnigan, in line with SGMA goals, has successfully recharged 2,200 acre feet of water just in the last water year alone. Collaborating with many various entities, including your Board, Department of Water Resources, California Department of Fish and Game, and the Nature Conservancy,	The environmental impacts and economic effects of the flow scenarios are analyzed in Chapter 7, Environmental Analysis, and Chapter 8, Economic Analysis and Other Considerations, of the 2023 draft Staff Report. 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.

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		we've gained statewide recognition for this program, providing that local solutions can be effective, and that your trust in us through SGMA to develop those solutions was not misplaced.	
417	2	Okay, in a recent book by Stephen M. R. Covey, he outlines two different styles of leadership for effecting change. One way is trust and inspire, and the other is command and control. To me, SGMA embodies a leadership of trust and inspire, setting clear goals, setting deadlines, having accountability, while allowing water agencies and districts and landowners to work together to create local solutions and partnerships, many of which more I learned about just today. I knew about a bunch, but I heard a lot more today, which is encouraging. The Agreements to Support Healthy Rivers and Landscapes align with this approach, also fostering lasting partnerships. On the other hand, unimpaired flows represents a command and control style. While it might seem effective on the surface, can this type of action truly produce meaningful change? If trust is eroded and there's little buy-in from districts and water users to be part of the solution, can that truly lead to lasting results? I know the solutions aren't easy, but I urge you to adopt decisions like SGMA that lean toward trust and inspire, recognizing that building trust and inspiring collaboration will lead to the most sustainable and meaningful outcomes.	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.
418	1	So I support Restore the Delta's position. The Delta has suffered for decades without updated water quality and flow standards that protect communities, culture, fisheries, recreation, and agriculture. The Staff Report for the Bay-Delta Plan contains voluntary agreements, a private, incomplete, and discriminatory process in which most Californians were left out of having a say in water allocations and river and Bay-Delta protections, not to mention disparate impacts these agreements will cause with tribal and environmental justice communities. Additionally, the Staff Report doesn't contain a proposed project but rather a recommended alternative with options through	Please see Common Response 1.3, Revised Proposed Plan Amendments, for responses to comments that raise issues with the program of implementation. See Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses. Also see Common Response 10.1, Economically Disadvantaged Communities. See Common Response 1.2, Water Quality Control Planning Process, regarding the State Water Board's authorities under the water quality control planning process and Common Response 3.1, Fish Protection, regarding the use of best available science.

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		which the Board can put together a Bay-Delta Plan that serves political interests rather than science-based objectives to restore our fisheries and environmental health.	
418	2	As currently drafted, the plan is incomplete and inadequate for fisheries and the overall health of the Bay-Delta Estuary. The proposed alternative of 55 percent unimpaired flows for the Sacramento River, with a range of 45 to 65 percent, will not save many fisheries, and fisheries will continue to slide into extinction. While there isn't a stable produced proposed project because Board members are being offered alternatives with additional à la carte management options, 65 percent minimum unimpaired flows gets us closer to fish recovery, but 75 percent is the best based on established science.	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 reasonable protection of fish and wildlife beneficial uses. Also see Common Response 7.1, General CEQA and Approach to the Analysis, regarding the project description, and Common Response 7.24, Alternatives Analysis.
418	3	There is no plan of implementation for the proposed alternative, which should have been finished over the last five years.	The 2023 draft Staff Report includes a sufficiently detailed description of the proposed program of implementation for the purposes of the analysis. 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 further information.
418	4	There is no harmful algae bloom standard to protect people who come in contact with waterways. There isn't a real strategy for how harmful algae blooms will be tracked, identified, and mitigated.	Please see Common Response 4.1, Harmful Algal Blooms, for responses to comments related to water quality standards for cyanotoxins and State Water Board efforts to address HABs in the Delta. Refer to the Staff Report, Section 5.6.1.3, Proposed Changes to Monitoring, Assessment, Special Studies and Reporting, regarding monitoring cyanobacteria harmful algal blooms (HABs) in the Delta, gaps in monitoring, the State Water Board's coordination efforts related to HABs monitoring and collaboration efforts on special studies to help fill gaps in knowledge about how stream flows and other environmental conditions contribute to Delta HABs to inform potential management actions by the Water Boards and others. In addition, the revised proposed Plan amendments described in the final Staff Report include provisions to address HABs, including monitoring requirements to track status and trends

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			and efforts to identify possible HAB management and mitigation measures.
418	5	The voluntary agreements which are offered as an option do not set water quality objectives, so the voluntary agreements cannot meet the objectives of the Bay-Delta Plan. The voluntary agreements, as included in this 1 draft, do not include an implementation plan, meaning the public will have to comment on implementation later. This keeps us in a perpetual cycle of reacting to a Bay-Delta that is never finished.	The 2023 draft Staff Report includes a sufficiently detailed description of the proposed program of implementation for the purposes of the analysis. However, drafts of the Bay-Delta Plan were subsequently released for public review and comment in October 2024, July 2025, and December 2025. In addition, the VA pathway would be implementing water quality objectives. Please see Common Response 1.3, Revised Proposed Plan Amendments, for further information on the VA pathway and water quality objectives.
418	6	Beneficial uses are identified in this plan, agriculture, fisheries, recreation and drinking water, but the plan does not define Tribal Beneficial Uses, which is a continuation of discriminatory practices. The Staff Report only looked at groundwater and drinking water, not cultural and recreational uses.	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. Please see Section 13.7.2, Environmental Analysis of CUL Tribal Beneficial Use Designation, for more discussion and environmental analysis of the CUL Tribal Beneficial Use designation. Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses. The Staff Report evaluates the environmental impacts of the project and other alternatives for the Sacramento/Delta update to the Bay-Delta Plan. The environmental analysis presented in the Staff Report complies with CEQA requirements and adequately evaluates environmental impacts, including impacts to cultural resources and recreation.
418	7	The environmental justice analysis for the Delta is inadequate seeing as it doesn't cover 72 small drinking water systems.	Please refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments related to small drinking water systems in the Delta.
418	8	The voluntary agreements do not address cold-water pools upstream needed for fisheries and do not contain storage thresholds.	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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			raise specific economic effects of the project. The VA pathway of the revised proposed Plan amendments requires HRL water rights to achieve the same objectives, including the cold water habitat objective, as would be required of other water users under the regulatory pathway. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more discussion of the VA pathway.
418	9	The Staff Report does identify the beneficial uses of a healthy river and estuary and healthy fisheries within the cost-benefit analysis. The cost benefits are mostly related to water experts.	Section 8.6, Other Economic Effects, in the 2023 draft Staff Report (Section 8.7, Other Economic Effects, in the final Staff Report) considers other economic effects that could occur as a result of the Sacramento/Delta update to the Bay-Delta Plan, including effects on commercial and recreational fisheries, recreation, ecosystem services, wildlife refuges, and energy (hydropower) production. 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 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 economic effects but does not change the conclusions of the Staff Report's economic analysis.
418	10	And I have a question about, on the American river, they have the Nestle and Alhambra Companies pump thousands of gallons of groundwater out with their wells nearby. What kind of regulation do you put on them? Because they paid very little for their water and they sell it, you know, a bottle of water is pretty expensive.	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.
419	1	I urge you to take immediate action to bring the Bay-Delta back from the brink of collapse by increasing freshwater flows up to 75 percent. You have the power to implement emergency measures. You have the power to implement the Bay-Delta Plan without further delay. I hope our governor is listening because I'm calling him out for his interference in anti-environment water policy. I'm calling out	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 reasonable protection of fish and wildlife beneficial uses.

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		the San Francisco PUC for its lawsuits and useless voluntary agreements which are wasting our collective time and money. And from the point of view of your own children and grandchildren, what would you want them to think about your role in the Bay-Delta ecosystem? They'll know if you've turned a deaf ear to the cries of environmentalists like me and Native Americans, fishermen, local residents and farmers and scientists. My nine-year-old grandson cries when he learns of species headed for extinction. Now, seven Bay-Delta fish species are threatened. You have the power and responsibility to balance the needs of humans and wildlife. Now, after years of insufficient freshwater flows, 75 percent of unimpaired flows are needed to help fish and other wildlife not just to survive but to thrive. Just for added emphasis, you have the power and responsibility to carry out the mission of the State Water.	
420	1	First, the Water Board should not consider the voluntary agreement proposal as a valid alternative to updating the Bay-Delta Plan. The VAs are not scientifically backed and fail to provide adequate fresh water flows to improve conditions for fish, water quality, and public health. Number two, the Water Board should adopt a minimum unimpaired flow standard of 65 percent or greater 1 on the Sacramento River in order to provide for recovery and viability of imperiled species. A 55 percent unimpaired flow standard is insufficient to meet these goals.	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 reasonable protection of fish and wildlife beneficial uses.
420	2	And three, the Water Board should incorporate Tribal Beneficial Uses, TBUs, into the updated framework, including providing staff recommendations for adoption and implementation of TBUs. Because I believe that, you know, there are other ways of water conservation, and I do believe that we should, like my -- Charming said, that we should reach out to tribal leaders and the state should do more to protect our resources and to protect and conserve our natural habitat.	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. See Section 13.7.2, Environmental Analysis of CUL Tribal Beneficial Use Designation, of the Staff Report for more discussion and environmental analysis of the CUL Tribal Beneficial Use designation. Please see Common Response 11.1, Tribal Engagement and Tribal

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			Beneficial Uses, for responses to comments related to Tribal Beneficial Uses and tribal outreach and engagement.
421	1	Oh, hi, I have some slides [Commenter slide shown at public comment event and not provided as part of this public comment transcript]. Oh, there they are. Cool. Hey, I'm Dave Warner, a longtime California resident concerned about our water use and its impact on our precious ecosystems. Thank you for your service and thank you for these hearings. There's a big unintended consequence of the Bay-Delta Plan's voluntary agreement process. Proposed Vas are adding a lot of delay to providing benefits to the ecosystem. Let me use the Tuolumne River VA as an example. Next slide, please. This slide shows how robust salmon runs have been on the Tuolumne, even as recently as the year 2000. But in the last 20 years, counts have plummeted with no sign of recovery. This is our problem. The plight of this precious natural resource is in our hands. Next slide, please. This slide shows salmon counts on the Tuolumne for just the last 23 years and overlays major actions taken to address the crisis, starting with the Delta Reform Act passed by the state in 2009. The last major action was you, the Water Board, adopting Phase 1 of the Bay-Delta Plan in 2018. And five years later, almost to the day, I think, there's still no benefit to the Tuolumne ecosystem as were mired in the voluntary agreement process. The proposed Tuolumne VA is missing fundamental components to the Bay-Delta Plan, such as adaptive management feature -- an adaptive management feature that gives confidence that the ecosystem will still recover even if the original proposed terms don't work out. Another example, the proposed Tuolumne VA doesn't arrest the Delta salinity issue. Once it is found that the VA isn't sufficient, what then? The Tuolumne VA gets modified and then we go through the process	The Tuolumne VA is being considered in a separate process. Please see Common Response 1.2, Water Quality Control Planning Process, for more information about the relationship to the lower San Joaquin River and southern Delta salinity update to the Bay-Delta Plan in 2018. Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the VA pathway.

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		all over again? And then the lawsuits are still outstanding. When we eventually say enough is enough with the VA attempts, will we still spend more years in court? And likely, the Phase 2 proposed Vas will follow the same laborious path. I understand that the Phase 2 proposed Vas are even weaker than the proposed Tuolumne VA. Given how weak the Tuolumne and the other Vas are, it seems like the water agencies, including the SFPUC, are using Vas as a delay tactic as opposed to acting in good faith. If the water agencies really have better solutions for the ecosystems, why haven't they been implemented back starting in '18 rather than just taking token actions? Between VA reviews and lawsuits, it could be another decade or more before there is any favorable impact to the ecosystem. Do you have a vision for how the Bay-Delta Plan ultimately gets resolved if the parties don't agree? How many years away is that? The ecosystem likely can't wait much longer. My vote is to clear these Vas as expeditiously as possible, which I think you're doing, be done with that process, implement Phase 1 and Phase 2 as quickly as possible, and we suffer the water agency lawsuits with strong public support on the side of the ecosystem. The voluntary agreement idea was good in concept, but in practice, it is translated into delays the ecosystem can hardly afford.	
422	1	I have the privilege of living in El Dorado County on the Cosumnes River, one of the few California rivers that lacks major dams and reservoirs. For over a decade, the Water Board's own science reports have made clear that flows, temperature and other water quality conditions in the Delta and tributaries are inadequate to protect fish and other wildlife. Protecting this environment is a beneficial use and must be prioritized. Today, you are considering an update to the Bay-Delta Plan. The Staff Report proposal is modest. It specifies Delta inflows well below the levels required if we were to create optimal conditions for fish. It allows that modest flow level to be reduced still	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 information on the consideration of beneficial uses and public trust.

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		further if we find that environmental conditions improve significantly. I understand that the Board is charged with balancing the needs of the environment with the needs of agriculture industry and residential use. But to adopt the proposed wholly inadequate voluntary agreements or to continue delay in hopes the VAs will be modified to target some semblance of environmental improvement would be no balancing, no compromise. Furthermore, as you know, the state is advancing massive infrastructure projects that if built would have very large effects on Delta inflows and the Delta environment. You must act with all deliberate speed so these multi-billion taxpayer dollar proposals can be evaluated under the rules that will exist if and when they become operational. Continuing with the hollow promises of the VAs would be an abdication of your responsibility to protect our waters as a public trust resource and the environment that some of us depend on for our livelihoods and many more depend on for sport, recreation, and the enjoyment of our beautiful state.	
423	1	Mr. Chairman, I thank you and the Board members sincerely for your public service. In a sense, I have been there, done that. I was given the privilege of being the executive officer of the state's first effort in 1993 to forge agreements between urban, ag, and environmental interests on protecting and restoring the Bay-Delta. Immediately and painfully obvious is the absence of either tribal or environmental justice communities in those efforts. Obviously, we failed. Now, 30 years later, allow me to offer what I hope is useful perspective to you Board members. First, this morning's panels were exceptional and I hope you act on their concerns and recommendations. Next, please realize that you are genuinely among the five most powerful individuals in California who have the authority and responsibility to restore what is California's most important ecosystem.	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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		Cutting through the overload of facts and decades of studies, the trend line is indisputable. The ecological health of the Bay-Delta continues its decades long decline to the point of risking irreversible loss of species and ecosystem health. Whatever benefits non-flow investments offer are marginal without adequate flow. The VSAs [sic] are a form of experiment that, at best, allows more study of whether restoration is possible without more flow. We do not need more studies on that point. As one brilliant USGS scientist has noted about the value of more studies, quote, "Only in a post-mortem who you have the fullest knowledge, by which point it is obviously too late to make a life-saving difference." So while not doubting the sincerity of the VSA [sic] proponents, including some of my friends, it is simply too risky of a gamble. Their lack of transparency and inclusiveness to date speaks more than today's expressed desire to do so in the future. So when you make your historic decisions, I recommend that you first look back over the past 30 years and gauge why we are still failing in protecting and restoring the Bay-Delta. Then, I implore you to heartfully consider how your decision will feel in 30 years. Personally, will you feel you made the right decision? Acting with integrity and courage to put aside political and personal consequences? And will we finally have addressed the historic and continuing disproportion impact on tribes, economically disadvantaged and people of color? I'm reminded, I have to say, what Governor Brown's resources secretary, Huey Johnson, advised me in becoming an assistant resources secretary. He said, "To do this job right, you need to be willing to be fired by doing the right thing." I actually believe in you folks. I admire your insights and I wish	

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		you the best. And thank you again. More importantly, how will a young person years from now view how your decision impacted their life and its dependence on a healthy environment?	
424	1	I'm a member of the public. I've been here since 9:30 this morning and it's a measure of how much I care about this issue that I've stayed here all day listening to all the panels and all the comments. I feel I have to remind you, that is us, the public that you serve. I'm afraid that the voices of the irrigation districts and the water agencies and big ag with their armies of paid lobbyists and their millions of campaign donations, and their time-wasting non-scientific VAs or healthy, whatever they want to call them now, are louder, their voices are louder than mine, and those of tribal and environmental justice communities. As a citizen and a voter, I have to ask, why are you giving 80 percent of our precious water to big ag and an industry that represents just 2 percent of our economy? So I want to ask you to turn down the volume on the self-interested parties, the irrigation districts, the water agencies, the rice farmers, and turn up the volume of the voices of the people like me and the tribal voices, people who care deeply, care deeply about our state and our environment. Serving the public interest is your sacred duty. You have been called to represent legality and experience, not political expediency. You, the Water Board, are not here to do what you're told by those with political ambitions. Please do your job as a Water Board to protect and restore California's salmon runs. Imagine your future self-thinking about having made the right decision. Imagine how you will feel having acted courageously, having protected tribal lands and water rights from further loss and degradation and desecration, having stopped saltwater incursion into our drinking water, having revived our fisheries, having saved our salmon-based ecosystem,	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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		having acted as members of the supposedly independent, regulatory agency that you are.	
425	1	I am Jeff Brown, a retired NASA research scientist and a Bay Area resident since 1981. The San Francisco Bay-Delta system has existed for roughly 10,000 years, but in only the last 200, it has been gravely endangered with pollution, infill, river damming, and the massive and ongoing diversion of its natural inflows, which in turn has led to higher water temperatures, proliferation of invasive, often predatory species, and greatly reduced fish survival rates. Now you are asked to entertain proposals and options for reversing this harm. As you do, please look at the Bay-Delta as a single heart-like organ circulating vital nutrients through a much larger ecological body with its resident flora and fauna, its migrating fish and birds, and most critically, its freshwater flows. This isn't mere analogy; it's how the Delta system functions. When you review proposals that allow for reduced inflows to the Bay-Delta, vastly below the natural unimpeded levels, ask yourself how the human body typically fares when blood flow to the heart is similarly restricted. When you think about maintaining a few degrees rise in river and Delta water temperature, consider the health implications of a similar sustained rise in human body temperature. When you weigh potential economic versus ecological harms that might result from increasing or decreasing inflows respectively, remember that economies regularly go through decline and recovery cycles; whole species and ecosystems do not. Furthermore, human effort and innovation have repeatedly been shown capable of repairing economies, but it is sheer hubris to suggest that they can fix nature.	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.
425	2	With regard to so-called voluntary agreements, please consider the abject failure such agreements crafted at the UN Global Climate Summits have had in reducing carbon emissions. Voluntary agreements are at best misguided attempts at expediency in an effort to quote, "do something," unquote, 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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		too often they are just cynical ploys by the big political and economic beneficiaries of the current order to maintain the status quo. With the status quo, the way and trends of the last 200 years is not maintainable. You have an extraordinary responsibility and an even more extraordinary opportunity to promote the revitalization of the highly-endangered San Francisco Bay-Delta system and to leave a legacy of promise for a healthy Bay-Delta far into the future. The key to this is and has always been to ensure that the maximum -- that to the maximum extent possible, the cool fresh water that nature provides to the Bay-Delta watershed stays in and flows through the system.	
426	1	First and foremost, I'd like to thank the Board staff for their hard work on a very technical and difficult task, including the Healthy Rivers and Landscapes Agreements, formerly known as the Voluntary Agreements, is crucial to ensuring that California's water supply will be managed in a way that supports the many diverse needs of the Bay-Delta system, including the economy, agriculture, and the environment. Since Governor Newsom convened stakeholders to develop agreements that provide additional water flow, habitat restoration, and water supply predictability, CalChamber has eagerly awaited the State Water Board's inclusion of these agreements in the Bay-Delta Plan. Since about two thirds of the state's water flows through the Bay-Delta region, policy set here impacts the entirety of the state.	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.
426	2	Businesses are increasingly concerned about water insecurity and rising water rates, each of which compound other factors that are making California less affordable to the average person. Imposing unimpaired flow requirements would only serve to make these problems worse by creating additional scarcity. The Healthy Rivers and Landscapes Alternative proposes a way to meet environmental needs and the needs of our community and economy. The agreements use both flow and non-flow measures that help support native species and the environment, and also create a governance structure that oversees implementation and assist in decision-making. The governance	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 on the factors to be considered in establishing water quality objectives, including the need for developing housing.

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		structure encourages conversation, collaboration, and rapid response to changing conditions. In addition, the more reasonable flow measures assist in ensuring that water users of all types can better predict water availability and plan accordingly. For example, developers can better model water availability to serve new housing developments, which are legally required to provide proof that water will exist to actually serve those developments. Also, as we've heard today, agricultural businesses can better plan for the appropriate acreage to plant, and this increased certainty helps support the related businesses. In short, the Healthy Rivers and Landscapes Alternative supports both the environment and the economy, and both of these are crucial to life in California today and in the future. So for these reasons, CalChamber supports the inclusion of the Healthy Rivers and Landscapes Agreements in the Phase 2 of the Bay-Delta Plan update. This will help keep water affordable and readily available.	
427	1	California Farm Bureau would like to thank the Board and its staff for the enormous effort that brought us to this milestone today. And we commend Governor Newsom for support and leadership on the voluntary agreement process. We believe the Healthy Rivers Alternative is the best option for supporting the ecosystems and people who all rely on California's Bay-Delta watershed. It's a reasonable, comprehensive approach that balances essential and competing beneficial users of water. There's broad consensus that only dictating more water to fish isn't enough to support healthy fish populations. They also need habitat and other conditions to thrive. And we know that it would come at a large cost to the farms and cities who already rely on that water. Instead, the Healthy Rivers Alternative provides more water for fish when and where they can most benefit from it. And would also create the habitat and other conditions they need to live and reproduce successfully.	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.
427	2	For too many years, every fraction in California water has relied on its own science. The Healthy Rivers Alternative also includes a	Please see Common Response 1.1, General Comments, for responses to comments that make general comments, do not

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		sorely needed shared science program that we collectively could base our management decisions on. If the science shows that the Healthy Rivers isn't working as we expected, we can change course. This alternative allows for that. Importantly, this alternative also has buy-in and support from public agencies, farmers, and communities who have harnessed the water supplies in the watershed to help grow California to the fourth largest economy and most productive agricultural state in the world. They know that in order for our state to continue thriving as the world's agricultural leader, the fish need to thrive too. All of these things set the Healthy Rivers Alternative apart from the unimpaired flows option and make it the clear choice for all parties who rely on the Bay-Delta's resources.	raise specific environmental impacts of the project, or do not raise specific economic effects of the project.
428	1	Good afternoon. Thank you for the opportunity to comment. I'm Jakob Evans with Sierra Club California as well. First, I'd like to express solidarity with the California Association of Professional Scientists outside and their call for fair pay and better working standards. And secondly, to briefly share a few points in response to the proposed voluntary agreements, echoing Caty as well. The Water Board should not consider the voluntary agreement proposal as a valid alternative to updating the Bay-Delta Plan. The Vas are not scientifically backed and failed to provide adequate freshwater flows to improve conditions for fish, water quality, and public health. The voluntary agreements were negotiated through an exclusionary process and only stalled the Board's process to update the Bay-Delta Plan. The Vas are a backroom deal negotiated between water agencies and the state without input from tribes, Delta communities, or EJ, environmental or fishing groups, all of whom will be affected if the Water Board capitulates to their requests. This deal has been driven by social interests and the Water Board should not legitimize it.	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 Staff Report Chapter 9, Proposed Voluntary Agreements, for an evaluation of the benefits of the VAs.

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428	2	The Water Board should adopt an unimpaired flow standard of 65 percent on the Sacramento River to provide for the recovery and viability of imperiled species. A 55 percent unimpaired flow standard is insufficient to meet these goals.	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 reasonable protection of fish and wildlife beneficial uses.
428	3	The Water Board should incorporate Tribal Beneficial Uses, TBUs, into the updated framework, including providing staff recommendations for the adoption implementation of TBUs.	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. See Section 13.7.2, Environmental Analysis of CUL Tribal Beneficial Use Designation, of the Staff Report for more discussion and environmental analysis of the CUL Tribal Beneficial Use designation. See also Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses.
428	4	The VA ignores the Board's established salmon doubling goal and instead proposes an inadequate alternative. The VA proposes to restore 25 percent of the habitat thought to be necessary to support the attainment of the existing salmon doubling goal. Even if this is achieved on its face, establishing 25 percent of the estimated habitat in order to reach the doubling goal is not even close to meeting the actual goal of doubling the salmon populations.	Please see Common Response 1.2, Water Quality Control Planning Process, for information on the reasonable protection of fish and wildlife beneficial uses.
429	1	But before I say what I have to say today, I do want to start this with something I do at every Water Committee meeting. And I normally start with the Native American Haudenosaunee Water Acknowledgement from braiding sweetgrass. "We give thanks to all the waters of the world. We are grateful that the waters are still here and doing their duty, sustaining life on Mother Earth. Water is life, quenching our thirst and providing us with strength, making the plants grow and sustaining us all. Let us gather our minds together. And with one mind, we send greetings and our thanks to the waters." I read this out today to you because I think there are a lot of us	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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		that are forgetting the connection most of us have to water and the fact that it is life and it is not an infinite resource. It is very finite. Our First Nation people consider all rivers to women and the flow of that river to be her hair. Women give life, they sustain life, and that is how we should regard the Bay-Delta.	
429	2	I would like to amplify the voices of our First Nation people who spoke this morning and the EJ voices we heard representing the underserved in Stockton and surrounding areas. The Delta Tribal Environmental Coalition, With Our Words, Little Manila Rising, I agree with everything that was said this morning. The Water Board should incorporate Tribal Beneficial Uses into the updated framework, including providing staff recommendations for adoption and implementation of TBUs.	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. See Section 13.7.2, Environmental Analysis of CUL Tribal Beneficial Use Designation, of the Staff Report for more discussion and environmental analysis of the CUL Tribal Beneficial Use designation. See also Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses. Please see Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on incorporation and designation of Tribal Beneficial Uses.
429	3	The voluntary agreements were negotiated through an exclusionary process and have done nothing but stall the Board's process to update the Bay-Delta Plan. It is sad that I have to be back here again today. I was here when Felicia Marcus was the chair, arguing again against VAs. We went through this process. This should not be a political decision. The Water Board's process to update the Bay-Delta Plan has dragged on for 15 years and counting. This agreement fails to protect water quality, public health, fish, and wildlife. This proposal is not supported by science or common sense. Rather, it is driven by special 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.
429	4	To the Rice Commission and the River Network, where is your tribal consultation? Where are the voices of the Black and Brown communities directly affected? When I looked at the panels side by side, you saw a panel of	The State Water Board has conducted extensive public and tribal related outreach and appreciates the significant input from tribes and environmental justice communities related to the Sacramento/Delta Update to the Bay-Delta Plan. Chapter 12, Public Participation, summarizes the public participation

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		BIPOC and you saw a panel of non-BIPOC people. I hope that resonated with you Board members up there, because it surely resonated with me sitting, looking at the screen at the difference, and also in how the entire problem was approached. We are creating an even bigger social justice situation when we do not incorporate all voices. And I would like to say to everyone, to all of these groups, particularly to our water agencies, it is up to you to go to these affected. It is up to you to reach out to tribal communities and EJ communities. It is not up to them to come to you. That is how environmental justice works. And without social justice, there is no environmental justice.	activities that have occurred for the Sacramento/Delta update to the Bay-Delta Plan. In addition to the public participation activities described in Chapter 12, State Water Board staff has engaged with California Native American Tribes on the Sacramento/Delta update to the Bay-Delta Plan, which is summarized in Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses. Please also refer to Common Response 10.1, Economically Disadvantaged Communities, for responses to comments related to the State Water Board's Racial Equity Resolution and Racial Equity Action Plan and comments on the VAs. Please also see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to tribal comments on the VAs.
429	5	Tribal ecological knowledge must be included. HAB standards must be included. Tribal beneficial uses must be included. Tribal water rights must be addressed and quantified. To do nothing is not an option. The Delta is deteriorating while we sit on our laurels.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Traditional Ecological Knowledge, Tribal Beneficial Uses, and tribal reserved water rights. Please see Staff Report Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses, and Staff Report Chapter 13, Revised Proposed Plan Amendments, for additional information on the State Water Board's efforts to engage more robustly with California Native American Tribes and integrate Traditional Ecological Knowledge/tribal knowledge into the State Water Board's Bay-Delta Plan update and implementation processes. Please refer to Common Response 4.1, Harmful Algal Blooms, for responses to comments related to water quality standards and harmful algal blooms.
429	6	I will end by saying this, Vice Chair Malissa Tayaba said, early this morning, "Ecology is culture and culture is ecology." This resonated with me because just a couple of weeks ago, I was the keynote speaker at the AAPI, Asian American Pacific Islander Climate Convening, and believe it or not, this was exactly my topic, cultural sustainability. And I say to you, or everyone that's listening today, we must take into account cultural sustainability. And we must pay heed to those that came before us that were	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.

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		great stewards of this earth that will continue to be there after us.	
430	1	Great, hi, this is Caty Wagner. And first of all, we stand with the California Association of Professional Scientists and their call for fair pay and better working standards. Not paying a scientist equitably sends a really dangerous message to the public about our values as science is constantly under attack by special interests, so just want to acknowledge them I'm with Sierra Club 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.
430	2	The Water Board should not consider the voluntary agreement proposal as a valid alternative to updating the Bay-Delta Plan. The VAs are not scientifically backed and failed to provide adequate freshwater flows to improve conditions for fish, water quality, and public health. Rebranding them as the Healthy Rivers and Landscapes Agreement does not actually make rivers healthier. The Water Board should adopt an unimpaired flow standard of 65 percent on the Sacramento River in order to provide for recovery and viability of imperiled species. A 55 percent unimpaired flow standard is insufficient to meet these goals.	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 reasonable protection of fish and wildlife beneficial uses.
430	3	The Water Board should incorporate TBUs and Traditional Ecological Knowledge into the updated framework, including providing staff recommendations for adoption and implementation of TBUs. We heard in the fifth panel that the VA signatories take responsibility for botching the invitations to tribes and call collaboration aspirational and admitted that they did not even attend the EJ or tribal presentations this morning. Engagement does not seem like a priority for them and maybe they need some help.	The revised proposed Plan amendments incorporate Tribal Beneficial Uses, 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 into the Bay-Delta Plan update and implementation processes. See Section 13.7.2, Environmental Analysis of CUL Tribal Beneficial Use Designation, of the Staff Report for more discussion and environmental analysis of the CUL Tribal Beneficial Use designation. See also Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to Tribal Beneficial Uses and Traditional Ecological Knowledge/tribal knowledge. Please see Common Response 1.1, General Comments, and Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses related to tribal comments on the VAs.

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430	4	For over ten years, the governor has failed to deliver on promises to produce a VA that addresses the issues facing the Bay-Delta. While a series of VA frameworks has been released in the past five years, none of these were complete or enforceable agreements and all lacked basic essential details. The March VA is no different than prior attempts. This proposal is driven by special interests. Claims that non-flow habitat can substitute for flows are not supported by the best available science. Temperature management is not included in the voluntary agreement. The Board's 2018 framework proposed setting carry over storage targets for reservoirs in order to maintain cold-water habitats. Similar requirements are noticeably absent in the VA framework. The Board should move forward with the Bay-Delta Plan update process without the VAs, especially considering the compounded effects of today's decision to certify Sites' EIR just two weeks after giving the public access to the documents, which will emit 362 million tons of carbon dioxide per year and allow proponents to scalp water for profit during drought.	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.
431	1	I think you all know that our salmon fishing season was closed this year. With the returns that we're seeing to the Central Valley right now, it appears quite likely that it will probably be closed again next year. And I just wanted to deliver some news. So we're not fishing right now. We're probably not going to fish next year. And I'm telling you this because there's a need to act urgently. I know you all function within a bureaucracy that has procedures. I know you're trying to be faithful to the procedures that are required before arriving at a decision, but we're running out of time. I heard this morning that this year's return of fall run salmon, the fish that we normally fish on, to the Upper Sacramento Basin appears to be numbering only about 500, 500 fall run fish. This is minus any fishing pressure whatsoever. We didn't fish this year. There are fewer fall run in the Upper Sacramento Basin than there are winter run. Many of your policies and oversight has	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 geared towards trying to protect winter run. I want to tell you and alert you that pretty soon your plate is going to have more on it. Hopefully, the fall run don't get listed, but from everything I'm hearing, and I think your staff is in touch with the fishery agency people too and can tell you, it appears that spring run will be listed imminently -- or uplisted I should say. Currently they're listed as threatened and it looks like they will be uplisted to endangered. One of the reasons I want to flag this to your attention, this is a little aside from the Bay-Delta Plan, but the Sites reservoir proponents will soon be in front of you seeking a water diversion permit. And as you consider that, even if the spring run have not formally been uplisted to endangered yet, you might want to keep that in the back of your mind because the spring run are actually hanging on in the creeks where they live and where we're losing them is in the main stem Sacramento. Sacramento flows are inadequate and I think the 500 fall run in the Upper River show that the stewardship that this Board is supposed to provide to us Californians is falling short. We need some help, we need it rapidly.	
431	2	I also just want to flag that in a normal year, we would have taken many boatloads of young kids, teenagers, out salmon fishing and introduce them to nature, our incredible Marines resources off the coast of California. That didn't happen this year, probably won't happen next year. So what's happening now is hurting generations.	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.
431	3	And finally, I'd just like to flag in this world that we're living in with crazy stuff going on all around us, when you think about what young people are responding to, and you heard some of them today from the Restore the Delta group, which was quite impressive, but when you see what young people are dealing with all around them right now, one of the things they look at is government and what in the world is government doing? Is it working? And when they see extinctions of our native salmon happening in their lifetime, you know it's got to be demoralizing. You know they have to feel alienated from government that is not serving them. This is not what any of us wants.	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion of non-flow measures and the State Water Board's authority to impose such measures. Please also see Common Response 3.1, Fish Protection, for a discussion of temperature thresholds for salmon egg incubation and habitat benefit analysis.

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		So I want to flag your attention, as you think about your job, all the bureaucratic handcuffs that you deal with, keep in mind that there's a need for quick action, quick action. And the people who want to tell you that producing more fish food or putting more gravel in the river is going to solve the problem are not addressing that which got us to 500 fall run in the upper river this year. 500 is not there because they lack gravel. It's not there because they lack food. It's there because the eggs died three years ago, most of them were killed from hot water, and the few that hatched failed to successfully migrate down the Sacramento River due to low flows. So I will stop there. Good luck in your work going forward. And please, don't feel constrained to carry this process to the point of perfection. We don't have time. We need action soon. Thanks.	
432	1	The salmon fishery is a total collapse now. There's not even any real wild salmon anymore. My father, who went salmon fishing weekly on the Salty Lady sport fishing boat out of Sausalito in his retirement, would have a broken heart to see the state of the fishery if he were alive today. As you consider finalizing the long overdue Bay-Delta Plan, you need to keep a balanced view of beneficial uses of the water we all own as part of the public trust. The Bay-Delta is not being protected for a long time. Fisheries are closed, water quality is failing, fish counts are down. What will it take to finally make a difference?	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 also see Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses.
432	2	The plan needs 75 percent of unimpaired Delta outflow. It needs 75 percent of unimpaired Sacramento outflow. The plan does not need the voluntary agreements which were developed behind closed doors and shut out the environmental organizations and tribes. The VAs are deeply flawed and won't work. They don't set water quality standards and don't have science-based objectives to restore the fisheries once and for all.	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; 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 information on the VA pathway.
432	3	The salmon will come back if they are given enough water. Please be mindful of all beneficial uses of the Bay-Delta, including recreation, good water quality, and stopping the extinction of salmon in our state.	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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433	1	I'm here today to comment on the inadequacy of the draft Staff Report for the Phase 2 update of the Bay-Delta Plan. The preferred alternative of 55 percent unimpaired flow is inadequate and will not protect the species listed on the Staff Report as special status. Considering the extensive list of threatened and endangered species within the Delta watershed, it's essential to evaluate the proposed alternatives impacts to subsistence fishing, recreational fishing, and fish for the preservation of culture and tradition. This alternative, if implemented, would contribute to delaying the recovery of fish populations and likely worsen ongoing conditions, especially during periods of drought when a 45 percent unimpaired flow standard would stand. Restore the Delta urges the Board to adopt a 75 percent unimpaired flow standard. It's imperative in line with the Board's dedication to doubling salmon populations and safeguarding the wholistic health of the Bay-Delta ecosystem.	Please see Common Response 1.2, Water Quality Control Process, regarding the reasonable protection of Fish and wildlife and consideration of other beneficial uses, and 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.
433	2	The proposed 55 percent unimpaired flow alternative coupled with the 40 percent unimpaired flow standard adopted during Phase 1 will certainly lead to the extinction of this fish species. Insufficient attention is given to the potential harm this could cause to fish already facing habitat destruction, disease and mortality due to factors such as reduced flow, elevated water temperatures and the proliferation of harmful algal blooms. Ensuring Bay-Delta flow is vital for fish, environmental stability, and local communities. By overlooking better alternatives that would benefit the everyday users of the Delta is fundamentally unjust. I thank you for the opportunity to comment and I hope you take this as an opportunity to reconsider the impacts on fisheries from insufficient flows in this update to the Bay-Delta.	Please see Common Response 1.2, Water Quality Control Planning Process, for a discussion on reasonable protection of fish and wildlife beneficial uses. Please see Common Response 7.24, Alternatives Analysis, for a discussion of the range of alternatives considered and the adequacy of that range.
434	1	Good afternoon, Chair Esquivel and members of the Board. My name is Calvin Collins and I'm a climate water advocate from Restore the Delta. I'm here today to comment on the draft Staff Report for the Bay-Delta Plan and its inadequate analysis of impacts to fishing, boating, swimming, and public access.	Section 7.18, Recreation, includes an analysis on recreational activities using methods and criteria consistent with the State Water Board's environmental checklist (Cal. Code Regs, tit. 23, §§ 3720-3781, Appendix A) and other State Water Board CEQA requirements, as described in Section 7.1, Introduction, Project Description, and Approach to Environmental Analysis. Per these

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		I come from Discovery Bay, California, a place with close ties to the Delta and recreation. Sadly, we are at a critical point. Water quality issues are causing illnesses among people and pets, creating a legacy we don't want for future residents. The current Staff Report for Phase 2 of the Bay-Delta Plan update falls short in addressing the critical issue of recreation for Delta communities. Our residents' well-being and activities defining our community are intertwined with the Delta's health. Immediate action is vital to protect the Delta's future. The lack of adequate flows and the absence of any objectives for harmful algal blooms have led to their continued proliferation throughout the Delta. This not only impairs the health and welfare of our communities, but also restricts the recreational activities that define our way of life. Families are now hesitant to let their children play near the water. This is not the Delta I grew up knowing and cherishing. The proposed voluntary agreements do not provide the necessary safeguards for water quality objectives. Without clear standards and implementation plans, we find ourselves in a perpetual cycle of reacting to a Bay-Delta that is never truly restored. Decisive action is imperative.	criteria, Section 7.18 adequately describes fishing, boating, and swimming, as well as public access to these activities, that take place throughout the study area and identifies the potential impacts on recreation that could occur as a result to changes in hydrology including impacts related to water quality conditions and harmful algal blooms (HABs). Overall, water quality conditions of the Delta are expected to improve because of changes in hydrology; thus, recreational opportunities that are supported by healthy rivers and a functioning watershed (e.g., swimming, fishing) are expected to be improved overall. Section 7.18 identifies that an incremental increase in potential HABs could cause temporary closures to recreation in some waterbodies; however, impacts are considered less than significant based on the number of other available recreational areas in the Delta and the temporary nature of closures, which would not likely result in sufficient numbers of recreationists or a period of time to result in substantial deterioration of recreational facilities at alternate locations. Please refer to Common Response 4.1, Harmful Algal Blooms, regarding HABs-related effects on recreation. The 2023 draft Staff Report Section 7.18, Recreation, and Section 9.7.18, Recreation, identified less-than-significant impacts on recreation from increased HAB production in reservoirs and Delta channels. Increased HABs can interfere with contact recreation, including causing temporary closures to recreation in some waterbodies; however, potential increased frequency of closures is not expected to result in a substantial number of recreationists moving to alternate recreational locations to the extent that it would substantially physically deteriorate those alternate locations. In response to a substantial number of public comments received from tribal and environmental justice communities stating that HABs cause significant impacts to recreational users of water, this impact conclusion has been conservatively revised in Chapter 13, Revised Proposed Plan Amendments, to potentially significant. To reduce or avoid these potentially significant impacts, Section 13.7.18, Recreation, identifies mitigation measures. Please refer to Mitigation Measure MM-REC-a: 3, Protect Water Quality and Avoid or Reduce Harmful Algal Blooms and Invasive Aquatic Weeds.

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			Also refer to Common Response 1.3, Revised Proposed Plan Amendments, regarding the revised proposed Plan amendments, including the regulatory pathway and VA pathway, and additional monitoring needed to address HABs.
434	2	A proposed alternative suggesting a minimum of 65 percent unimpaired flows based on established science not only aids fish recovery, but also promotes healthier waters for recreation. Additionally, setting standards for harmful algal blooms is vital for community health and preserving our cherished activities. In conclusion, I thank you for the opportunity to comment and I implore you to consider the impact of this Staff Report on recreation for Delta communities. I urge you to place a high priority on preserving beneficial uses, setting benchmarks for harmful algal blooms and acknowledging the importance of adequate flows and maintaining the Delta's vitality. I hope you take this as an opportunity to reconsider the analysis in this Bay-Delta Plan 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; Common Response 1.2, Water Quality Control Planning Process, for information on the consideration of beneficial uses; and Common Response 7.1, General CEQA and Approach to the Analysis. Please also see Common Response 4.1, Harmful Algal Blooms.
435	1	Program of Implementation: The Staff Report does not include the State Water Board's draft Program of Implementation (POI) for the proposed updates to the Bay-Delta Plan, which DWR understands is in development and presently anticipated for release in the summer. The ability of DWR to analyze the magnitude of potential impacts of the proposed updates, including the Staff Report's proposed inflow and outflow objectives, on the State Water Project (SWP), and to operationalize the proposed flow requirements, is highly dependent on the intended POI. The Staff Report raises significant concerns regarding anticipated impacts to SWP agricultural and municipal and industrial (M&I) supplies (e.g., Staff Report, p.A1-289, p.A1-436, p.A1-538), and additional impacts to power generation, agricultural, and M&I supplies could occur depending on the details and mechanisms of POI implementation.	The 2023 draft Staff Report includes a sufficiently detailed description of the proposed program of implementation for the purposes of the analysis. However, drafts of the Bay-Delta Plan were subsequently released for public review and comment in October 2024, July 2025, and December 2025. Changes in surface water supply to the plan and study area from the proposed Plan amendments were discussed in Chapter 6, Changes in Hydrology and Water Supply. Please see Chapter 7, Environmental Analysis, for impact analyses for power generation (Section 7.8, Energy), agriculture (Section 7.4, Agriculture and Forest Resources), and municipal and industrial supply uses (Section 7.12.1, Hydrology and Water Quality; 7.20 Utilities and Service Systems, etc.) from the proposed Plan amendments. See Chapter 9, Proposed Voluntary Agreements, for the environmental analysis of the proposed VAs. See also Common Response 1.3, Revised Proposed Plan Amendments, for further information on the revised proposed Plan amendments.
435	2	Similarly, a key component of the proposed Voluntary Agreements [Footnote 1: The Voluntary Agreements program is now entitled the "Healthy Rivers and Landscapes Program" but are referred to herein as Voluntary Agreements for consistency with the terminology used in the Staff Report] (VA), if adopted, is	Please see Common Response 1.3, Revised Proposed Plan Amendments, for information on the process for continuation, modification, or termination of the VA pathway.

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		the process by which the State Water Board will evaluate whether VAs are achieving their intended objectives and the potential for implementation of a "Regulatory Implementation Pathway" in regions where a VA is discontinued (See Staff Report, section 9.4). The draft POI should specify a process that aligns with the proposed Vas [Footnote 2: 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, March 2022, as amended] for potential imposition of the Regulatory Implementation Pathway in regions where Vas do not exist or are discontinued.	
435	3	In the absence of the draft POI, it is challenging to understand how the proposed alternatives in the Staff Report can be operationalized while also achieving compliance with existing and anticipated future regulatory requirements, including SWP compliance with the Federal Endangered Species Act (ESA), California Endangered Species Act (CESA) and Federal Energy Regulatory Commission license obligations. For example, the proposed "Modifications to Existing Delta Outflow Objectives" (Staff Report, pp.5-30 – 5-39) are not consistent with the latest State and Federal Proposed Actions for the reinitiation of ESA and CESA Consultation for Long-Term Operations of the SWP and the U.S. Bureau of Reclamation's (Reclamation) Central Valley Project (CVP). Additionally, the Staff Report does not clarify how it aligns with the 2018 Bay-Delta Plan update for Lower San Joaquin River flow objectives and southern Delta salinity. The intended draft POI should provide sufficient detail to allow DWR to determine how the Bay-Delta Plan update will impact SWP water supplies and compliance with other regulatory requirements. DWR welcomes future engagement with the State Water Board to inform the efforts to develop the POI.	Please see the response to comment 435-1. Also see Common Response 1.2, Water Quality Control Planning Process, for information on the relationship with the 2018 Lower San Joaquin River and Southern Delta Salinity update to the Bay-Delta Plan and the interaction with other regulatory requirements.
435	4	Sustainable Groundwater Management Act: The Staff Report generally recognizes the interrelationship of the Bay-Delta Plan with groundwater but does not fully assess the groundwater level and groundwater quality impacts on Groundwater Sustainability Agencies (GSA) implementing projects to comply with the Sustainable Groundwater	In Section 7.12.2, Groundwater, the Staff Report analyzes the potentially significant impacts to groundwater supplies as Impact GW-b and analyzes the potentially significant impact increased groundwater pumping could have on groundwater quality as Impact GW-f. Section 7.12.2.4, Mitigation Measures, discusses measures to mitigate this impact, including SGMA implementation and oversight. The Staff Report also

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		Management Act (SGMA). The impacts will limit potential GSA projects intended to achieve sustainability and avoid a significant loss of agricultural production. Further clarity on potential impacts to GSA project implementation would benefit stakeholders that need to navigate prospective Bay-Delta Plan implementation with achievement of SGMA goals.	acknowledges that revisions to regional Groundwater Sustainability Plans (GSPs) may be needed if GSP water budgets are inconsistent with a change in surface water supplies that may occur from the implementation of an unimpaired flow alternative. A GSP for a subbasin should consider any adopted and applicable regulatory requirements on water resource-related plan(s) within the basin as well as assess how the GSP may affect the plan (Wat. Code section 10727.2(g)) GSAs are required to periodically evaluate their GSPs and make any necessary modifications to account for changed conditions in the basin to reach the plan's objectives and sustainability goals (Wat. Code section 10728.2). For more information on the overlap with updates to the Sacramento/Delta Bay Delta Plan and SGMA, please see Common Response 7.12.2, Groundwater and Sustainable Groundwater Management Act.
435	5	Head of Old River Barrier: Staff Report Alternative 4b would require installation by DWR and Reclamation of the "Head of Old River Barrier" (HORB) during April and May to prevent juvenile Chinook salmon and steelhead from being entrained into the interior Delta. However, when HORB is installed, it results in greater hydrodynamic pull from Old and Middle River (OMR) flow from the western Delta, which is likely to increase entrainment risk of longfin smelt and delta smelt, especially from the San Joaquin River [Footnote 3: Relevant studies conducted include (1) Salmonid survival studies that occurred prior to and throughout the Vernalis Adaptive Management Program period (2) HORB alternatives investigations in 2009 and 2010; (3) South Delta survival studies in 2014 (Buchanan et al.) and 2016 (Buchanan et al.); and (4) survival synthesis efforts in 2006 (Brown and Schwartz), 2008 (Newman), 2012 (Buchanan et al.), 2016 (Salmon Scoping Team), 2016 (Hinkelman and Cavallo) 2018 (Buchanan et al.) and 2022 (Dodrill et al.).]. Additionally, studies to date have been on acoustic-tagged hatchery steelhead and Chinook juvenile salmon, and benefits for wild salmonids remain highly uncertain. Due to the lack of scientific support for the HORB, DWR and Reclamation are not proposing to install HORB in ongoing consultations with fisheries agencies on the Long-Term	Please see a description of the benefits of Alternative 4b Head of Old River Barrier in Section 7.24.5.2, Head of Old River Barrier Alternative (Alternative 4b), of the 2023 draft Staff Report.

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		Operations of the SWP and CVP, and DWR recommends that the State Water Board not further pursue Alternative 4b at this time.	
435	6	Modular Alternative 6a (Protection of Voluntary Agreement Flows Alternative): DWR recognizes and supports the State Water Board's intention to utilize its legal authorities to protect VA flows against diversion for other purposes, and for inclusion of measures to protect the baseline for VA flows in the Bay-Delta Plan. However, DWR also recognizes the need for development of new water projects, focused on capturing water during wet periods, to adapt to changing climate and sea level rise. The specifics of proposed Modular Alternative 6a (Alt 6a) would seriously limit the effectiveness of these types of projects. The Alt 6a would significantly reduce the viability of the Delta Conveyance Project (and other proposed water projects) by reducing water supply yield and increasing the cost per acre-foot. If implemented, Alt 6a is anticipated to reduce the yield of the DCP over all water year types by an average of 55%. DWR has initiated and looks forward to continued communications with the State Water Board staff on other potential approaches that reflect the importance of baseline flows in the VA framework, but that would allow for increased diversions for new projects during periods of high flow. Some potential concepts could limit diversions for new projects based on different considerations of unimpaired flows, Delta outflow criteria, a buffer over the determination of excess flows before diversions could begin, monthly or seasonal criteria, or scaled diversions based on instream flow or Delta outflow. DWR looks forward to additional coordination in identifying alternative flow bypass threshold criteria that maximize species protection and diversion yield using the best available science.	Please see Common Response 1.3, Revised Proposed Plan Amendments, for more information on the provision to protect the VA flow base and regarding comments on other water supply projects.
435	7	Incorporation of Relevant Scientific Literature Chapters on the available science informing fish and wildlife flow recommendations with considerations of other ecosystem stressors to native species in the Bay-Delta watershed provide an essential foundation for developing recommendations for the Bay-Delta Plan update. DWR appreciates the coverage of these essential topics. The Staff Report would benefit from the additional incorporation of the recent relevant peer-reviewed literature in several areas, including the role of managed	The 2023 draft Staff Report includes information regarding managed agricultural inundation on floodplains in Section 4.2.3, Floodplain and Wetland Habitat, and describes the Knaggs Ranch Agricultural Floodplain Study as an example of recent Yolo Bypass management actions focused on rearing opportunities for Chinook salmon. The Holmes et al. (2021) citation, which provides published results from the Knaggs Ranch Study, has been added to the appropriate text within Staff Report Section 4.2.3. The commenter provides other citations of scientific literature and then raises minor suggestions for additional

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		agricultural floodplains for juvenile salmon rearing habitat, entrainment risks for smelt species in the south Delta SWP and CVP facilities, and species abundance and flow relationships. Several examples of this additional peer reviewed literature include: • Risk of entrainment at CVP and SWP facilities and population-level impacts of entrainment for Longfin Smelt (Section 3.5.4.2) and Delta Smelt (Section 3.8.4.4) should include recent hydrodynamic and particle-tracking modeling work estimating proportional entrainment of larval Longfin Smelt based on estimated locations and timing of hatching (Gross et al. 2022) and proportional entrainment with recent larval trawl surveys 2009 – 2020 (Kimmerer and Gross 2022), which show low to negligible population impacts of CVP and SWP diversions. The discussion of Delta Smelt entrainment risk does not reflect the most recent analyses, in particular Grimaldo et al. 2021, which develops a more refined approach to analyze the SWP and CVP export effects separately. • The description of the loss and function of floodplains for native fish species (Section 4.2.3) should be expanded and include updates to recent studies and Yolo Bypass management. For example, available recent peer-reviewed literature describing how managed agricultural inundation supports rapid growth for juvenile salmon and provides rearing opportunities for Chinook salmon (e.g., Sommer et al. 2020, Holmes et al. 2021, and Katz et al. 2017) should be included. The section (and others, see Sacramento Splittail, Section 3.7.1) should include planned nearterm changes (water year 2025) to the Fremont Weir management with implementation of the “Big Notch” project that will increase the frequency and duration of Yolo Bypass flooding. Finally, literature on the importance of floodplains for supporting life history diversity in Chinook salmon while still allowing for their ability to leave floodplain habitat upon its drainage should be included to support the role of floodplain habitat in salmon life history (e.g., Takata et al. 2017, Goertler et al. 2018, Sturrock et al. 2018). • Additional topic areas that would benefit from the incorporation of recent literature include additional sections on	information to be included in the final Staff Report that are not significant to the Staff Report analyses or conclusions. See Common Response 3.1, Fish Protection, on the process for updates to literature in Chapters 3 and 4, flow-benefits analyses, including updated flow thresholds, and fish entrainment in the Delta. Chapters 3 and 4 of the final Staff Report have been updated to reflect more recent scientific literature.

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		Chinook salmon, sturgeon, climate change, zooplankton abundance relationships with flow, and tidal wetlands. We have provided a starting list of references that may be useful to State Water Board staff (included below). DWR staff are willing and available to discuss any of the topic areas in Chapters 3 and 4 of the Staff Report that do not yet reflect recent published information.	
435	8	Proposed Changes to Monitoring Assessment, Special Studies, and Reporting: The Staff Report proposes an evaluation of reporting requirements for environmental monitoring (Section 5.1.6.3). DWR agrees that the data collected, and assessments made must align with priority management questions. The Environmental Monitoring Program (EMP), which DWR has operated jointly with USBR since 1975, fulfills numerous biological and water quality monitoring requirements from D-1641. DWR has been consistently providing annual reports and working with collaborators to maintain relevant, consistent, and comprehensive datasets for this program. When evaluating future changes to mandated reporting, it will be helpful for the State Water Board to provide greater detail regarding the format, scope, and timing of any review requirements. For thorough reviews, a frequency of every five years is more realistic than the proposed frequency of every three years.	As discussed in Section 5.6.1.3, Proposed Changes to Monitoring, Assessment, Special Studies, and Reporting, State Water Board Water Right Decision 1641 currently requires review of the Water Quality Compliance and Baseline Monitoring Program, which is fulfilled in part by the Environmental Monitoring Program, every 3 years. Please see Chapter 13, Revised Proposed Plan Amendments, and Common Response 1.3, Revised Proposed Plan Amendments, for more information on the Bay-Delta Monitoring and Evaluation Program.
435	9	In addition to the above comments, DWR remains committed, in coordination with other VA parties, to further developing the proposed VAs for future consideration by the State Water Board as a pathway, in conjunction with other actions, to implement 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.
436	1	So I'm going to talk about tribal water rights here, Tribal Engagement, Section 11, covers a little bit of -- or you kind of pass over the Winters Doctrine and a couple of other things about federally reserved rights, federal tribal rights and things like that. So I have some presentations, they were up, the slides [slides not included in transcript] were up when Vice Chair was doing -- yeah, there we go. So if you go to the first slide, it's tribal water rights.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for discussion on tribal reserved water rights. Additional information on this topic has been added to Chapter 11, Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses.

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		You know, where is our water? And you're going to hear why that's important and what tribal water rights are important into everything you're going to hear from the rest of the folks on this panel, the next panel, and the panel farther on down the road. Next. Next one, please. In California, you know, there's about 109, 110 or more federally recognized tribes. There's more than 80 tribes that are not federally recognized but are recognized by the state somehow. And the one thing that you haven't addressed is there are over 300 individual Native American allotments located both on reservations and in public domain, all qualify for quantification. And we're going to be talking about quantification in a minute.	
436	2	So federally reserved water rights on Indian reservations are governed by the Winters Doctrine which is mentioned in your Section 11 here of the Water Plan, that's why I think I'm able to address it, which has evolved over more than a century in federal courts, and since 1955 in state courts as well. Two landmark U.S. Supreme Court cases, Winters versus U.S. and U.S. versus Rio Grande Dam Irrigation Company established several key principles. Federally reserved lands have a right to use sufficient water to fulfill the primary purpose of the land of the reservation. And, two, this is key, these water rights cannot be destroyed by state water law or by water users acting in accordance with state water law. And that's why we're talking about some water rights here as we get into it. Evaluation of a tribe's water rights requires a determination of two factors, the date on which the land became federally reserved, the priority date, and the amount of water needed to fulfill the primary purpose for which the land was federally reserved. Federally reserved water rights have priority over all other water rights dating from the time when the reservation was first created and cannot be appropriated by the state. In California, there are no treaty tribes.	Please refer to the response to comment 436-1.

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		Yeah, next slide. Next slide, please [slides not included in transcript]. In 1851 to 1852, federal agents negotiated 18 treaties with California tribes, this is history, you all know about it. These treaties were never ratified because the state of California legislative representatives talked to the U.S. Senate and said, don't ratify those, we want the resources. So the U.S. Senate hid the treaties away, weren't ratified for over 50 years, they didn't surface until 1908. And in 1907, the year before that, they had passed, I forget what the name of the Act is, but it restricted the president from making any treaties with tribes anymore. So they surfaced after they couldn't be ratified in the first place. So that was kind of neat, don't you think? Congress, in 1851, also passed the Land Claims Act, providing that all lands in California would pass into public domain unless claimed within two years. They didn't tell the tribes this because the tribes thought that they had signed treaties, they were going to get reservations, we were going to have our own property, our own land to live on. And so we didn't go and claim land because we thought we had it already. And guess what? That kind of took us away there under pressure from California statesmen. I already talked about all that. It is important to understand, though, that the priority date of some cases is actually earlier than the creation of reservation because some reservations were created, then you had the Termination Act which came in, got rid of the terminations -- reservations, and then they did the other Act, which allowed them -- the Self-Determination Act, which allowed them to reform as a reservation. But the original date of that reservation or the original date of the military school or the boarding school, the military facility, boarding school, fort, whatever, where the tribe is located is considered the priority date. So even though, say, in 1958 a tribe was reformed, but if they were reformed on land that had prior federal designation, that becomes the priority date. So it rolls back to the 1800s, late 1800s, 1850s.	

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436	3	It is also important to understand that there is no requirement that the Indian people of a reservation actually use the water from the priority date. Unlike water rights of the State of California, federally reserved rights do not expire if water is not used. As a result, the Indian tribes may decide to use their water rights later than other users and still have a senior right to sufficient water for the purposes of the reservation. Only landowners who had made continuous beneficial use of water since before the priority date will have a right to senior of the tribe, so -- and that's very few. And under SB 389, now you can figure out who those people might or might not be, I just thought I'd throw that out there, determining water rights. Next slide, please.	Please refer to the response to comment 436-1.
436	4	In recognition of the importance of finality of water adjudications, the U.S. Supreme Court has found that tribal water rights must be quantified for both present and future uses. The method most commonly used is the practicably irrigable acreage, or PIA, method. The PIA method quantifies the amount of water needed to irrigate arable lands on the reservation. The weight of authority holds that federally reserved rights include both groundwater and surface water. That's important to know. The federal McCarran Amendment provides for a limited waiver of sovereign immunity so that United States, as a trustee of tribal resources, can come in and talk to you folks or mediate and whatever and determine tribal federally reserved water rights. Together, a tribe's priority date and primary purpose quantifying quantity must be used to determine the tribe's -- oh, I got six minutes, okay -- to determine the tribe's water rights. This mechanism also allows for the permanently quantified tribal water rights and to allow for informed planning by you, businesses and everybody else, right water allocation.	Please refer to the response to comment 436-1.
436	5	Here's the key one that we haven't talked about and we just alluded to is that allotments made to individual Indian persons can be divided into two categories, first, lands on Indian reservations, which were allotted to individual members of	Please refer to the response to comment 436-1.

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		federally recognized tribes under the General Allotment Act of 1887, that's the Dawes Act, second, lands on public domain, which were allotted to individual members of both federally and non-federally recognized tribes. Be aware of that because my family has allotments, Caleen's family has allotments. There are many tribes, individual people up and down the state, that have federal allotments that are still in effect, they're still in the public domain. We haven't sold them off. One of Congress's intentions in passing the Dawes Act was to encourage Indian persons to adopt an agricultural lifestyle. Both the Dawes Act and U.S. Supreme Court have recognized that on-reservation allotments are entitled to a proportional share of a tribe's federally reserved water rights. Thus, individual allotments located on a reservation must be included until the acreage when calculating a tribe's PIA. Public domain allotments located off of an Indian reservation are subject to the same principles as Dawes Act allotments in other federally reserved lands with respect to water rights. That is, water rights attached to a public domain allotment are determined by application of the priority date and the primary purpose as discussed above. So all those allotments that are still out there in the public domain, our chief's family allotment, my family's allotments, and several other family's allotments still qualify for federally reserved water rights. And they haven't been accounted for or quantified because the state of California has never accounted for or quantified those water rights. I'm not going to -- next slide, please, but I'm going to talk about -- I'm not going to go to that conclusion yet because I have a couple of other things to say.	
436	6	These are from my attorney, our attorney from Restore the Delta. And she relays that, "The Board needs to undertake a more robust program to quantify federally reserved water rights and ensure that water is not available for appropriation." That's an important statement there because now you're talking	Please refer to the response to comment 436-1.

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		-- you're looking at updating the Bay-Delta Plan, that's going to include flows, allocations, water quality, all those kinds of things. And when you take into consideration those things and you do your metrics, be sure that you do not include or appropriate federally reserved water rights. And in order to not include federally reserved water rights, you have to quantify them. So you've got, you know, until next year when you put the new thing out to quantify some of those rights. "The Board will, likewise, need to ensure that implementation of the Bay-Delta Plan does not impinge on federally reserved rights, including unquantified water rights." That's from the attorney. The US EPA is in the process of finalizing a rule, by the way, that will formalize and clarify already existing requirements that state agencies, including the Board, ensure in setting or amending water quality standards, that those standards protect tribal reserved rights. The Board does not appear to have undertaken this analysis for the Bay-Delta Plan update and that's why we're bringing it to your attention. For instance, it is not considered whether the continued reliance on water from the Trinity River -- sorry, it got snuck in here -- for the Bay-Delta flows will impede exercise of tribal reserve rights held by tribes on the Trinity and Klamath. So that's a really good example of how that could impinge on tribal rights.	
436	7	The voluntary agreements turn water quality standard-setting and attainment over to water agencies and irrigation districts, ignoring the existence of Indian tribes, including those who hold federally reserved rights, as well as tribes' millennial-long role in water stewardship. The VAs thereby act as another instance of the erasure of Indian tribes from water governance. Their eight-year experiment and the water agencies and them putting forth what they think is going to be the best thing for the meaning of life and everything is excluding tribes, tribal TEK, tribal TBUs, tribal water rights, federally reserved water rights and excluding all of those things. And they're actually going to be	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to tribal comments on the VAs, tribal reserved water rights, and Tribal Beneficial Uses.

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		taking control over the management of that and the decision making during those voluntary agreements. And that's another reason why you should oppose them.	
436	8	The history of broken treaty promises and the state's direct role in preventing ratification of the treaties makes it all the more important that the Board ensure that flows are adequate to protect cultural, spiritual, and economic practices for all tribes by, for instance, designating the TBUs in the Bay-Delta Plan and that it meaningfully engage tribes as partners in this process.	Please see Common Response 11.1, Tribal Engagement and Tribal Beneficial Uses, for responses to comments related to tribal outreach and engagement, and Tribal Beneficial Uses.
436	9	In conclusion, the California Bay-Delta Plan update does not account for tribal water rights which have not been quantified. The exact count of tribes whose water rights have been accurately quantified is unclear, but what is clear is that the tally is far below the total number of federally recognized tribes in the state. Furthermore, there's no evidence to suggest that the water rights of any public domain allotment have been accurately quantified and incorporated into water allocations. Not properly accounting for reserve tribal water rights limits the ability of the state water resources control Board, other public entities, businesses, tribal governments, and individual landowners to formulate equitable, reliable long-term water usage plans. Tribal water rights must be addressed and quantified.	Please refer to the response to comment 436-1.