

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
1345	1	<p>The DRSED does not provide any measure of credible scientific evidence or analyses to justify adoption of the unimpaired flow ("UIF") regime as envisioned by Board staff.</p>	<p>Please see Master Response 3.1, Fish Protection, Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives, and Chapter 19, Analyses of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30, regarding the scientific basis of the project.</p> <p>As described in Chapter 19 and Appendix C, the unimpaired flow approach is intended to capture allow higher flows, and capture the natural pattern of variability and retain the attributes of the natural flow regime to which native LSJR basin fish and wildlife adapted, and that is important to support key ecosystem processes. More recent studies (e.g. Sturrock et al. 2015; State Water Board 2017; TID and MID 2013; USFWS 2014; Zueg et al. 2014) continue to provide evidence of the importance of suitable flow and related habitat conditions during the spring time period. Finally, the analyses provided in Chapter 19, Analyses of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30, show that improving flows that mimic the natural hydrographic conditions including related temperature and floodplain regimes to which native fish species are adapted, are expected to provide many juvenile salmonids with additional space, time, and food resources which are necessary for required growth, development, and survival.</p> <p>Please refer to Master Response 3.1 for more information regarding the unimpaired flow approach and benefits thereof, the use of best available science, the current pattern of fish decline and the need for increased flow, and the adequacy of the analyses.</p>
1345	2	<p>MID was an active participant to the Board's two technical workshops held on the DRSED. MID transcribed the webcasts of these technical workshops and hereby specifically incorporate these transcripts into this proceeding's record as well. The Board never responded to our February 16, 2017 request for an extension to the comment period, such request incorporated by reference herein, which was based on the California Department of Fish Wildlife ("CDFW") "errors" of the SalSim model used in the DRSED. The public has never been afforded an opportunity to analyze the Project or the DRS ED based on the Revised SalSim model, as Board staff has failed to provide access to it despite repeated requests. The SalSim model is the sole quantitative tool relating to fish populations and the most recent version must be publicly accessible.</p>	<p>Please see Master Response 1.1, General Comments, regarding the public outreach process. The State Water Board extended the comment period twice, ultimately providing a six-month comment period. Please see Master Response 3.1, Fish Protection, regarding the limitations of the SalSim model and how the State Water Board did not rely on it in the SED.</p>
1345	3	<p>Unfortunately, the DRSED is as deficient legally as it is scientifically. The DRSED violates a multitude of state and federal laws and requirements, including, but not limited to, the California Environmental Quality Act ("CEQA"), Porter-Cologne Water Quality Act ("Porter-Cologne"), California Water Code, California Constitution, federal Endangered Species Act ("ESA"), federal Clean Water Act, and United States Constitution.</p>	<p>Please see Master Response 1.1, General Comments, for general responses to comments regarding applicable statutes, regulations, and principles designed to protect water rights and the use of water pursuant to such established rights. Please also refer to Master Response 1.2, Water Quality Control Planning Process, for a more detailed description regarding the relevant authorities and regulations applicable to the State Water Board water quality control planning process.</p>
1345	4	<p>The DRSED Fails to Comport with the California Environmental Quality Act.</p> <p>The Board's adoption of amendments to the Water Quality Control Plan for the San Francisco Bay Sacramento/San Joaquin Delta Estuary is a discretionary action of a state agency and, thus, subject to the California Environmental Quality Act ("CEQA"). Because the water quality control planning program is a certified regulatory program under CEQA, the Board prepared the DRSED in place of an environmental impact report. (Cal. Code Regs., tit. 14, § 15251; Cal. Code Regs., tit. 23, § 3775).</p> <p>Importantly, the environmental review remains "subject to the Board policy goals and substantive standards of CEQA." (City of Arcadia v. State Water Resources Control Board (2006) 135 Cal.App.4th 1392, 1442 ("Arcadia")). Unfortunately, the DRSED is so fundamentally flawed that it violates CEQA and adoption of the preferred alternative will be</p>	<p>Please see Master Response 1.1, General Comments, regarding the approach to the analysis and the use of a Substitute Environmental Document to meet CEQA requirements. We disagree that the SED is fundamentally flawed and fails to comply with CEQA's requirements. We respond to the commenter's claimed deficiencies below.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>an abuse of discretion. (Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.41h412, 435 ("Vineyard Area Citizens") (citing Cal. Pub. Resources Code§ 21168.5)).</p> <p>The Board's adoption of the DRSED will be reviewed de novo to ascertain whether the Board has scrupulously enforced the legislatively mandated CEQA requirements. (Vineyard Area Citizens, supra, at 435). The purpose of the DRSED is to give the public and government agencies the information needed to make informed decisions, thus protecting "not only the environment but also informed self-government." (In re Bay-Delta etc., (2008) 43 Cal. 4th 1143, 1162-63). As a CEQA-equivalent document, the DRSED must effectively disclose to the public the analytic route the agency traveled from evidence to action. (Topanga Assn. for a Scenic Community v. County of Los Angeles (1974) 11 Cal.3d 506, 515).</p> <p>Further, the DRSED must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project, and must contain facts and analysis, not just bare conclusions or opinions. (Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 405 ("Laurel Heights"); Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn. (1986) 42 Cal. 3d 929, 935). As currently written, the DRSED is woefully inadequate and the Board has failed to meet its CEQA requirements.</p>	
1345	5	<p>The DRES'D's Notices of Preparation are Illegal.</p> <p>CEQA mandates the Board send a "notice of preparation" ("Notice") to the Office of Planning and Research and to each responsible and trustee agency, stating that an EIR will be prepared. (Cal. Code Regs., tit. 14, § 15082(a)). The Notice, at a minimum, must include a description of the project, the locations of the project, and the probable environmental effects of the project in order to put the public and regulated community on notice about the Board's intended action. (Cal. Code Regs., tit. 14, § 15082(a)(1)).</p> <p>In this instance, the Board prepared the first Notice, in 2009, of its intention to update and implement the Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary. The 2009 Notice did not provide notice of a project that would create entirely new numeric flow objectives on the three eastside tributaries to the San Joaquin River. Additionally, the Notice did not state the Board planned to review or otherwise regulate waters outside the Bay-Delta plan. In 2011, the Board issued a revised Notice. Once again, the 2011 Notice failed to indicate the Board was reviewing or amending the geographic scope of the Bay-Delta plan nor notice that it would be regulating waters not included in the Bay-Delta plan.</p> <p>These omissions are significant as waters regulated in the Bay-Delta plan do not include the San Joaquin River system upstream of Vernalis, and specifically do not include the Stanislaus, Tuolumne or Merced Rivers. However, the DRSED proposes to regulate the San Joaquin River system from its confluence with the Merced River to Vernalis, which includes the Stanislaus, Tuolumne and Merced Rivers. Thus, the geographic scope and regulated waters are completely different than the noticed geographic scope and waters. Further, the Notices did not indicate a disconnect between the proposed Lower San Joaquin River ("LSJR") Flow Objective and a Delta benefit.</p> <p>Beginning with the 1978 plan, and spanning through its revisions in 1995 and 2006 plans, water quality objectives have been directly tied to the protection of beneficial uses in the</p>	<p>Please see Master Response 2.5, Baseline and No Project, regarding the notice of the preparation and how it adequately disclosed the geographic scope of the plan amendments and how the narrative flow objective would be implemented with numeric requirements on the Stanislaus, Merced, and Tuolumne Rivers. As explained therein, the State Water Board appropriately provided notice and ample opportunity for public comments in accordance with applicable law. The commenter is misinterpreting the 2011 Notice of Preparation regarding changes to water rights. This is what it says:</p> <p>"The State Water Board is currently preparing a SED in support of potential additions and changes to: water quality objectives for the protection of southern Delta agricultural beneficial uses; San Joaquin River flow objectives for the protection of fish and wildlife beneficial uses; and the program of implementation for those objectives. In addition, the State Water Board is also considering potential changes to the monitoring and special studies program included in the 2006 Bay-Delta Plan. As explained in the 2009 notice, the State Water Board is not currently considering any other changes to the Bay-Delta Plan or any specific changes to water rights and other requirements implementing the Bay-Delta Plan. The State Water Board will provide additional notice regarding review of other aspects of the Bay-Delta Plan and its implementation in the future."</p> <p>This does not mean, as commenter suggests, that no changes to specific water rights will ever occur as part of the plan amendments. Any interpretation to that effect runs counter to explicit statements in the existing Bay-Delta Plan that it is to be implemented through water right and water quality proceedings.</p> <p>Please refer to the Executive Summary for information regarding consultation with other agencies and trustee agencies as well as a discussion of the changes made to the 2012 Draft SED in response to issues and concerns raised during the public comment period.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>Delta. [Footnote 3: The 1978 Bay-Delta Plan's water quality objectives protected "beneficial uses in the Delta and Suisun Marsh; the 1995 Bay Delta Plan's water quality objectives protected the "multitude of beneficial uses" served by the "waters of the Bay Delta estuary;" and the 2006 Bay-Delta Plan's water quality objectives protected the waters of the "Delta, Suisun Bay, and Suisun Marsh."] The DRSED, in contrast, proposes to protect beneficial uses in "the Lower San Joaquin River (downstream of the Merced River confluence); the major San Joaquin River ("SJR") tributaries (the Stanislaus, Tuolumne, and Merced Rivers), below the rim dams that regulate their flows (the New Melones, New Don Pedro, and New Exchequer Dams, respectively); the reservoirs created by these dams (New Melones Reservoir, New Don Pedro Reservoir, and Lake McClure, respectively); and the southern Delta." (DRSED at 7-1). This change represents a complete departure from the previous Bay-Delta Plans, and the public and regulatory communities were not properly notified of such a drastic change.</p> <p>Another major deficiency of the Notices centers around their failure to notify the general public as well as the specific irrigation districts, including MID, which are themselves local public agencies, that the Board was considering creating new numeric flow objectives on the Stanislaus, Tuolumne and Merced Rivers. (DRSED at Appx. K). In fact, the 2011 Notice expressly stated, "the State Water Board is not currently considering any other changes to the Bay-Delta Plan or any specific changes to water rights or other requirements implementing the Bay-Delta Plan." (2011 Notice at p. 3). The Board did assure the public it would provide "additional notice regarding review of other aspects of the Bay-Delta plan and its implementation in the future." (2011 Notice at p. 3).</p> <p>Unfortunately, the Board did not keep its word in either case. A crucial component of a properly prepared notice is an accurate project description. (Cal. Code Regs., tit. 14, § 15082(a)(1)). However, the DRSED violates this requirement as it proposes an entirely new project much larger in geographic scope that portends to regulate waters outside the Bay-Delta without directly linking these objectives to protected beneficial uses within the Delta. Further, the DRSED proposes numeric flow objectives on the Stanislaus, Tuolumne and Merced Rivers in contradiction of the Notices. (DRSED at Appx. K, p. 18).</p> <p>The DRSED also proposes a new narrative flow objective that is different than the narrative flow objective noticed in the Notices, minimum reservoir carryover storage targets and end-of-drought storage refill requirements. (DRSED at Appx. K, p. 18, p. 28; DRSED at Appx. F.1, p. F.I-32). The Board's failure to issue a new or revised notice properly describing the current proposed project violates CEQA. Importantly, the Board cannot rely upon the 2012 SED as a substitute for the required Notice. (Cal. Code Regs., tit. 14, § 15082(b)(l)(a)). The failure to prepare and circulate a proper notice that complies with CEQA's mandates has resulted in a fundamentally flawed document. Had a proper notice been circulated, the responsible and trustee agencies have 30 days to provide the Board with a response that identifies significant environmental issues, reasonable alternatives, and mitigations measures, that those agencies "will need to have explored in the draft EIR." (Cal. Code Regs., tit. 14, § 15082(b)(l)(a)).</p> <p>The regulations recognize that this dialogue may result in a draft document that "need[s] to be revised to expanded to conform to [those] responses. . ." (Cal. Code Regs., tit. 14, § 15082(a)(4)). In this case, the illegal Notice has prohibited responsible and trustee agencies from providing responses prior to and/or during the preparation of the DRSED. This lack of communication has resulted in a fatally flawed impact analysis, an insufficient alternatives</p>	

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		analysis, and a legally and scientifically insufficient document.	
1345	6	<p>The DRSED Illegally Lacks a Sufficient Project Description.</p> <p>A fundamental purpose of environmental review is providing the public with detailed information about the effects a proposed project is likely to have on the environment. (Laurel Heights, supra, (1988) 47 Cal.3d at 391; see also Cal. Code Regs., tit. 14, § 15003(b)). The project description must be sufficient enough to permit preparation of a meaningful and accurate report of the impacts of the proposed project (Laurel Heights, supra, at 396). The DRSED, however, utterly fails to meet this requirement because its alleged project description includes a less-than-one-page description stating the proposed project would create a new Lower San Joaquin River Flow Objective for the protection of fish and wildlife beneficial uses and an associated program of implementation. (DRSED at 1-1).</p> <p>Amazingly, this alleged project description makes no mention of the carry-over storage requirement contained in all alternatives proposed in the document, the end-of-drought storage refill requirements contained in all proposed alternatives, or the time frame envisioned for this project. In fact, throughout this process and perhaps because the project description is legally deficient, Board staff has made varying representations regarding each of these crucial components.</p> <p>The DRSED states "[t]he Feb-June Vernalis base flow requirement may be adjusted on an annual or long-term basis to any value between 800-1200 cfs. The Vernalis base flow requirement, with an adaptive range of 800-1200 cfs, establishes a minimum flow in the event that the percent of unimpaired flow would have resulted in a lower number, such as in a critically dry year." (DRSED at ES-17). This statement appears to control the quantity of water that is commanded by the Project because the minimum flow will be required even if the natural river does not produce enough water to meet the minimum under the unimpaired flow methodology.</p> <p>It is unclear how this "Vernalis base flow" requirement comports with the remainder of the Project, which is based on UIF--a number that is "variable" and unknowable until it actually occurs. In fact, it is this very "variability" of the UIF flow that drives the Board staffs "change" to the UIF methodology. There is no explanation to describe how it is reasonable to set a new "annual" flow requirement for the Vernalis location that uses a different (but related) flat metric than the metric used in the Decision 1641 monthly flow requirements, which is yet again a different metric than the variable-flow UIF methodology that is used for the tributaries. (See State Water Res. Control Bd. Cases, 39 Cal. Rptr. 3d at 210 (citing Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, CAL. WATER RESOURCES CONTROL BD., 5 (May 1995).) The DRSED does not provide any analysis or information to demonstrate how the minimum base flow requirement was contrived nor which benefits should be expected from the minimum base flow that are the same or different than those benefits contemplated by the "varied" nature of the flow objective.</p> <p>Notwithstanding this "change" in flow management strategies that justifies the Lower San Joaquin River Objective, the DRSED fails to provide any information to justify why this static, artificial minimum flow remains scientifically justifiable or even how the old flow management theory (static, man-made flow quantities) relates or interacts with the new theory (regarding naturally occurring flows). It is critical that this comparison of benefits between the two theories is analyzed, most especially if the Board staff intends to rely upon</p>	<p>Please refer to Master Response 2.1, Amendments to the Water Quality Control Plan, for response to comments regarding adequacy of the project description and the for the scientific justification for the base flow objective.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>what may be mutually-exclusive scientific theories to justify the same Project. Excluding this component from the Project Description violates CEQA.</p>	
1345	7	<p>The DRSED's Failure to Consider a Range of Reasonable Alternatives Violates CEQA.</p> <p>The DRSED must consider a reasonable range of alternatives which could feasibly attain the basic objectives of the Proposed Project. (Friends of Eel River v. Sonoma County Water Agency (2003) 108 Cal.App.4th 859, 873 ("Friends of Eel River"); see also, Cal. Code Regs., tit. 14, § 15126(d)). Although environmental review is not required to analyze every possible alternative, CEQA demands the DRSED analyze a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. (Preservation Action Counsel v. City of San Jose (2006) 141 Cal.App.4th 1336, 1354). In fact, the DRSED's discussion must focus on "alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly." (Friends of Eel River, supra, (2003) 108 Cal.App.4th at 873).</p> <p>Shockingly, the DRSED only considers additional flows from only three tributaries, Tuolumne, Stanislaus and Merced Rivers, and five irrigation districts, MID, Oakdale Irrigation District, South San Joaquin Irrigation District, Merced Irrigation District and TID. This analysis is woefully inadequate, and thus illegal, as it completely ignores all of the surface water sources within the entire San Joaquin River. The DRSED does not foster informed decision-making as required by law because of staff's failure to consider these sources, which could feasibly attain the basic objectives of the Proposed Project.</p>	<p>Please refer to Master Response 2.4, Alternatives to the Water Quality Control Plan Amendments, regarding the adequacy of the reasonable range of feasible alternatives considered in the SED.</p> <p>Please see Master Response 2.1, Amendments to the Water Quality Control Plan, regarding the geographic boundaries of the plan amendments. The criteria for identification of the plan area is described in Section 3.3, Lower San Joaquin River (LSJR) Alternatives, in Chapter 3, Alternatives Description. The State Water Board identified the geographic scope of the plan amendments to protect the existing fishery in the LSJR Watershed—the three eastside salmon-bearing tributaries—because that portion of the watershed supports an existing fishery that can be maintained and improved. Further information is provided in Chapter 3, Section 3.3.1, Attributes of LSJR Flow Objectives, under the subheading "Geography." In developing the alternatives, the State Water Board considered whether alternative flow objectives would apply only to Vernalis, just as the current objective, or be extended upstream to some other location.</p>
1345	8	<p>The DRSED Should Have Included an Alternative that Considered all San Joaquin River Water Sources.</p> <p>When developing water quality objectives, "the Board is directed to consider not only the availability of unappropriated water (Cal. Water Code, § 174) but also all competing demands for water in determining what is a reasonable level of water quality protection (Cal. Water Code, § 13000)." United States v. State Water Resources Control Bd., (1986) 182 Cal. App.3d 82, 118 (Racanelli). Similarly, the State Water Board must consider "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." (Cal. Water Code, § 1324(c)).</p> <p>In Racanelli, the First District Court of Appeal held that the Board's decision to establish water quality objectives for the Delta based on the amount of water available prior to the construction and operation of the Central Valley Project ("CVP") and State Water Project ("SWP") facilities (collectively the "Projects"), known as the "without project" standard, violated these rules because the "Board considered only the water use of the Delta parties. . . and the needs of the customers served by the [P]rojects. . . [while] [n]o attention was given to water use by the upstream users." (Id. at 118). In other words, the standard was set "only at a level which could be enforced against the projects." (Id. at 119).</p> <p>The Racanelli Court stated that a "global perspective" of the available water resources was necessary. (Id). The Court observed that the imposition of a "without project" standard upon the Projects themselves "represents one reasonable method" of achieving water quality control in the Delta, but the Court explained that the Board cannot satisfy its water quality planning obligations if it does not consider "other actions which could be taken to achieve Delta water quality, such as remedial actions to curtail excess diversions and</p>	<p>Please see Master Response 2.4, Alternatives to the Water Quality Control Plan, for responses to comments regarding additional San Joaquin River water sources.</p> <p>In United States v. State Water Resources Control Board (1986) 182 Cal.App.3d 82 (the "Racanelli Decision"), the court reviewed the State Water Board's adoption of water quality objectives to protect agricultural, industrial and municipal uses from salinity based on the measure of flows necessary to protect existing water rights against impairment by the state and federal water projects. The court rejected the objectives as not fulfilling the Board's statutory obligation to attain the highest reasonable water quality considering all demands on that water and to ensure the reasonable protection of beneficial uses. (United States, supra, at p. 116.) It stated that the Board's task is to protect beneficial uses, not water rights. The court held that the Board had compromised its water quality role by defining its scope too narrowly because the Board had established the water quality standards only at a level that could be enforced against USBR's and DWR's water rights. (Id. at pp. 118-120.) No attention was given to water use or quality degradation by other users such as upstream diverters or polluters. (Ibid.)</p> <p>Based on this case, the commenter asserted that the Board is again proceeding unlawfully with the proposed flow objectives by not including the San Joaquin River upstream of the Merced River. We disagree. The State Water Board identified the geographic scope of the plan amendments to protect the existing fishery in the LSJR Watershed—the three eastside salmon-bearing tributaries—because that portion of the watershed supports an existing fishery that can be maintained and improved. Moreover, it is these three salmon-bearing tributaries, the Stanislaus, Tuolumne, and Merced Rivers, where reductions in the natural production and returns from the ocean of adult fall-run Chinook salmon have been the largest than any of the other tributaries (or combination of tributaries) to the Sacramento River or the San Joaquin River when comparing 1967-1991 and 1992-2010 time periods. The very purpose of the plan amendments is to obtain the necessary flows from these salmon-bearing tributaries. Unlike in the Racanelli Decision, here, the proposed objectives reasonably protect fish and wildlife beneficial uses, are not to a level that can be</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>pollution by other water users." (Id. at 120).</p>	<p>enforced only against certain water rights, and furthers the State Water Board's obligation to attain the highest reasonable water quality considering all of the demands on that water. The State Water Board has not limited itself in any way to protect these uses. The State Water Board will consider additional measures in future Bay-Delta Plan updates to protect beneficial uses in other areas, such as the Upper San Joaquin River when those areas are restored and can support a fishery. Including the Upper San Joaquin River would not reduce the quantity of water needed from the Stanislaus, Tuolumne and Merced Rivers to achieve the plan amendment's goals.</p>
1345	9	<p>The State Water Board's Proposals for the Tributary Flow Objective and the Vernalis Flow Objective and the Alternatives Considered are Framed so Narrowly they Violate CEQA.</p> <p>The State Water Board's Tributary Flow Objective and Vernalis Flow Objective are unlawful for the same reasons that the "without project" standard in Racanelli was unlawful, namely, they target a select group of water users and ignore the possible contributions or actions of other water users. The State Water Board's new flow proposal has a narrative objective and two numeric flow objectives. (DRSED, at ES-4; Appx. K, p. 18). Both the narrative and numeric objectives purport to cover a broad geographic area that extends far beyond the locale of the three eastside tributaries that are identified as being the contributing resources for achieving those objectives.</p> <p>Specifically, the Narrative Objective states that inflow conditions from the "San Joaquin River watershed to the Delta" should be maintained at sufficient levels to support and maintain the natural production of viable native San Joaquin River watershed fish populations "migrating through the Delta." (DRSED, at Appx. K, p. 18). Similarly, the program of implementation states, "[a]lthough the lowest downstream compliance location from the Lower San Joaquin River flow objective is at Vernalis, the objectives are intended to protect migratory Lower San Joaquin River fish in a larger area, including within the Delta. . ." (DRSED, at Appx. K, p. 28).</p> <p>Despite the broad geographic scope of the objectives, which covers the entire San Joaquin River watershed through the Delta, the Tributary Flow Objective only requires the maintenance of an unimpaired flow percentage below the rim dams on each of the Stanislaus, Tuolumne and Merced Rivers. (DRSED, at ES-5; 1-1-1-2; Appx. K, p. 18). [Footnote 4: The "plan area" in the SED is described as the Stanislaus River watershed from New Melones to the confluence of the San Joaquin River, the Tuolumne River watershed from New Don Pedro Reservoir to the confluence of the San Joaquin River, and the Merced River watershed from the Lake McClure to the confluence of the San Joaquin River, as well as the mainstream of the San Joaquin River between its confluence with the Merced River downstream to Vernalis. (SED, at 1-2.)]</p> <p>Likewise, the DRSED states that the Vernalis Flow Objective will be satisfied by releases from the Stanislaus, Tuolumne and Merced Rivers: "When the percentage of unimpaired flow requirement is insufficient to meet the minimum base flow requirement, the Stanislaus River shall provide 29 percent, the Tuolumne River 47 percent and the Merced River 24 percent of the additional total outflow to achieve and maintain the required base flow at Vernalis." (DRSED, at Appx. K, p. 29). By only requiring the maintenance of unimpaired flow below the rim dams on each of the three eastside tributaries, and by only requiring contributions from the three eastside tributaries to meet the Vernalis Flow Objective, the State Water Board's proposed objectives are designed in such a way that they can only be enforced against water users who divert from the Stanislaus, Tuolumne and Merced Rivers,</p>	<p>Please see response to comment 1345-8. The Racanelli Decision involved the review of the State Water Board's adoption of the 1978 Water Quality Control Plan for the Sacramento-San Joaquin Delta and Water Right Decision 1485. (United States v. State Water Resources Control Bd., supra, 182 Cal.App.3d at pp. 97-98.) On appeal of the State Water Board's actions, the appellate court concluded that the Board had compromised its water quality role by defining its scope too narrowly because the board had established the water quality standards only at a level that could be enforced against the USBR's and DWR's water rights without attention given to water use or quality degradation by other users such as upstream diverters or polluters. (Id., pp. 118-120.) Here, the State Water Board's development of the water quality objectives is not narrowly defined in terms of enforceable water rights, but is based on the reasonable protection of beneficial uses, consistent with Water Code section 13241. This includes supporting juvenile rearing in the Stanislaus, Tuolumne, and Merced Rivers and migration through the Delta in order to maintain the natural production of San Joaquin River fall-run Chinook salmon.</p> <p>Please see SED Appendix K, Program of Implementation that states the State Water Board will implement the LSJR plan amendments through water right actions or water quality actions, such as Federal Energy Regulatory Commission (FERC) hydropower licensing processes. These implementation actions are not restricted to specific water users; instead, the State Water Board will consider imposing responsibility to implement the water quality objectives on water users in accordance with water right priority and other applicable legal requirements. Please see Master Response 2.1, Amendments to the Water Quality Control Plan, for responses to comments regarding the plan area, extended plan area, and geographic scope of the Bay-Delta Plan, justification for the plan amendments, the unimpaired flow contribution of different parts of the San Joaquin River watershed, and protection of flows provided by the LSJR flow objectives in the tributaries, the LSJR, and the Delta. As explained in Master Response 2.1, the plan amendments have the potential to affect water supply, rivers and surrounding watersheds, and the greater watershed above the rim dams. Also see Master Response 2.4, Alternatives to the Water Quality Control Plan Amendments, for information regarding the focus of the planning efforts and range of alternatives and how including the Upper San Joaquin River would not reduce or avoid environmental impacts.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>upstream of the compliance points on each of those rivers.</p> <p>All of the water users upstream of the confluence of the Merced River and the San Joaquin River are notably exempt from this regulation, as are the water users on the west side of the San Joaquin River, and the water users on the Calaveras, Mokelumne and Cosumnes Rivers. (DRSED, ES-1). By exempting these water users and the resources available to them, the State Water Board has improperly ignored numerous water resources that should have been included in developing the objectives designed to protect "the natural production of viable native San Joaquin River watershed fish populations migrating through the Delta." (DRSED, at Appx. K, p. 18).</p> <p>Specifically, on the Upper San Joaquin River, the State Water Board has ignored Eastman Lake behind Buchanan Dam on the Chowchilla River (Storage Capacity: 150,000 acre feet; [Footnote 5: Eastman Lake storage: <a href="http://cdec.water.ca.gov/cgi-progs/profile?s=BUC&amp;type=res">http://cdec.water.ca.gov/cgi-progs/profile?s=BUC&amp;type=res</a> ) Hensley Lake behind Hidden Dam on the Fresno River (Storage Capacity: 90,000 acre feet; [Footnote 6: Hensley storage: <a href="http://cdec.water.ca.gov/cgi-progs/profile?s=HID&amp;type=res">http://cdec.water.ca.gov/cgi-progs/profile?s=HID&amp;type=res</a>]), and Millerton Lake behind Friant Dam on the Upper San Joaquin River (Storage Capacity: 520,500 acre feet; [Footnote 7: Millerton Lake storage: <a href="http://cdec.water.ca.gov/cgi-progs/profile?s=MIL&amp;type=res">http://cdec.water.ca.gov/cgi-progs/profile?s=MIL&amp;type=res</a>] (Figure 2-3). The average annual unimpaired flow for the Upper San Joaquin River at Friant Dam is 1,702,000 acre feet, which, standing alone, "represents approximately 28 percent of the unimpaired flow on the SJR at Vernalis." (DRSED, at 2-9). That figure of 28 percent does not include the resources on the tributaries further upstream on the Chowchilla and Fresno Rivers. The DRSED did not consider, nor incorporate, these resources when presenting and evaluating the range of alternatives.</p> <p>The DRSED has also ignored the water users on the lower San Joaquin River that are downstream of the compliance points on each of the three eastside tributaries. These water users include but are not limited to the following: 1) Westside Irrigation District, with an average annual demand of 19,437 acre-feet; 2) Stevinson Water District, with an average annual demand of 17,533 acre-feet; 3) Patterson Irrigation District, with an average annual demand of 62,932 acre-feet; 5) West Stanislaus Irrigation District, with an average annual demand of 61,617 acre feet; 6) E1 Solyo Water District, with an average annual demand of 60,252 acre-feet; 7) - Irrigation District, with an average annual demand of 14,686 acre-feet; 8) Reclamation District 2075 (McMullin), with an average annual demand of 5,906 acre-feet; 9) Reclamation District 2064 (River Junction), with an average annual demand of 2,610 acre-feet; and 10) Byron-Bethany Irrigation District, with an average annual demand of 1,743 acre-feet.</p> <p>Due to the location of these water users downstream of the compliance points, none can contribute to meeting the Tributary Flow Objective, and none are directed to contribute to the Vernalis Flow Objective, the latter of which has been impermissibly narrowly defined to ensure compliance can only be made with flows from the Stanislaus, Tuolumne and Merced Rivers. (DRSED, at Appx. K, p. 29). The amount of land in the entire San Joaquin River Hydrologic Region is approximately 3.73 million acres (DRSED, at 2-5), which leaves approximately 2.92 million acres of land that are not included, but which still fall within the San Joaquin River basin. [Footnote 8: The map in figure ES-1 does not accurately depict the San Joaquin River Basin. The San Joaquin River Basin also includes the Kings River Basin. (Turner v. James Canal Co., 155 Cal. 82, 91 [explaining that the Kings River and San Joaquin River are hydrologically connected through the Fresno Slough].)] When the hydrologically</p>	

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>connected Kings River basin is added, the amount of land that is within the San Joaquin River basin that is not included in the plan increases even more.</p> <p>In addition, while the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("WQCP") focuses on the seven water right holders identified in the table above, it excludes approximately 4,500 water right holders in the San Joaquin River Basin. Even the DRSED admits most of the water rights which will be impacted are held by the U.S. Bureau of Reclamation, MID, Oakdale Irrigation District, South San Joaquin Irrigation District, Merced Irrigation District and TID at 98%, 99%, and 94% respectively. (DRSED at ES-23). By developing numeric objectives that can only be achieved through the imposition of restrictions on a select group of water users, the Board has unlawfully excluded consideration of a potentially feasible alternative and has thus prevented consideration of "an intelligent decision as to the environmental consequences and relative merits" of such an alternative. (Friends of Eel River, supra, (2003) 108 Cal.App.4th 859, 873).</p>	
1345	10	[ATT1: Table of acreages for various irrigation districts.]	The commenter is providing 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.
1345	11	<p>The DRSED Failed to Consider a Reasonable Non-Flow Alternative.</p> <p>The alleged purpose is to support and maintain the "natural production" of viable native San Joaquin River watershed fish populations migrating through the Delta. (DRSED at Appx. K). As MID has stated publicly in a variety of forums for several years, science specific to the lower Tuolumne River indicates that this purpose can be achieved through numerous non-flow actions. By way of example, studies indicate predation is the dominant stressor to salmon smolts in the San Joaquin River tributary systems, with less than five percent of salmon smolt surviving to the mainstem of the San Joaquin River. (See generally, Vernalis Adaptive Management Plan Report of the 2010 Review Panel, Delta Science Program, May 2010t; see also, TID/MID 1992a and FishBio 2013a).</p> <p>Similarly, spawning gravel studies report downstream movement and loss of spawning gravels on the lower Tuolumne River. Further, spawning gravel quality can be negatively affected by in-filling of coarse sediment by fines resulting in decreased salmonid egg viability. (Stillwater Sciences 2013a and McBain &amp; Trush 2004). As such, the DRSED should have considered at least one reasonable non-flow alternative in its analysis. The scientifically supported non-flow measures could include items such as:</p> <ul style="list-style-type: none"> <li>-Undertaking a program of gravel augmentation. (Stillwater Sciences 2013a and McBain &amp; Trush 2004);</li> <li>-Improving spawning gravel quality by removing fine sediments. (Stillwater Sciences 2013a and McBain &amp; Trush 2004);</li> <li>-Undertaking a focused native riparian vegetation planting program. (McBain &amp; Trush 2000 and Stillwater Sciences 2013d);</li> <li>-Installing permanent predation weirs to prohibit the upstream movement of striped bass and other bass species into the prime rearing areas for juvenile Chinook and <i>O. mykiss</i>.</li> </ul> <p>Such an alternative, if included, would have met the alleged project goal without the tremendous environmental impacts to both groundwater and agricultural resources, and</p>	<p>The State Water Board recognizes the importance of implementing non-flow measures to aide in the recovery of, and to support, salmon populations. Non-flow actions are recommended as part of a comprehensive effort to address Delta aquatic ecosystem needs, as set forth in Appendix K, Revised Water Quality Control Plan. For further discussion on State Water Board's authority related to non-flow measures, and the incorporation of non-flow measures into the plan amendments, please see Master Response 5.2, Incorporation of Non-Flow Measures. Please see Master Response 2.4, Alternatives to the Water Quality Control Plan, for why non-flow measures as an alternative to the flow objectives would not meet the project goals and objectives, are not feasible and would not avoid significant environmental impacts.</p> <p>Best available science has shown that non-flow factors, such as predation, are affected by flow, because a reduced, flattened flow regime favors non-native species. Increasing flow in the river will enhance the effect of predator removal. The scientific basis and relevant research for flow objectives to protect fish and wildlife are documented in Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objective. For a discussion regarding the need for improved flow in protecting fish and wildlife, consideration of fish predation, and the approach of unimpaired flow as functional flow, please see Master Response 3.1, Fish Protection.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>without dewatering the entire region. The DRSED's alternatives analysis violates CEQA because it fails to include a feasible non-flow alternative. In fact, the State's own salmon model, SALSIM, demonstrates the ineffectiveness of the Project's narrow focus on flow in an attempt to achieve salmon benefits in the SJR basin. The model showed only marginal benefits to the salmon population after two decades of 40% UIF, and actually showed decreasing salmon population at higher flows of 50% and 60% UIF.</p>	
1345	12	<p>The proposed narrative flow objective violates the Porter-Cologne Act.</p> <p>The Board proposes to modify the WQCP. The Porter-Cologne Act defines "water quality control plan" to include "water quality objectives". (Cal. Water Code§ 13050(j)). The statute defines "water quality objectives" as "limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." (Cal. Water Code§ 13050(h)). Objectives can be numeric or narrative. An example of a narrative objective is "no toxic pollutants in toxic amounts." (City of Burbank v. State Water Resources Control Bd. (2005) 35 Cal. 4th 613, 622, fn. 4).</p> <p>This narrative objective is also consistent with the statute because the phrase "in toxic amounts" establishes a limit or level. An objective determination could be made about when the addition of toxic substances results in toxic conditions in a specific water. Here, however, the proposed narrative objective violates the Porter-Cologne Act because it does not establish limits or levels. No one can objectively determine (as opposed to subjectively determine) whether the San Joaquin River complies with the objective. Any possibility of an objective determination is destroyed by the objective itself, which includes two laundry lists of factors but does not specify how they are to be used to ascertain compliance, and which specifically allows for other unspecified factors to be used: Maintain inflow conditions from the San Joaquin River Watershed to the Delta at Vernalis, sufficient to support and maintain the natural production of viable native San Joaquin River Watershed fish populations migrating through the Delta.</p> <p>Inflow conditions that reasonably contribute toward maintaining viable native migratory San Joaquin River fish populations include, but may not be limited to, flows that more closely mimic the natural hydrographic conditions to which native fish species are adapted, including the relative magnitude, duration, timing, and spatial extent of flows as they would naturally occur. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity. (DRSED at 3-8). Because there is no objective way to determine whether "inflow conditions" support "the natural production of viable native" fish populations, this objective does not establish "limits or levels" and therefore violates the Porter-Cologne Act. Although this language may help explain the Board's intention, the Board is not authorized to propose a water quality objective that does not contain limits or levels. It should be deleted.</p>	<p>The LSJR narrative flow objective is an expression of desired flow and biological conditions in the LSJR and three east-side tributaries. The LSJR narrative objective is similar in its level of specificity to other narrative flow objectives that have been adopted nationwide. The narrative objective describes the water quality condition needed to protect the resource. The terms in the LSJR narrative objective are specific with precise scientific and dictionary definitions and the overall statement of desired conditions is not vague. The LSJR narrative flow objective identifies the desired flow condition by establishing that flows need to be sufficient for supporting and maintaining the natural production of viable native SJR watershed fish populations migrating through the Delta. It is consistent with Water Code section 13050(h) in that it prescribes the "limits or levels of water quality constituents or characteristics" to reasonably protect beneficial uses. The phrase support and maintain means that there must be enough flow to provide, and continue providing, a basis for the existence of fish populations. The phrase natural production refers to naturally occurring fish populations as opposed to those originating in fish hatcheries. The narrative flow objective provides examples of indicators of fish population viability which include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity. The narrative flow objective also provides examples of flows that contribute to maintaining viable, native migratory SJR fish populations. These types of flows include flows that more closely mimic the natural hydrographic conditions, than existing flows on the eastside tributaries and LSJR, to which native fish species are adapted, including the relative magnitude, duration, timing, and spatial extent of flows as they would naturally occur.</p> <p>As the SED explains, the LSJR flow objective will be implemented through water rights and water quality actions, which will include enforceable requirements to achieve the flow objectives.</p> <p>Please refer to Master Response 2.1, Amendments to the Water Quality Control Plan, for additional response to comments asserting that the narrative flow objective is too vague.</p>
1345	13	<p>The Proposed Numeric Flow Criterion Violates the Porter-Cologne Water Quality Control Act ("Porter-Cologne").</p> <p>The proposed numeric flow criterion requires "a percent of unimpaired flow": "A percent of unimpaired flow between a lower and upper limit from each of the Merced, Tuolumne, and Stanislaus Rivers shall be maintained from February through June." (DRSED at 3-8). Although the DRSED identifies three alternatives that evaluate ranges of 20-30 percent, 30-50 percent, and 50-60 percent, they are really all one alternative, because the Board can</p>	<p>We disagree with all of the commenter's characterizations of the numeric flow objectives. The proposed numeric flow objective does indeed set forth a limit or level of water quality constituents or characteristics: it is a range of 30 to 50 percent of unimpaired flow, to be implemented with 40 percent as a starting percentage of unimpaired flow and adaptively managed under clear criteria, not based on whatever the Board pleases as commenter claims. To more clearly define the level of protection, the plan amendments at Appendix K have been revised to move the 40 percent starting percentage of unimpaired flow from the program of implementation to the numeric flow objective. Table 3, now requires maintenance of 40 percent</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>choose any percentage from 20 to 60 percent. [Footnote 9: "Ultimately, however, the State Water Board, in exercising its authority and responsibilities, may select a range within the LSJR [i.e., Lower San Joaquin River] alternatives analyzed that is consistent with the requirements of applicable law, including CEQA and the Porter-Cologne Water Quality Control Act. In other words, the Board may select a percent of unimpaired flow anywhere between the 20 and 60 percent range evaluated in this SED." (DRSED at 3-9).</p> <p>What's more, the Board can vary the percentage as it pleases: "The unimpaired flow objective does not have to be implemented in a way that requires rigid adherence with a fixed percent of unimpaired flow. LSJR Alternatives 2, 3, and 4 include an adaptive implementation element. This adaptive implementation element allows for flows under each alternative to be "shaped" or shifted in time to provide more functionally useful flows and to respond to changing information and conditions." (DRSED at 3-10). A water quality objective must have "limits or levels". The proposed numeric criterion appears at first indeed to have limits or levels, because of the many percentages specified. But, the apparent specificity is illusory. The proposed objective does not specify any limit or level. Instead, it announces the Board will, in the future, choose a limit or level and that the Board is likely to change that limit or level whenever it chooses.</p> <p>Because the objective itself does not specify a limit or level, no one can make an independent determination of whether compliance with that objective has been achieved. Here, the Board is proposing is a research project--not a regulatory scheme. The indeterminacy of the proposed objective admits, de-facto, the Board cannot justify any specific percentage. The flexibility of the "adaptive implementation element" concedes that the Board wants power to control water releases and diversions so that the Board can collect data that may--or may not--eventually support its proposed action. Because the proposed numeric flow objective does not provide objectively determinable "limits or levels," it violates Porter-Cologne.</p>	<p>of unimpaired flow, with an allowed adaptive range between 30 - 50 percent, inclusive, from each of the Stanislaus, Tuolumne, and Merced Rivers from February through June. The range, if adopted, would represent the Board's determination of a range of flow that reasonably protects the BU. With respect to claims that compliance cannot be determined, please be advised that the plan amendments have yet to be implemented to assign responsibility for meeting the water quality objectives. Adoption of the plan amendments does not impose any enforceable requirements on any entities, even though state agencies are generally obligated to comply with water quality control plans. Please see Master Response 1.2, Water Quality Control Plan Process, regarding implementation through water right proceedings. Please also refer to Master Response 2.1, Amendments to the Water Quality Control Plan, for additional response to comments asserting that the numeric flow objective is too vague.</p>
1345	14	<p>The Proposed Flow Objectives Violate Cal. Water Code § 13241.</p> <p>Cal. Water Code § 13241 specifies that water quality objectives must "ensure the reasonable protection" of beneficial uses:</p> <p>-Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance. . .</p> <p>-Beneficial uses for the lower San Joaquin River include municipal supply, agricultural supply, and groundwater recharge:</p> <p>-Municipal and Domestic Supply ("MUN") - Uses of water for community, military, or individual water supply.</p> <p>-Agricultural Supply ("AGR")--Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.</p> <p>-Ground Water Recharge ("GWR")--Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers. [Footnote 10: (California Regional Water</p>	<p>Please refer to Master Response 1.2, Water Quality Control Planning Process, for responses to comments regarding the water quality control planning process and consideration and protection of beneficial uses under Water Code § 13241.</p> <p>The SED addresses the impacts related to groundwater, agriculture, and service providers in Chapters 9, 11, and 13, respectively on a programmatic level appropriate for planning documents. Please see Master Response 1.1, General Comments, regarding why a programmatic analysis is appropriate for the plan amendments. Chapter 22 integrates the analyses in Chapters 9 and 13 to discuss disadvantaged communities. Please refer to Master Response 2.7, Disadvantaged Communities, for information regarding impacts related to disadvantaged communities. Please also refer to Master Response 3.4, Groundwater and the Sustainable Management Groundwater Act, for information regarding potential impacts of the plan amendments on groundwater.</p> <p>Please also refer to Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, regarding impacts to San Francisco.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>Quality Control Board, Central Valley Region (Revised July 2016), The Water Quality Control Plan (Basin Plan) For The California Regional Water Quality Control Board Central Valley Region, Fourth Edition Revised July 2016 (With Approved Amendments), The Sacramento River Basin And The San Joaquin River Basin (the "San Joaquin River Basin Plan") at 11-1.00.])</p> <p>Beneficial uses for groundwater in the region include municipal and agricultural supply: "Unless otherwise designated by the Regional Water Board, all ground waters in the Region are considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO)." (Id. at II-3.00). The San Joaquin River Basin Plan makes clear that protecting ground water requires meeting quantity objectives: "The protection and enhancement of beneficial uses require that certain quality and quantity objectives be met for surface and ground waters." (Id. at II-1.00).</p> <p>The proposed flow objectives violate Cal. Water Code § 13241 because they do not "ensure the reasonable protection" of the beneficial uses of municipal supply, agricultural supply, and groundwater recharge, and they do not ensure that reasonable quantity objectives be met for groundwater supply. The DRSED acknowledges that the proposed flow objectives will harm these beneficial uses by reducing the amount of water available for agriculture. It would also reduce groundwater recharge, leading to a lowering of groundwater levels, which will affect the availability of groundwater for "municipal supply"--in other words, the proposed flow objectives would cause groundwater levels to drop, thereby drying up some wells used by individuals and communities for drinking water. The proposed flow objectives would also affect the drinking water supply for the City and County of San Francisco.</p> <p>Although the DRSED does not fully describe all the harm it will cause to agriculture, to individuals, to poor communities who rely on shallow drinking water wells, and to big cities like San Francisco--the absence of a full description is a violation of CEQA--the DRSED says enough to leave no doubt that the Board intends to harm these beneficial uses, that the harm will be significant, that farmers will be hurt, and that both rich and poor will be left without a full supply of drinking water.</p>	
1345	15	<p>The Board Has Failed to Undertake the Required Balancing Among Beneficial Uses.</p> <p>As specified under Cal. Water Code§ 13241, the Board has a duty to protect all beneficial uses, including municipal and agricultural. "While the Board had a duty to adopt objectives to protect fish and wildlife uses and a program of implementation for achieving those objectives, in doing so the Board also had a duty to consider and protect all of the other beneficial uses to be made of water in the Bay-Delta, including municipal, industrial, and agricultural uses." (State Water Resources Control Ed. Cases (2006) 136 Cal.App.4th 674, 778). When uses conflict, the Board must balance competing interests. (Id).</p> <p>In undertaking the balancing, the Board must explain itself with sufficient specificity to ensure a court can properly review the Board's decision.</p> <p>". . . [W]e agree with the trial court that the Board failed to make necessary findings reflecting the balancing of interests between the domestic uses of the canal and the domestic uses of the export recipients in determining the "public interest." We recognize that such findings need not be stated with the formality required in a judicial proceeding but must be adequate enough to permit a reviewing court to determine whether they are</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process, for a discussion of the water quality control planning process, the consideration and protection of beneficial uses, and balancing competing uses of water in adopting water quality objectives and a program of implementation to achieve those objectives. The commenter relies on an appellate decision to argue that the Board must make findings on Water Code § 13241 factors. First, the quoted language from the appellate decision is not applicable here, since it pertains to the Board's quasi-judicial enforcement efforts where specific findings are clearly required. In contrast, the plan amendments are a quasi-legislative action. Second, the State Water Board does not need to make specific findings on Water Code section 13241 factors. (City of Arcadia v. State Water Resources Control Board (2010) 191 Cal.App.4th 156, 177.) We disagree that State Water Board is taking the position that salmon must protected no matter the harm to other beneficial uses. The State Water Board is well aware of the difficulty and challenges of balancing of competing beneficial uses of water.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>supported by sufficient evidence or a proper principle and to apprise the parties as to the reason for the administrative action in order that they may decide whether, and upon what grounds, additional proceedings should be initiated." (Racanelli, supra, (1986) 182 Cal.App.3d at 142, (ellipsis, quotation marks, and citations omitted)).</p> <p>Here the Board has done no balancing. On the contrary, it has taken the position of salmon over everything--that water must be given to salmon no matter how small the benefit and how great the harm to other beneficial uses. Because Cal. Water Code § 13 241 requires the Board to try to protect all beneficial uses, rather than protect one to the detriment of all others, the Board has abused its discretion.</p>	
1345	16	<p>If, as the Board asserts, "[f]ish species have not shown signs of recovery" in the more than 20 years since 1995 [Footnote 11: The Board last imposed flow objectives intended to protect fish in 1995.], then it is reasonable to conclude that the flow objectives have not been successful. There is little reason to believe that proposed flow objectives will succeed when everything else has failed. The DRSED all but acknowledges failure by noting that the objectives will not be sufficient to attain the temperature objectives, and by predicting that the flow objectives will increase the salmon population by only 1100 fish.</p> <p>The DRSED estimates that the proposed project will produce \$64 million of harm to agriculture and to people who need drinking water. (DRSED at ES-31). It acknowledges, however, that the cost to the City and County of San Francisco alone could be \$119 million for alternative 3, and \$208 million for alternative 4. (Id. at ES-37). The true costs are much higher: \$1.6 billion within MID and TID's boundaries alone.</p> <p>Worse still, the DRSED acknowledges that the project will make drinking water "completely unavailable in some areas": "A reduction in surface water supply would affect the groundwater aquifer by simultaneously causing a reduction in recharge volume (from a reduction in deep percolation from the distribution system and agricultural fields) and an increase in groundwater pumping (to replace lost surface water supplies). The reduction in surface water supply would therefore affect entities that rely upon groundwater as their principal source of drinking water by (1) increasing the need to drill deeper wells to continue to access groundwater, (2) increasing groundwater pumping costs, (3) degrading groundwater quality, and (4) making groundwater completely unavailable in some areas after some period of continued unrestricted groundwater pumping." (Id. at ES-35).</p> <p>The people in the Central Valley should not be deprived of safe, reliable drinking water for the possibility of increasing LSJR salmon by approximately 1,100 fish. What makes them so valuable that the City and County of San Francisco might have to spend \$200 million for them, and everyone else more than \$1 billion? Never have so many been forced to contribute so much water to save so few fish. Spending more than \$1 million dollars per salmon and depriving entire communities of a safe, reliable drinking water supply is clearly an unbalanced approach that violates the letter and spirit of the California water code.</p>	<p>Please refer to the response to comment 1345-1 regarding higher and more variable flows.</p> <p>Please refer to Master Response 3.1, Fish Protection, regarding the current pattern of fish decline and the need for increased flow, and the State Water Board's use of SalSim.</p> <p>The purpose of the environmental review process is to disclose potential environmental impacts on the public and decision-makers. In addition, the State Water Board will consider the potential economic effects based on the information in the SED and public comments, as required under Water Code Section 13141. The plan amendments identified and disclosed potential economic effects in : Chapter 11, Agricultural Resources; Chapter 20, Economic Analyses; Chapter 22, Integrated Discussion of Potential Municipal and Domestic Water Supply Management Options; and Appendix G, Agricultural Economic Effects of the Lower San Joaquin River Flow Alternatives: Methodology and Modeling Results. For additional information regarding economic effects please refer to the following master responses:</p> <ul style="list-style-type: none"> <li>• Master Response 8.0, Economic Analyses Framework</li> <li>• Master Response 8.1, Local Agricultural Economic Effects and the SWAP Model</li> <li>• Master Response 8.2, Regional Agricultural Economic Effects</li> <li>• Master Response 8.4, Non-Agricultural Economic Considerations</li> <li>• Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System</li> </ul> <p>The commenter's stated benefits to fish is incorrect and the State Water Board is not required to include a cost-benefit analysis, as the commenter seems to suggest. Please see Master Response 1.2, Water Quality Control Planning Process, regarding consideration of beneficial uses by the State Water Board. Please see Master Response 1.1, General Comments, regarding general responses to economic-related comments, including those attempting to compare costs and benefits.</p>
1345	17	<p>The Proposed Flow Objectives Violate Cal. Water Code § 13241(c).</p> <p>The Board has failed to comply with Cal. Water Code 13241(c), which requires the Board to consider what can reasonably be attained. Neither the Delta nor the Central Valley rivers can ever be restored to their natural conditions, at least not if "natural" refers to conditions before 1849. "The SED has failed to demonstrate an understanding of the current physical conditions and resources of the Tuolumne River." Further, that "Providing a "natural flow</p>	<p>Please refer to the response to comment 1345-1 regarding higher and more variable flows. The analysis in the plan amendments did not use unimpaired flow as representation of natural conditions. The intent of using the unimpaired flow approach was to allow increased instream flows for the protection of fish and wildlife beneficial uses, and capture the natural pattern of variability to retain the attributes of the natural flow regime to which native LSJR basin fish and wildlife adapted and that is important to support key ecosystem processes. Please refer to Master Response 3.1, Fish Protection, regarding the unimpaired flow</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>regime" to what is otherwise a completely modified, far from natural river-floodplain system is unlikely to lead to improvements to the anadromous fish populations of the Tuolumne River or the LSJR." (Technical Comments at p. 2).</p> <p>Notwithstanding a sophisticated technical analysis, one could call upon common sense to recognize that even if all the dams in the Central Valley no longer existed, the Delta and rivers would not be natural. The Delta and rivers have been artificially channelized and controlled by levees, canals, and bypasses. Development within the Central Valley has changed the amount of storm water that runs off the land, the pathway it takes, and what it picks up along the way. Among other things, so many of the dominant fish now residing in these river systems are not native as they were imported from the East Coast. Also, it is hatchery fish (as opposed to "natural fish") which constitute the vast majority (up to 100%) of the fish presently existing in tributaries. (See. Technical Comments at p.76; Id. at Appx. A).</p> <p>It does not make sense to impose requirements and spend money with the goal of attaining objectives that cannot be attained for other reasons. This concept is the obvious purpose of Cal. Water Code§ 1324(c). The code requires the Board ascertain, and then consider, what can "reasonably be achieved through the coordinated control of all factors which affect water quality in the area". (Id.). Even with the astronomical costs, in terms of water and money that the DRSED will impose, the Board concedes that flow criteria by themselves will not do the job: "The State Water Board also recognizes that Recommended Actions, including non-flow measures, such as habitat restoration, must also be part of efforts to comprehensively address Delta aquatic ecosystem needs as a whole." (DRSED, Appx K at 28).</p> <p>Unfortunately, the Board does not say what habitat needs to be restored, whether that restoration can reasonably be achieved, and whether the Board's goals for salmon (which are omitted from the document) can be attained. Because the Board does not know what can reasonably be achieved for the salmon at issue here, it cannot say whether the vast expenditures of water and money that it is proposing here will make any difference in the long run. Thus, it has not complied with an explicit statutory requirement.</p>	<p>approach.</p> <p>Please see Master Response 3.1 regarding the role of hatcheries.</p> <p>Please refer to Master Response 3.2, Surface Water Analyses and Modeling, regarding the calculation of unimpaired flow.</p> <p>The State Water Board is not conceding that the flow objectives will not reasonably protect fish and wildlife beneficial uses by virtue of recognizing that non-flow measures are also important. As the quoted language states, non-flow measures are desirable to address Delta aquatic ecosystem needs as a whole.</p> <p>The commenter selectively quotes Water Code § 13241 to argue that the State Water Board has failed to specify and consider "what can reasonably be attained." The section requires the Board, in establishing water quality objectives, to consider, among other factors, "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." Its focus is water quality conditions, not "what can reasonably be attained." The State Water Board has and will consider the water conditions that can reasonably be achieved through the coordinated control of all factors which affect water quality. Please refer to Master Response 1.2, Water Quality Control Planning Process, regarding Water Code § 13241, subd. (c), in relation to non-flow measures. Section 13241 does not specify how a water board must go about considering the specified factors and no findings are required. (City of Arcadia v. State Water Res. Control Bd. (2010) 191 Cal.App.4th 156, 177.) Thus, even assuming arguendo that non-flow measures are water quality conditions, the commenter's assertion that the Board had to somehow specify "what habitat needs to be restored" is simply incorrect. Water diversions, exports and competing uses of water have resulted in impairments to fish and wildlife beneficial uses. Coordinated control of these factors through the establishment of flow water quality objectives that protect fish and wildlife beneficial uses while considering competing uses of water is both achievable and necessary.</p>
1345	18	[ATT2: Figure #1. Disadvantaged communities by census block group.]	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.
1345	18	<p>The Proposed Flow Criteria are Improper Determinations of Water Rights Rather than True Water Quality Objectives.</p> <p>Porter-Cologne refers to "beneficial uses" and "water quality objectives", which are incorporated into a "water quality control plan." (Cal. Water Code§ 13241, §13050(t), (h), (j)). These are the California equivalents of what the federal Clean Water Act refers to as "designated uses" and "water quality criteria", which are incorporated into "water quality standards." (Clean Water Act§ 303(c)(2)(A), 33 USC§ 1313(c)(2)(A); see Cal. Water Code§ 13372 (provisions of division apply when "consistent. . .with the requirements for state programs implementing the Federal Water Pollution Control Act")). In accordance with the Clean Water Act, all new or revised water quality standards must be submitted to EPA, which can approve it or promulgate its own standard. (Clean Water Act§ 303(c)(2)(A), (c)(3), 33 USC§ 1313(c)(2)(A), (c)(3)).</p> <p>If the proposed flow objectives are true water quality objectives issued in accordance with</p>	<p>Please refer to Master Response 1.2, Water Quality Control Planning Process, and Master Response 1.1, General Comments, for responses to comments and additional information regarding State Water Board authorities under the Porter-Cologne Act, State Water Board responsibilities under the federal Clean Water Act, and the distinction between the program of implementation, a component of the Bay-Delta Plan, and future implementation of the Bay-Delta Plan in a water right or water quality proceeding.</p> <p>The plan amendments are not determinations of water rights. The commenter's assertion that the SED implies or tacitly acknowledges that the plan amendments are determinations of water rights is not correct. Adoption of the plan amendments, including the program of implementation, does not impose enforceable requirements on any entities, even though state agencies are generally obligated to comply with water quality control plans. (Id., § 13247.) Implementation of the plan objectives in a State Water Board adjudicative proceeding or by regulation will involve a specific exercise of the Board's authority to impose enforceable obligations on specific entities. (See Appendix K, Chapter IV, Program of Implementation.) ["The</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>Cal. Water Code § 13241, then they must be submitted to the United States Environmental Protection Agency ("U.S. EPA") for review and approval. However, the Board insists U.S. EPA "could not adopt standards for [flow and operations] under the Clean Water Act," and that any attempt by EPA to adopt standards of this sort would "fundamentally interfere with the State's water allocation authority." (DRSED at App. K at 5). [Footnote 12: "The State Water Board does not concede that it is required under the Clean Water Act to submit all parts of this plan to the USEPA. Assuming the USEPA has authority under the Clean Water Act to approve the objectives for flow and operations, the State Water Board believes that the USEPA could not adopt standards for these parameters under the Clean Water Act. If the USEPA attempted to adopt such standards, it could fundamentally interfere with the State's water allocation authority under section 101(g) of the Clean Water Act." (DRSED, app. K at 5, quotations omitted.)]</p> <p>This admission invalidates the proposed flow objectives. The Board tacitly acknowledges these objectives are really determinations of water rights, and the Board must use its water right authority to make them. Unfortunately, the Board has not conducted water rights hearings or otherwise used its water rights authority to reach these water rights decisions. The Board cannot adjudicate water rights under the guise of establishing water quality objectives--especially when it admits that the flow criteria are not true water quality objectives.</p>	<p>State Water Board will exercise its legislative or adjudicative power involving water rights and water quality to require implementation of the water quality objectives."]; see generally, State Water Resources Control Bd. Cases, supra, 136 Cal.App.4th at pp. 703-705, 706-712 [distinguishing between the 1995 Bay-Delta Plan's program of implementation and the Decision 1641 water rights proceeding implementing certain aspects of the 1995 Plan.]</p> <p>The State Water Board maintains that EPA adoption of flow objectives could fundamentally interfere with the authority of each state to allocate quantities of water within its jurisdiction. CWA Section 101(g) explicitly states that the CWA shall not supersede State authority to allocate quantities of water. State adoption of flow objectives, however, is consistent with section 101(g) of the CWA because the State has the authority to allocate quantities of water within its jurisdiction. US EPA regulations and the corresponding goals and provisions of the federal CWA allow states to adopt narrative and numeric criteria, including flow criteria, that address the physical and biological integrity of the Nation's waters (see CWA sections 101 and 303(c); see also 40 C.F.R. § 131.11(b)). Maintaining the State Water Board's position that EPA cannot interfere with each state's authority to allocate quantities of water neither invalidates the flow objectives nor is an acknowledgement that the flow objectives are water right determinations, as explained above. The flow objectives will have to be implemented through water right actions, but the objectives themselves do not make any such determination.</p>
1345	19	<p>The Proposed Narrative and Numeric Flow Objectives Violate the California Administrative Procedure Act ("APA").</p> <p>The AP A applies to revised plans adopted by the Board after 1992. (Gov. Code § 11353(b)(l)). The revised plans must comply "with the standards of necessity, authority, clarity, consistency, reference, and nonduplication set forth in subdivision (a) of [Government Code] Section 11349.1." (Gov. Code § 11353(b)(4)). Section 11349.1, in turn, specifies six standards: (1) Necessity. (2) Authority. (3) Clarity. (4) Consistency. (5) Reference. (6) Nonduplication. (Gov. Code § 11349.1) The proposed narrative and numeric flow objectives violate all of these requirements except reference.</p> <p>The APA defines "necessity" as the need for a regulation to effectuate the purpose of a statute: "'Necessity' means the record of the rulemaking proceeding demonstrates by substantial evidence the need for a regulation to effectuate the purpose of the statute, court decision, or other provision of law that the regulation implements, interprets, or makes specific, taking into account the totality of the record. For purposes of this standard, evidence includes, but is not limited to, facts, studies, and expert opinion." (Gov. Code § 11349(a)).</p> <p>Here the necessity standard is not met because there is no need to revise the basin plan and adopt new flow objectives. The Board proposes to initiate a research project rather than implementing a regulatory program. The indeterminacy of the proposal, and the insistence on adaptive management, make clear that the Board does not know what will be gained by the proposal, and what harm it will do to the other beneficial uses it is required to protect. The Board has not explained why it needs to increase the number of salmon in the LSJR by 1100 fish, especially considering the harm it will do to agriculture, groundwater and drinking water supplies.</p> <p>Under the APA "authority" is defined as "the provision of law which permits or obligates the agency to adopt, amend, or repeal a regulation." (Gov. Code § 11349(b)). Here the Board</p>	<p>OAL must review the regulatory provisions of the plan amendments "to determine compliance with the standards of necessity, authority, clarity, consistency, reference, and nonduplication" set forth in Government Code section 11349.1, subdivision (a). (Gov. Code, § 11353, subd (b)(4).) The comment alleges that the proposed narrative and numeric flow objectives violate all of these standards except for the reference standard. To the contrary, and as described below, the regulatory provisions meet the contested APA standards.</p> <p>The State Water Board has demonstrated the necessity for the regulatory provisions by describing the specific purpose of the plan amendments and why the amendments are required to carry out that purpose. As explained above, pursuant to state and federal law, the State Water Board is required to protect water quality that affects beneficial uses of water in the state. As discussed in the Executive Summary and Chapter 3, Alternatives Description, Section 3.2, Purpose and Goals, the Bay Delta Plan designates beneficial uses of water, establishes water quality objectives for the reasonable protection of those beneficial uses, provides a program of implementation for achieving the water quality objectives, and includes monitoring and special studies. The purpose of the plan amendments is to provide reasonable protection for fish and wildlife and agricultural beneficial uses. The amendments to the water quality objectives, program of implementation, monitoring and special studies, and other provisions of the Bay-Delta Plan are necessary to carry out that purpose. For example, it is necessary to amend the program of implementation to achieve the water quality objectives necessary to protect fish and wildlife beneficial uses.</p> <p>Any argument that it not necessary to revise the Bay-Delta Plan to adopt new flow objectives, for example, is belied by the scientific information in the SED describing the ecological crisis in the Delta. As discussed in the Executive Summary; Chapter 19, Analyses of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30; Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives; this master response; and Master Response 2.1, Amendments to the Water Quality Control Plan, the Bay-Delta ecosystem is in decline. Fish species have not shown signs of recovery since adoption of the 1995 Bay-Delta Plan objectives intended to protect fish and wildlife. As detailed in Master Response 3.1, Fish Benefits, scientific studies show that flow is major factor in the survival of fish. The proposed LSJR flow objective and plan of implementation are intended to reasonably</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>lacks authority to establish water quality objectives that lack "limits or levels," as explained above. Of particular importance, the APA defines "clarity" as "written or displayed so that the meaning of regulations will be easily understood by those persons directly affected by them." (Gov. Code§ 11349(c)). The DRSED's proposed regulation could not be more unclear. As the Board concedes, the proposed objectives are themselves uninterpretable. Their meaning will be specified by the Board, or by its Executive Officer, as time goes on. This lack of clarity violates the APA. Rather than continue this folly, the Board should wait until it has specific, scientifically credible numbers and then propose those numbers as water quality objectives.</p> <p>As used in the APA, "[c]onsistency" means being in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or other provisions of law. (Gov. Code§ 11349(d)). Here the proposed flow objectives conflict with the water-rights law, CEQA, Porter-Cologne, the Clean Water Act, and the void-for-vagueness doctrine, among other statutes and laws. Similarly, under the APA, "nonduplication" requires the identification of overlapping statutes, and a justification of any overlap. (Gov. Code § 11349(f)). Here the proposed flow objectives overlap with water-rights law, the Endangered Species Act and the Clean Water Act. The Board has not justified the overlap as required by law. Given the multiple violations of the APA, the Board should withdraw these objectives until such time as legally defensibly, scientifically credible objective can be proposed.</p>	<p>protect fish and wildlife by restoring more natural habitat conditions for native fish species. The LSJR narrative flow objective is an expression of the desired flow and biological conditions in the LSJR and three eastside tributaries that would reasonable protect fish and wildlife, including requiring flows to be managed in a manner that avoids causing adverse impacts to fish. The numeric flow objectives are designed to provide flow conditions that will attain the narrative objective. Please refer to Master Response 3.1, Fish Protection, for responses to comments regarding protection of fish and measurable benefits to aquatic resources from the plan amendments.</p> <p>As for the "authority" standard, the State Water Board clearly has the authority to adopt narrative and numeric water quality objectives, as explained in Master Response 2.1, Water Quality Control Plan Amendments. The "nonduplication" standard is "intended to prevent the indiscriminate incorporation of statutory language in a regulation." (Gov. Code, § 11349, subd. (f).) The plan amendments are not duplicative because they neither serve the same purpose as a state or federal statute or other regulation, nor do they incorporate existing statutory language. Indeed, as discussed in Appendix C, existing legal requirements to protect fish have not been sufficient to support and maintain the fishery. There are no requirements that provide the same protective level of flow that can be adaptively managed on a tributary basis as is afforded by the plan amendments. Moreover, there is no support for the allegation that the plan amendments conflict with other laws; to the contrary, the regulatory provisions meet the "consistency" standard because they carry out or are in harmony with state and federal laws requiring water quality protection, including the Porter-Cologne Act and the Clean Water Act. Finally, the plan amendments meet the "clarity" standard because they can be easily understood by persons directly affected by them. While some commenters appear to allege that the regulatory provisions are unclear, for example, because they afford flexibility in managing the required flows and do not require adherence to rigid numeric thresholds at prescribed times, such flexibility in the possible outcomes does not render the provisions unclear or capable of multiple meanings. Rather, the regulatory provisions clearly establish the water quality objectives and provide how they will implemented. (See Master Response 2.1 for further information.) In sum, given the current state of the Bay-Delta and native fish species populations, that prior actions have not been effective, and the broad scope of State Water Board's authorities, the regulatory provisions meet the standards of Government Code section 11349.1 subdivision (a).</p>
1345	20	<p>The Project has been Impermissibly Piecemealed.</p> <p>The federal Clean Water Act requires states to identify those waters for which effluent limits required by the act "are not stringent enough to implement any water quality standard applicable to such waters." (33 U.S.C. § 1313(d)(l)(A)). These waters are sometimes referred to as "impaired" waters, or as 303(d)-listed waters. [Footnote 13: <a href="http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml">http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml</a>] For each 303(d)-listed water, a state must "establish . . . the total maximum daily load, for those pollutants which the Administrator identifies . . . as suitable for such calculation." (33 U.S. C. § 1313 (d)(l)(C)). The EPA administrator as identified "all pollutants, under proper technical conditions, as being suitable for the calculation of total maximum daily loads." (43 Fed.Reg. 60662 (1978)). Total maximum daily loads are usually referred to as "TMDLs."</p> <p>The Board has 303(d)-listed three segments of the San Joaquin River for temperature: San Joaquin River (Stanislaus River to Delta Boundary); San Joaquin River (Tuolumne River to Stanislaus River); and San Joaquin River (Merced River to Tuolumne River). For each of these, the pollutant is "Temperature, water"; the source is "Unknown", and the expected TMDL date is 2021. To meet this deadline, the Board will have to start work on the TMDL soon, if it has not already.</p> <p>One of the purposes of the proposed flow criteria, according to the DRSED, is to improve</p>	<p>Please see response to comment 1345-21 on how the development of temperature TMDLs for the listed waters is not part of the Central Valley Regional Water Quality Control Board's work plan for the foreseeable future. The TMDLs, if the Central Valley Water Board develops and adopts them, are separate and independent projects than the plan amendments and no piecemealing of environmental review has occurred. Please see Master Response 1.2, Water Quality Control Planning Process, on what constitutes piecemealing under CEQA.</p> <p>The commenter asserts that even if the plan amendments are adopted further action to adopt TMDLs would be immediately necessary since the EPA temperature criteria will not be met 100% of the time. However, there is no evidence to support the assertion that further action would be immediately necessary. The commenter acknowledges temperature objectives have not been adopted for the San Joaquin River tributaries but asserts that using EPA temperature criteria as a benchmark for evaluating temperature-related impacts of the proposed LSJR alternatives on anadromous salmonids is compliance with a TMDL for temperature. That is inconsistent and incorrect.</p> <p>The State Water Board does not purport to establish temperature objectives for the plan area. That is beyond the scope of the plan amendments. In Chapter 5, Surface Hydrology and Water Quality, the description of the environmental setting does include consideration of water quality and listed impairments (see Tables 5.4 and 5.5). In addition, Chapter 19, Analysis of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30, and Appendix F.1, Hydrologic and Water Quality Modeling,</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>compliance with the temperature objective for the San Joaquin River. The Executive Summary, for example, provides a graphic showing that the temperature goal for the core rearing of salmon is not being met in most of 52 miles of the lower San Joaquin River. (DRSED at ES-41, fig. ES- 3). Nor are the other temperature goals consistently being met. (Id. at ES-42, table ES-15). The proposed flow criteria will increase the frequency of compliance, but not to 100%. Even under the best alternative, the temperature goal for the core rearing of salmon will be met only 56% of the time. (Id. at ES-41, fig. ES-3). None of the EPA temperature criteria will be met 100% of the time. (Id. at ES-42, table ES-15).</p> <p>The DRSED, in other words, admits that the proposed flow criteria will not be sufficient to achieve the temperature criterion. Because the flow criteria being proposed in the DRSED will not be enough to achieve the temperature objective, additional efforts will have to be made--efforts that are spelled out in the TMDL. Part of the project of protecting salmon is the establishment of TMDLs for temperature in the lower San Joaquin River, and the requirements and prohibitions imposed as a result of that TMDL. Although the Board has not identified what specific requirements and prohibitions that will be imposed as part of the temperature TMDLs, there appears to be only one trick in the Board's bag: taking water from upstream users and letting it flow downstream.</p> <p>It is therefore reasonable to conclude that the effects of the entire, non-piecemealed project will be much worse than those identified in the DRSED. After all, if the Board takes away half of the water a farmer needs, the farmer may be able to survive. But if it takes away all the water, the farmer cannot possibly survive. If the Board's decision causes groundwater levels to drop a little, then a water-supply well may still be able to provide some water. But if groundwater levels drop too far, then there will be no water for the users to pump. The supply of water to San Francisco could be cut back, producing severe urban stress.</p> <p>A TMDL, like an EIR, is an informational document. (City of Arcadia v. State Water Resources Control Bd. (2006) 135 Cal.App.4th 1392, 1414). "A TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and waterbodies." (Id. at 1415, quotation marks and square brackets omitted). Here, the Board admits that the proposed flow objectives are inadequate to achieve the applicable temperature objectives, which are intended to protect the very same salmon that proposed flow criteria are supposed to protect. It makes no sense to proceed with a fraction of the total salmon-protection project and pretend that the rest of the project doesn't exist.</p> <p>The Board must consider whether the temperature objectives are unattainable, meaning that there is no reasonable set of circumstances that can lead to their attainment. (Cal. Water Code § 13241(c). If they are unattainable, the Board should conduct a "use attainability analysis" and revise the beneficial use so that it can be attained. EPA regulations specifically authorize the Board to revise the beneficial use to be protected. (40 CFR § 131.10(g)). Because the TMDL requirements and prohibitions are part of the same project, and because they indisputably have the potential to affect the environment, they must be considered as part of the DRSED.</p>	<p>analyze potential temperature effects. However, the temperature analyses were necessary to show that, among other benefits, a numeric water quality objective for the LSJR of 40% unimpaired flow would meet the narrative water quality objective of supporting viable native San Joaquin River migratory fish populations by improving temperature conditions for critical February through June life stages. Because temperature TMDLs are not yet developed for the LSJR, and there is no current plan to develop them, it is speculative to assume when they may be developed and what they may require in addition to the plan amendments.</p> <p>The commenter states if temperature objectives cannot be attained, a use attainability objective should be done to revise the use. It is unclear what the commenter means by "revise the use." To the extent that the commenter is suggesting that existing beneficial use be eliminated or not protected, please see response to comment 1345-24 on the Clean Water Act's obligation to protect existing uses as specifically defined under the Act.</p> <p>For additional information regarding the scope of the plan amendments, please refer to Master Response 1.2, Water Quality Control Planning Process. Refer to Master Response 3.1, Fish Protection, regarding the adequacy of temperature modeling and use of EPA criteria.</p> <p>Please also refer to response to comment 1345-16 regarding the purpose of the environmental review process and the economic analyses performed.</p>
1345	21	<p>The Board Must Consider the Cumulative Effects of the Temperature TMDLs.</p> <p>Even if one were to argue that the temperature TMDLs are separate projects, their effects must be evaluated anyway because they are cumulative. "An EIR shall discuss cumulative</p>	<p>The existence of water bodies listed as impaired under 303(d) does not make a temperature TMDL for each of those water bodies a probable future project producing related or cumulative impacts at this time. The Clean Water Act does not set a deadline for the development of TMDLs following a listing decision by the EPA. (33 U.S.C. §1313(d); 40 C.F.R. § 130.7(d).) Almost a decade ago, in 2009, the Central Valley Regional</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3)." (14 CCR § 15230(a)). "Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (14 CCR § 15065(a)(3)).</p> <p>"The Agency must interpret this requirement in such a way as to afford the fullest possible protection of the environment." (Friends of Eel River, supra, (2003) 108 Cal.App.41 h at 868, quotation marks omitted). In Friends of the Eel, the EIR was inadequate because the agency did not sufficiently consider the cumulative effects of PERC relicensing proposals, which would decrease flow in the river and exacerbate the environmental effects caused by the project. (Id. at 869-870). Here the temperature TMDLs are future projects that will exacerbate the environmental effects of the current project under consideration, i.e., the proposed flow criteria. They will reduce the amount of water available for agriculture and drinking water, lower groundwater levels, dry up wells, and otherwise make the effects of the project under review much worse.</p> <p>They are undoubtedly significant, and they are not speculative. The TMDLs are required by federal law, and the Board has established an expected completion date. For these reasons, the effects of the temperature TMDLs must be considered as cumulative effects.</p>	<p>Water Quality Control Board projected a date of 2021 for adopting a TMDL. In the latest Clean Water Act section 303(d) impaired water bodies list (303(d) List), the LSJR between the Merced River and the Delta boundary remains on the 303(d) List for temperature, but the completion date has been extended to 2027 (See, e.g.,</p> <p><a href="https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/01304.shtml#44778">https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/01304.shtml#44778</a>). However, the development of such a TMDL is not part of the current Central Valley Regional Water Quality Control Board's current work plan or its work plan through fiscal year 2021. There are currently 778 impaired water body segments in the Central Valley that have yet to be addressed (see <a href="https://www.waterboards.ca.gov/centralvalley/board_info/exec_officer_reports/program_factsheets/fy1718/fy1718_tmdl_factsheet.pdf">https://www.waterboards.ca.gov/centralvalley/board_info/exec_officer_reports/program_factsheets/fy1718/fy1718_tmdl_factsheet.pdf</a>). Resource and other constraints preclude the Central Valley Regional Water Quality Control Board from addressing all listed waters in a timely manner. Rather, prioritizing the development of TMDLs depends on numerous factors, including the significance of the water body, the degree to which objectives are not met, potential threat to human health and the environment, potential for beneficial use protection and recovery, and the water quality benefits of activities in the watershed. On the last point, the plan amendments will result in more flows and reduced temperatures within the LSJR watershed, which would be relevant in future impairment assessment efforts for the 303(d) List. Temperature goals do not have to be met 100 percent of the time in order for the LSJR to potentially be removed from the 303(d) List in future impairment assessments. In any case, because there is no plan to develop temperature TMDLs for the LSJR, it is speculative to assume what they may require beyond the plan amendments and what related impacts could occur.</p> <p>Please refer to Master Response 6.1, Cumulative Analysis, for information regarding the approach to, and the adequacy of, the cumulative impact analysis.</p> <p>The plan amendments are to establish LSJR flow objectives and a program of implementation for the reasonable protection of fish and wildlife beneficial uses in the LSJR Watershed. Chapter 19, Analysis of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30, Section 19.2.4, Summary and Conclusions of Temperature Evaluation, summarizes the temperature evaluation and concludes that the plan amendments would be beneficial due to the changes to temperature suitable for different life stages of native fish populations.</p>
1345	22	<p>The Board Must Consider a Reasonable Alternative: Providing Turbidity by Relaxing Restrictions on Construction Sites.</p> <p>According to the Board, one of the benefits of increasing the flow is increased turbidity, which can reduce predation: "[I]t is expected that large flow pulses during the spring time period will help juvenile salmonids migrate successfully to the Delta as a result of increased velocities, increased turbidity pulses, and increased volumes of water, all of which can reduce predation vulnerability." (DRSED at ES-38)</p> <p>Turbidity is a measure of how much or how little light passes through a water sample. In this case, turbidity in the river comes from mud, which is often referred to as "sediment." Higher concentrations of mud or sediment in the water protect against predation. Serious concerns have been raised about the erosion of sediment from the Delta and Suisun Marsh, and the need to additional sediment to offset the loss of valuable habitat and to raise the levels of the wetlands to keep pace with rising sea levels. The goal of increasing protective turbidity can be achieved far more easily than through the proposed objective. The Board has issued a general construction stormwater permit that requires construction sites to implement measures, known as "best management practices" or "BMPs," that reduce the amount of mud discharged into waters.</p>	<p>Please see Master Response 2.4, Alternatives to the Water Quality Control Plan, regarding the reasonable range of feasible alternatives evaluated in the SED. Adjusting the turbidity by relaxing restrictions at construction sites would not meet the purposes and needs for the plan amendments described in Chapter 3, Section 3.2, Purposes and Goals, and Master Response 2.4, because it would not: (1) Maintain inflow conditions from the SJR Watershed sufficient to support and maintain the natural production of viable native fish populations migrating through the Delta; (2) Provide flows that more closely mimic the natural hydrographic conditions (including frequency, timing, magnitude, and duration of natural flows) in the LSJR and three eastside, salmon-bearing tributaries—the Stanislaus, Tuolumne, and Merced Rivers—to which these migratory native fish species are adapted; (3) Allow adaptive implementation of flows that will afford maximum flexibility in establishing beneficial habitat conditions for native fishes... and (4) Promote transparency in decision-making and provide certainty to the regulated community by expressing flow requirements for the protection of fish and wildlife as a share of the total quantity of water available for all beneficial uses; and (5) [T]ake into consideration all of the demands being made and to be made on waters in the LSJR and the three eastside, salmon-bearing tributaries and the factors to be considered for establishing water quality objectives in Water Code Section 13241, including, but not limited to, past, present, and probable future beneficial uses and economic considerations.</p> <p>Furthermore, turbidity requirements for construction sites are designed to prevent excessive turbidity during the typical construction season, which, for a number of reasons (feasibility of in-water work,</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>(<a href="http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml">http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml</a>).</p> <p>By imposing a "numeric action level" of 250 NTU for turbidity, the stormwater permit forces construction sites to reduce their discharges of turbidity. It make no sense for the Board to take water away from water users for the purpose of increasing turbidity, while at the same time forcing construction sites to take action that has the effect of reducing turbidity. To be sure, the proposed flow objectives would do more than increase turbidity. But the other things it would do are all directed at the same goal, which is to increase the populations of salmon.</p> <p>The increase in turbidity that could be achieved by eliminating the turbidity restrictions on construction sites appears likely to be far greater than the increase that could be obtained with the proposed flow objective. It is possible that the greater protection provided by this increase in turbidity would by itself achieve the objective of the flow increase. Because the Board has not considered this alternative, it cannot say. The Board should therefore evaluate the alternative of protecting salmon by increasing turbidity from construction sites rather than the flow objective.</p>	<p>avoidance of sensitive life stages, worker safety) is limited to the summer dry season when flows are stable and turbidity is naturally low. In addition, any increases in turbidity resulting from construction activities would be localized in nature and would have negligible effects on large-scale sediment dynamics associated with peak flows in the winter and spring. As discussed in Master Response 3.1, Fish Protection, and Master Response 5.2, Incorporation of Non-Flow Measures, flow is a key driver of hydrologic health for fish and wildlife. Finally, any alternative that involves not regulating turbidity discharges in stormwater to meet water quality standards violates the Clean Water Act, and is, therefore, infeasible under CEQA. Section 402(p)(3)(A) of the Clean Water Act requires that permits for stormwater discharges associated with industrial activity include requirements necessary to meet water quality standards.</p>
1345	23	<p>The Proposed Flow Objectives Commit Waste in Violation of Article X, Section 2 of the California Constitution.</p> <p>In 1926, Amelia Herminghaus prevailed in her suit against Southern California Edison. (Herminghaus v. Southern California Edison Co. (1926) 200 Cal. 81). (Herminghaus) Ms. Herminghaus asserted, and the trial court found, that in the spring the San Joaquin River flooded her land and left a very fertile silt deposit: "the natural flow of the waters of the San Joaquin River is variable in quantity, being more abundant during the period of rainfall in the winter season and also during the late spring and summer when the snows upon its watershed in the high Sierras melt and contribute their accretion to said river; that during these periods in the augmented natural flow of said river the waters thereof flowed naturally out and over the plaintiffs' said lands and saturated the same and deposited thereon a very fertile silt which enriched said land and caused an abundant growth of grasses thereon as the same would not have grown except for said natural irrigation by the overflow of said waters and the deposit of said silt. . ." (Id. at 93).</p> <p>Southern California Edison wanted to build a system of dams and reservoirs upstream, which would have captured the peak spring flows, thereby preventing them from flooding the land owned by Ms. Herminghaus and depriving her of that very fertile silt deposit. The California Supreme Court ruled that the riparian right of Ms. Herminghaus prevailed. (Id. at 108-113). "The voters overturned Herminghaus in the 1928 election by adopting article X, section 2. . ." (Capistrano Taxpayers Assn., Inc. v. City of San Juan Capistrano (2015) 235 Cal.App.4th 1493, 1509). Herminghaus authorized what the dissent "perceived to be a plain waste of good water":</p> <p>"The Herminghaus decision, as Justice Shenk wrote in his dissent there, allowed downstream riparian landowners--basically farmers owning land adjacent to a river--to claim 99 percent of the flow of the San Joaquin River even though they were actually using less than 1 percent of that flow. To compound that anomaly, the downstream riparian landowners' claims came at the expense of the efforts of an electric utility company to generate electricity for general, beneficial use by building reservoirs at various points upstream on the river. In the process of upholding the downstream landowners' "riparian rights" over the rights of the electric company to use the water to make electricity, the</p>	<p>The State Water Board is proposing the plan amendment because of its responsibility to reasonably protect fish and wildlife under the Porter-Cologne Water Quality Control Act, not because of any "quasi-religious belief that salmon are more important than anything else." At times up to 90% of surface water is being diverted from Stanislaus, Tuolumne, and Merced Rivers and fish and wildlife beneficial uses have been adversely affected. The scientific evidence presented in Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flows and Southern Delta Salinity Objectives is clear that more flows are needed February – June to improve conditions for fish. Reasonable protection of fish and wildlife beneficial uses is not an unreasonable waste of water. The State Water Board will consider competing uses of water when considering whether to adopt the proposed plan amendment. Please see Master Response 1.1 General Comments, regarding the substantial evidence standard. Please see Master Response 1.2, Water Quality Control Planning Process regarding the authorities and regulations governing the process.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>Herminghaus majority invalidated legislation aimed at preserving water in the state for a reasonable beneficial use, thereby countenancing what Justice Shenk perceived to be a plain waste of good water." (Id. at 1509).</p> <p>Here the Board's position is remarkably close the position of Ms. Herminghaus. It wants to take as much as 60% of the flow of the river to increase flooding along of the riverbanks, just as Ms. Herminghaus did, even though it would be committing a huge amount of water for a few fish. The proposed project, in short, is a plain waste of good water. Even before Herminghaus, the California Supreme Court had considered the demands of the City of Antioch, which wanted a flow of 35,000 cubic feet per second maintained so that it could take less than one cubic foot per second of water. (Antioch v. Williams Irrigation Dist. (1922) 188 Cal. 451, 461).</p> <p>The Court reasoned that it "would be extremely unreasonable and unjust to the inhabitants of the valleys above and highly detrimental to the public interests besides," and held that "an appropriator of fresh water from one of these streams at a point near its outlet to the sea does not, by such appropriation, acquire the right to insist that subsequent appropriators above shall leave enough water flowing in the stream to hold the salt water of the incoming tides below his point of diversion." (Id. at 465).</p> <p>The Board will undoubtedly point to the Joslin case, in which the California Supreme Court held that although "what is a reasonable use of water depends on the circumstances of each case, such an inquiry cannot be resolved in vacuo isolated from statewide considerations of transcendent importance." (Joslin v. Marin Municipal Water Dist. (1967) 67 Cal.2d 132, 140). But Joslin was a pro-dam case, not a pro-fish case. Mr. Joslin, like Ms. Herminghaus, relied on spring floods to bring his land a valuable benefit. For Mr. Joslin, the benefit was gravel, which he harvested and sold. When the water district built a dam and reservoir (Nicasio Reservoir), his supply of gravel was cut off, and he sued for damages. The California Supreme Court held that his use had become unreasonable, and therefore that he was not entitled to damages. (Id. at 141).</p> <p>In Joslin, the California Supreme Court recognized the transcendent importance of conserving water in reservoirs: "Paramount among these [statewide considerations of transcendent importance] we see the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in the 1928 amendment." (Id. at 140).</p> <p>Even the Mono Lake case, which greatly expanded the Board's powers and the public trust doctrine, acknowledged that need "to make efficient use of California's limited water resources": "The population and economy of this state depend upon the appropriation of vast quantities of water for uses unrelated to in-stream trust values. California's Constitution [Footnote 14: See, e.g., Cal. Constitution Art. X, § 2.], statutes [Footnote 15: See, e.g., Cal. Water Code, §§ 100, 104.], decisions [Footnote 16: See, e.g., Waterford Irrig. Dist. v. Turlock Irrig. Dist. (1920) 50 Cal.App. 213.], and commentators [Footnote 17: See, e.g., Hutchins, The Cal. Law of Water Rights, op. cit. supra, p.11] all emphasize the need to make efficient use of California's limited water resources: all recognize, at least implicitly, that efficient use requires diverting water from in-stream uses. Now that the economy and population centers of this state have developed in reliance upon appropriated water, it would be disingenuous to hold that such appropriations are and have always been improper to the extent that they harm public trust uses, and can be justified only upon theories of reliance or estoppel." (National Audubon Society v. Superior Court (1983) 33 Cal.3d 419,</p>	

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>446).</p> <p>Here, the Board proposes to return to the days of Herminghaus, where dams were prohibited from diverting the natural flow, and where vast quantities of water were wasted in order to obtain small benefits. Because they would require so much water for so few fish, the proposed flow objectives would be an unreasonable use in violation of Article X, § 2 of California's Constitution. Rather than honoring Article X, § 2 and its historical importance in allowing for the construction of reservoirs and the storage of water for agricultural and drinking water supply, the Board threatens to use that provision against anyone who replaces lost surface water by pumping more groundwater:</p> <p>"In order to help ensure that actions taken in response to implementation of the LSJR flow objectives do not result in unreasonable redirected impacts to groundwater resources, the State Water Board will take actions as necessary pursuant to its authorities, including its authorities to prevent the waste, unreasonable use, unreasonable method of use, and unreasonable method of diversion of water (Cal. Const., art. X, § 2; Wat. Code, §§ 100, 275) and to enforce the Sustainable Groundwater Management Act (SGMA) (Wat. Code, § 10720 et seq.)." (DRSED, Appx. Kat 28).</p> <p>The Board's threat to take away existing rights to divert and store water in dams, and its insistence on the proposed flow objectives, arise from a quasi-religious belief that salmon are more important to anything else. Protecting the environment, the Board might say, is the consideration of statewide importance that is transcendent over everything else--salmon over everything. But the Board has not provided any substantial evidence on the statewide need for those salmon. What is the economic value of those salmon? Why is the Delta's "crisis," which apparently refers to its declining fish populations, more important than the cutting off of drinking water to poor small communities in the Central Valley and to the City and County of San Francisco? Why are those fish more important than the loss of water essential to farmers in the Central Valley, and to all those people who depend on farming for their livelihoods? The Board's quasi-religious belief should not dictate California's water policy.</p>	
1345	24	<p>The Proposed Flow Objectives Violate the Clean Water Act.</p> <p>The proposed flow objectives are not true water quality objectives, but rather are water rights determinations. Couching a water rights determination as a water quality objective violates the federal Clean Water Act: "Consistent with section 101(g) and 518(a) of the Clean Water Act, water quality standards shall not be construed to supersede or abrogate rights to quantities of water." (40 CFR § 131.4(a)). The proposed objectives also violate the Clean Water Act because they do not protect the beneficial uses. The Board must adopt objectives that protect the beneficial uses: "States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use." (40 CFR § 131.11 (a)).</p> <p>EPA reviews water quality objectives to ascertain whether they are based on sound science and protect the beneficial uses: Under section 303(c) of the Act, EPA is to review and to approve or disapprove State-adopted water quality standards. The review involves a determination of: ". . . (2) Whether the State has adopted criteria that protect the designated water uses based on sound scientific rationale consistent with § 131.11." (40 CFR § 131.5(a)). Here, the proposed objectives are not based on a sound scientific rationale.</p>	<p>The commenter stated that the coldwater freshwater habitat (COLD) beneficial use must be removed in the Bay-Delta Plan, alleging that it appears to be unattainable because temperature goals cannot be achieved 100 percent of the time. The commenter argued that the criteria for de-designating a beneficial use under 40 CFR §131.3 of the Clean Water Act's regulations are met, due to low flow conditions, human-caused conditions, hydrologic modifications, physical conditions, and widespread economic harm. Therefore, the commenter stated that the State Water Board should conduct a use attainability analysis to avoid impacts associated with the flow objectives. The commenter's arguments are fundamentally at odds with the Clean Water Act and its goals to restore and maintain the integrity of the nation's waters, including the goal to make waters fishable and swimmable. Instead of protecting existing beneficial uses, the commenter seeks to eliminate them where they have been adversely affected. As explained below, the Clean Water Act does not sanction such a result and no changes have been made.</p> <p>The Clean Water Act regulations generally prohibit the removal of an existing use. They expressly provide that states may not remove designated uses if they are existing uses, unless a use requiring more stringent criteria is added. (40 CFR § 131.10(h)(1).) "Existing uses" are those are "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." (40 CFR § 131.3(e).) The regulations also require that existing instream uses and the level of water quality necessary to protect the existing uses be maintained and protected. (40 CFR § 131.12(a)(1).) The COLD beneficial use is an existing use that cannot be eliminated, but rather must be protected.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>Nor do they protect the beneficial uses.</p> <p>As the Board acknowledges, the proposed flow objectives cannot produce full compliance with the temperature objectives. (DRS ED at ES-41). At the mouth of the San Joaquin River, the temperature objective would be achieved only about half the time. (Id). If the temperature objective is really needed to protect the beneficial use--apparently "Cold Freshwater Habitat ("COLD")" (DRS ED, app. K at 11)--then the establishment of flow objectives (which are more like programs of implementation) that do not attain the temperature objective is a violation of the Clean Water Act.</p> <p>The Clean Water Act specifies that there should be an interim goal that, "wherever attainable . . . provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water". (Clean Water Act§ 101(a)(2), 33 USC§ 1251(a)(2)). Here, the COLD beneficial use appears not to be attainable. Beneficial uses (which the Clean Water Act refers to as "designated uses") should be removed. The Board was not and is not required to maintain the COLD use: "States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries." (40 CFR § 131.10(c)).</p> <p>A use may be removed if it is not being attained and at least one of several specific conditions is met: States may remove a designated use which is not an existing use, as defined in § 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:</p> <p>"(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or;</p> <p>(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or</p> <p>(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or</p> <p>(4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or</p> <p>(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or</p> <p>(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact." (40 CFR § 131.10(g)).</p> <p>The lower San Joaquin River meets several of these conditions, including those for low flow conditions, human caused conditions, hydrologic modifications, physical conditions, and widespread economic harm. The Board should therefore perform the use attainability analysis to determine whether the COLD use can be attained. If it cannot, then there is no reason to generate the extreme costs and hardships that the proposed flow objectives</p>	<p>Hypothetically speaking, even if an existing beneficial use were to be severely impaired or eliminated from waters, states would still be required to establish water quality criteria to protect the use because it is considered an existing use under the Clean Water Act regulations. In addition, designated beneficial uses, such as the COLD beneficial use, are part of water quality standards whether or not they are being attained. (40 CFR §131.3(f).) Finally, the commenter's suggestion for a use attainability analysis to remove a designated beneficial use is not applicable to existing uses. (40 CFR 131.11(g).)</p> <p>The proposed flow objectives are based on sound scientific rationale and protect fish and wildlife beneficial uses. See Chapters 5,7, 9 and 19 and Master Response 3.1, Fish Protection.</p> <p>The commenter stated that municipal uses is the most sensitive use and that the Clean Water Act regulations require that where there are conflicts among uses, the most sensitive uses must be protected. The regulations do not support such an interpretation. Rather, they state that when establishing water quality criteria (water quality objectives under the Porter-Cologne Act) for a water body with multiple use designations, the criteria must support the most sensitive use. (40 CFR § 131.12(a).) What this means is that the criteria must be sufficient to protect the most sensitive use, not that the most sensitive use must be protected to the exclusion of other uses. The LSJR flow objectives address flow and they support the most sensitive fish and wildlife beneficial use, native salmonids.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>would produce.</p> <p>Rather than specify a balancing of objectives, the Clean Water Act requires that where there are conflicts the most sensitive use must be protected: "For waters with multiple use designations, the criteria shall support the most sensitive use." (40 CFR§ 131.5(a)). Here the most sensitive use is surely the provision of drinking water to people, especially to poor communities. Surely the production of another 1100 fish, or any number of fish, cannot put human lives in jeopardy. Here the Board acknowledges that the proposed objectives will lower groundwater, thereby drying up wells that are used for drinking water as well as agricultural supply. Cutting off the supply of drinking water from farmers and communities does not "support the most sensitive use" of Municipal and Domestic Supply (MUN)." (DRSED, Appx. Kat 10; San Joaquin River Basin Plan at II-1.00).</p> <p>To comply with the Clean Water Act, the Board must do more than say that no one will really die of thirst, that they will find some way of getting water. The question is whether this most sensitive use is being adequately protected. The Board has acknowledged that people will be deprived of their drinking water. That is enough to establish a Clean Water Act violation. The use is not being protected.</p>	
1345	25	<p>The DRSED's Program of Implementation Will Constitute a Compensable Taking under the Fifth Amendment.</p> <p>The DRSED provides that the when the LSJR flow objectives are implemented, the Board "will include minimum reservoir carryover storage targets or other requirements. . ." (DRSED, Appx. K, p. 28), including things like minimum end of September storage requirements, minimum diversion levels, and maximum allowable draws from storage (DRSED, Appx. F, p. F.I-31). While the DRSED does not establish any specific carryover storage or other requirements for any party or reservoir, it notes that such requirements will be needed because the additional streamflow requirements of the LSJR alternatives "require adjustment of parameters to ensure feasibility for the 82-year simulation so that the reservoirs are not drained entirely in the worst droughts of record." (DRSED, Appx. F, p. F.I-31). And while the scope and magnitude of such requirements are yet unknown, they are expected to reduce the available water supply for consumptive use, particularly in dry and critical years. (Jan.3, 2017 Hearing Tr., p. 24, ln. 18-24).</p> <p>Additionally, the DRSED provides that in some cases, the volume equivalent to that which would have been released via the unimpaired flow percentage from February through June can be treated as a block of water and a portion released outside of the February through June period, including in the following year. (DRS ED, Appx. K., p. 30-31). For such a scheme to work, MID and TID, as owners of the New Don Pedro Dam and reservoir, will be required to divert into storage a quantity of water, maintain such quantity of water in storage, and then release such water from the dam at a later date.</p> <p>All of these actions--requiring MID and TID to divert water into storage, requiring MID and TID to leave water in storage and refrain from diverting it for consumptive use, and requiring MID and TID to release water from storage for the benefit of fish and wildlife located downstream--constitute compensable takings under the Fifth Amendment to the United States Constitution. [Footnote 18: Compensation will be required even if the appropriation is based upon the SWB's alleged public trust authority. (See National Audubon Soc. v. Superior Court (1983) 33 Cal.3d 419, 440, citing Illinois Central Railroad Co. v. Illinois, 146 U.S. 387, 455, for proposition that use of public trust to order removal of</p>	<p>As discussed in response to Comment 1345-27, because water rights are non-possessory rights of use subject to the overriding limitations and restrictions of California's reasonable use and public trust doctrines, implementation of the Plan amendments do not result in a taking requiring compensation. The California Supreme Court has "rejected the claim that establishment of the public trust constituted a taking of property for which compensation was required." (National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 440). Please see response to Comment 1345-27 on why the plan amendments do not constitute a compensable taking.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		improvements on public trust lands would require compensation.]	
1345	26	<p>MID and TID Have Private Property Rights Taken for a Public Purpose.</p> <p>To constitute a compensable taking under the Fifth Amendment, the government must take private property for public use. (<i>Klamath Irr. v. U.S.</i>, 129 Fed. Cl. 722 (2016)). The physical facilities necessary to effectuate the Board's plan--the dams, canals, drains and other facilities MID and TID use to divert, store and deliver water from the Tuolumne River--are all private property facilities owned, operated, built and maintained by MID and TID.</p> <p>Further, the pre-and post-1914 appropriative water rights held by MID and TID are private property which cannot be taken by government action without just compensation. (See, e.g., <i>United States v. State Water Res. Control Bd.</i> (1986) 182 Cal.App.3d 82, 100). The commandeering of MID and TID's storage at New Don Pedro Dam and reservoir and subsequent release of stored water for the benefit of fish and wildlife downstream will be considered a public use for purposes of the Fifth Amendment. (<i>Casitas Mun. Water Dist. v. United States</i> (Fed.Cir. 2008) 543 F.3d 1276, 1292-1293.) (<i>Castias III.</i>)</p>	Please see response to comment 1345-27.
1345	27	<p>The DRSED's Program of Implementation Constitutes a Physical Taking.</p> <p>Regulatory action by a governmental entity is considered a per se, physical taking if it (1) requires the owner to suffer a permanent physical invasion of property, no matter how small (<i>Loretto v. Teleprompter Manhattan CATV Corp.</i>, (1982) 458 U.S. 419,434-435, or (2) completely deprives the owner of all economically beneficial use of the property. (<i>Lucas v. S.C. Coastal Council</i>, (1992) 505 U.S. 1003, 1019).</p> <p>The carryover storage and withdrawal limitations of the DRSED constitute permanent physical invasions of MID and TID's New Don Pedro reservoir. Instructing MID and TID how much water they must store in New Don Pedro for future release to satisfy non-consumptive uses, and limiting the amount of stored water that they can release from storage for consumptive uses, are clear physical invasions of New Don Pedro Dam and reservoir by the Board.</p> <p>For all intents and purposes, the Board will have taken for itself some of the available storage space in New Don Pedro which currently belongs to MID and TID. The DRSED thus constitutes a "classic taking" via physical appropriation of available storage space in New Don Pedro Reservoir by the Board. (See, e.g., <i>United States v. Security Industrial Bank</i>, (1982) 459 U.S. 70, 78). The requirement to release water stored in New Don Pedro Reservoir for purposes of fish and wildlife enhancement likewise constitutes a per se, physical taking of water rights owned by MID and TID. Once the stored water is taken and released for benefit of fish and wildlife, it is forever gone from the Districts, no different than if the Board piped the water from New Don Pedro to a different location. (<i>Casitas III</i>, <i>Supra</i>, at 1294).</p> <p>The government caused storage and release of water away from MID and TID will be analyzed under the physical takings rubric. (<i>Casitas III</i>, <i>Supra</i>, at 543 F.3d 1276, 1298; See also <i>Washoe Cty., Nev. v. US.</i>, 319 F.3d 1320, 1326 (Fed.Cir.2003) [physical taking where government has "decreased the amount of water accessible by the owner of the water rights."]). Once the DRS ED is adopted and allocates responsibility for implementing the DRSED's requirements, MID and TID will seek compensation for both the value of the storage space in Don Pedro reservoir taken by the Board, as well as the value of the water</p>	<p>This comment does not provide a basis for modifying the plan amendments or raise significant environmental issues. As described in Executive Summary, Section ES 8.1, LSJR Alternatives, Chapter 3, Alternatives Description, and Appendix K, Revised Water Quality Control Plan, the plan amendments would require LSJR flow objectives for February through June be implemented by requiring a certain percentage of unimpaired flow from the Stanislaus, Tuolumne, and Merced Rivers. A portion of the February through June unimpaired flow may be delayed until after June to prevent adverse effects to fisheries, including temperature, which would otherwise result. The State Water Board may impose minimum reservoir storage targets or other requirements to help ensure that providing flows to meet the flow objectives will not have adverse temperature impacts on fish and wildlife.</p> <p>As discussed in Appendix F.1, Hydrologic and Water Quality Modeling, the carryover storage assumptions used in the WSE model simulations are not establishing regulatory requirements at this time to avoid constraining future plan implementation; the assumptions provide a reasonable representation of reservoir operations that could meet streamflow requirements, carryover storage guidelines, preserve a portion of storage for the following year's supply, and maintain cold pools to determine the significance of impacts, pursuant to CEQA. For further discussion of the reservoir operation assumptions incorporated into the Water Supply Effects (WSE) model, including guidelines for carryover storage, please see Master Response 3.2, Surface Water Analyses and Modeling.</p> <p>The commenter asserts that the State Water Board's action requires compensation under the Takings Clause of the United States Constitution because it will result in a physical invasion of property (U.S. Const. Amend. V; <i>Lucas v. South Carolina Coastal Council</i> (1992) 505 U.S. 1003, 1015). The United States Supreme Court has acknowledged that the physical taking test must be reserved for the "relative rare" cases in which the physical occupation can be "easily identified," such as "[w]hen the government physically takes possession of an interest in property for some public purpose" or otherwise directly appropriates or occupies private property for its own use or use by a third party (<i>Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency</i> (2002) 535 U.S. 302, 322, 324). The requirement that there be an actual physical occupation, invasion, or appropriation of property by the government is the defining characteristic of a physical taking. Use restrictions, including regulatory requirements that have the effect of limiting the amount of water that can be diverted or used, do not constitute a physical invasion (<i>Allegretti &amp; Co. v.</i></p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		rights taken.	<p>County of Imperial (2006) 138 Cal.App.4th 1261, 1273).</p> <p>The comment raises hypothetical issues concerning the implementation of plan amendments that will be addressed in a future, separate proceeding. A future potential requirement regarding as-yet-undetermined reservoir storage targets is not sufficient to demonstrate an actual impairment of a right to use water that precludes implementation of the plan amendments. Please see Master Response 1.2, Water Quality Control Planning Process, for discussion on the scope of the water quality control planning process and Bay-Delta proceedings, including State Water Board protection of beneficial uses in the Bay-Delta and tributary watersheds through independent proceedings.</p> <p>Even if the courts were to find a physical invasion or a loss of all economic value, the courts hold that there is no taking if the property right does not extend to conducting the activity or imposing harm that government prevents the property owner from carrying out, as the government is imposing limitations that inhere in the title of the property. “[I]n order for there to be a cognizable property interest sufficient to support a takings claim,” the claimant must show that he or she actually possesses a right to use the property allegedly taken (American Pelagic Fishing Co. v. United States (Fed. Cir. 2004) 379 F.3d 1363, 1377). All water in California is the property of the people of the State and is owned in trust for them by the State (Wat. Code, §§ 102, 1001; Kidd v Laird (1860) 15 Cal. 161, 179-180). Water rights in California are non-possessory rights of use only; there are no rights to the corpus of the water and no water right holder has a vested right to divert a specified quantity of water without limitation (Eddy v. Simpson (1853) 3 Cal. 249, 252; United States v. State Water Resources Control Bd. (186) 182 Cal.App.3d. 82, pp. 100, 105-106, 147). Rather, the right is to use up to a certain quantity of water, subject to the overriding limitations and restrictions of California’s reasonable use and public trust doctrines, which inhere in the water right itself (National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 437, 440, 445, 447; Joslin v. Marin Municipal Water Dist., (1967) 67 Cal.2d 132, 144-145). Pursuant to the reasonable use and public trust doctrines, a water right holder may be prevented from diverting the maximum quantity of water under its water rights in order to prevent harm to fishery resources and other beneficial uses of the source of water from which the water is diverted. This includes preventing deterioration of water quality that impairs beneficial uses (United States v. State Water Resources Control Bd., supra, 182 Cal.App.3d at p. 130; see State Water Resources Control Bd. Cases (2006) 138 Cal.App.4th 674, 778-779 [State Water Board’s development and implementation of water quality control plan largely fulfills its obligations under the public trust doctrine]). Such limitation does not infringe on any vested right. Thus, the regulation of activities that have the potential to affect public trust resources or to contravene the reasonable use doctrine cannot result in a taking because no one has a property right in the unlimited and unregulated use of surface water in California.</p> <p>Further, the Plan amendments do not require a water right holder to divert water to storage, as the comment inaccurately suggests. Nor would the State Water Board take available storage space for itself. Rather, the purpose of the plan amendments is to protect the beneficial uses of the waters of the State, which belong to the people of the State, by imposing requirements on the diversion and use of water through water right or water quality actions (Wat. Code, §§ 102, 13241). Under the proposed plan amendments, a water right holder who is responsible for meeting the unimpaired flow requirement could do so by reducing surface water diversions through bypassing flows, releasing stored water, or by reoperating reservoirs. There is no requirement to divert to storage in the first instance; rather conditions may be imposed that address the availability of water for diversion or the water proposed to be diverted for beneficial use. Because water rights are non-possessory rights of use subject to the overriding limitations and restrictions of California’s reasonable use and public trust doctrines, and implementation of the plan amendments do not result in a physical taking requiring compensation.</p>
1345	28	<p>Fish and Game Code Section 5937 Does Not Require the Release of Stored Water.</p> <p>The DRSED provides that in some cases, the volume equivalent to that which would have</p>	<p>Contrary to the commenter’s assertions, Fish and Game Code section 5937 may be used to require releases of stored water and the section is not merely a limitation on the amount of water that can be appropriated</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>been released via the unimpaired flow percentage from February through June can be treated as a block of water and a portion released outside of the February through June period, including in the following year. (DRS ED, Appx. K., p. 30-31). In either case, although the STM Working Group will be consulted, the Board's Executive Director can approve such a scheme upon the recommendation of a single member of the STM Working Group. (DRS ED, Appx. K, p. 29-30, items (b) and (c)). Obviously, for such a scheme to work, the dam owner would be required to divert into storage a quantity of water, maintain such quantity of water in storage, and then release such water from the dam at a later date.</p> <p>During the public hearings regarding the DRSED, several parties raised concerns about the Board's ability to require the release of stored water for the benefit of fish and wildlife beneficial uses located downstream. In response, Chairwoman Marcus identified Fish and Game Code Section 5937 as a source of the Board's authority to require the release of stored water. (See, e.g., Dec. 16, 2016 Tr., p. 216, ln. 3-11; Dec. 19, 2016 Tr., p. 152-153). The Chairwoman is incorrect, and Fish and Game Code Section 5937 does not authorize the Board to require the release of stored water. Fish and Game Code Section 5937 requires dam owners to allow water to pass through a fishway, or in the absence of a fishway, pass over, around or through a dam to keep fish below the dam in good condition. Section 5937 does not mention stored water at all.</p> <p>As explained by the courts that have construed Section 5937, it is a limitation on the amount of water that can be appropriated from a stream. For example, in <i>Natural Resources Defense Council v. Patterson</i>, 791 F.Supp.1425, 1435 (E.D. Cal. 1992), the court explained that "[w]ithout deciding whether section 5937 is a water appropriation statute, vel non, the statute's plain language demonstrates that it was intended to limit the amount of water a dam owner desiring to collect for eventual irrigation may properly impound from an otherwise naturally flowing stream. Thus, it is a prohibition on what water the . . . owner of the dam, may otherwise appropriate. . . . Put another way . . . 5937 preserves from appropriation . . . an amount of water necessary for instream uses. . . ."</p> <p>A similar finding was made in <i>California Trout, Inc. v. State Water Resources Control Bd.</i> (1989) 307 Cal.App.3d 585, 599: "[t]hese provisions straightforwardly limit the amount of water that may be appropriated by diversion from a dam . . . by requiring that sufficient water first be released to sustain the fish below the dam."</p> <p>Both of these cases correctly determined that Section 5937 is a limit on the appropriation of the natural flow of water in a stream or river. It does not require the release of stored water from a reservoir. This interpretation is supported by the Board's own regulation designed to implement Section 5937, which states: "In the case of a reservoir, this provision shall not require the passage or release of water at a greater rate than the unimpaired natural flow into the reservoir." (Cal. Admin. Code, tit. 23, § 782). The plain language, implementing regulation, and controlling authorities clearly indicate that Section 5937 does not mandate the release of stored water to keep fish below a dam in good condition.</p>	<p>by diversion from a dam.</p> <p>Section 5937 provides in pertinent part: "The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam." (Fish and G. Code, § 5937.)</p> <p>Section 5937 is a legislative expression of the public trust doctrine. (<i>California Trout, Inc. v. State Water Resources Control Board</i> (1989) 207 Cal.App. 585.) Under the public trust doctrine and the reasonableness doctrine, the State Water Board retains continuing authority over the manner in which water is diverted and used. (<i>National Audubon Society v. Superior Court</i> (1983) 33 Cal.3d 419; California Constitution, art. X, § 2; Wat. Code, § 275.) <i>California Trout, Inc.</i> "can be read as indicating that Section 5937 legislatively establishes that it is reasonable to release enough water below any dam to keep any fish that exist below the dam in good condition." (<i>State Water Board Order WR 95-2</i>, p. 6.)</p> <p>The State Water Board has already determined that section 782 of the State Water Board's regulation (Cal. Code Regs., tit. 23, § 782) cannot be understood as adopting an interpretation of Section 5937 that prevents the release of stored water. (<i>State Water Board Order WR 90-16</i>, p. 8.) As the State Water Board held:</p> <p>"We cannot accept an interpretation of Section 5937 which in no case would allow compliance through releases which may exceed concurrent inflows to the reservoir at certain times of the year, because such an interpretation would be inconsistent with the rule favoring a physical solution to promote maximum beneficial use of water. (See <i>City of Lodi v. East Bay Municipal Util. Dist.</i>, 7 Cal.2d 316, 60 P.2d 439 (1936).) For example, in a particular case, there may be two ways of maintaining fish in good condition. One flow regime may require very high winter and spring flows but allow for very low summer flows, with flows never exceeding natural levels. Another flow regime may allow storage of large volumes, and moderate stream flows, in the winter and spring, with higher than natural flows in summer. Under the District's interpretation, the Board would have to adopt the former flow regime, even if the latter provided equal protection for fish and allowed more water to be diverted and used for other purposes. Such an interpretation would be inconsistent with Article X, Section 2, of the Constitution." (Id. at pp. 8-9.)</p>
1345	29	<p>The Carryover Storage Provisions Contained in the DRSED are Constitutional Impairments of the 4th Agreement Between MID, TID and the City and County of San Francisco.</p> <p>In 1966, MID, TID and CCSF entered into the 4th Agreement, by which CSF participated financially in the costs of construction of New Don Pedro Dam and reservoir. (DRS ED, Appx. L, p. L-3). Pursuant to the 4th Agreement, MID, TID and CCSF agreed to construct New Don Pedro reservoir to a capacity of 2,030,000 AF, with CCSF paying a significant portion of the</p>	<p>The State Water Board appropriately modeled potential reservoir operations using a set of simplifying assumptions (including carryover storage) to show the range of potential environmental impacts in such a way that the public and the State Water Board can compare the relative effects. The model results present a range of potential and likely generalized operations, sufficient to evaluate water supply and other effects of the plan amendments from a programmatic perspective. The program of implementation does not establish specific carryover requirements to avoid constraining future implementation. Specific carryover or other requirements will be established when implementing the plan amendments through future water right and</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>costs of construction and other related costs in exchange for water banking privileges in New Don Pedro reservoir.</p> <p>The water banking privileges, the "principal benefit to be derived by [CCSF] in return for its payment of a substantial part of the cost" of construction, enable CCSF to release water to MID and TID: (1) in advance of the time when releases are required under the Raker Act; (2) when such releases can be stored in New Don Pedro Reservoir; and (3) to subsequently intercept or divert equivalent amounts of water which it would otherwise be required to pass to MID and TID to satisfy their superior water rights. (4th Agreement, Art. 7, p. 7; DRS ED, Appx. L, p. L-3).</p> <p>As recognized by the Board, CCSF does not hold water rights to, nor physically divert from, New Don Pedro reservoir. All water in New Don Pedro reservoir is owned by MID and TID. (DRSED, Appx. L, p. L-3). The carryover storage requirements established in the DRSED, including end of September storage targets, maximum allowable withdrawal from storage, and end of drought refill criteria (See, e.g., DRSED, Appx. F, p. F.I-31-32) will result in storage levels in New Don Pedro being higher than under current conditions. As a result, there will be fewer times that there is room for in New Don Pedro reservoir for MID and TID to store water that is released by SF in advance of when it is required to make releases under the Raker Act.</p> <p>Since the capability of putting early releases into storage is a prerequisite to CCSF making such early releases, the carryover storage requirements will significantly impair CCSF's "principal benefit" under the 4th Agreement. Article I, Section 9 of the California Constitution prohibits legislative or judicial actions which significantly impair the obligations of an existing contract. (Bradley v. Superior Court (1957) 48 Cal.2d 509, 519). Since the Board's DRSED is a quasi-legislative act, its significant impairment of the obligations and benefits of the 4th Agreement violates Article I, Section 9 of the California Constitution.</p>	<p>water quality proceedings.</p> <p>The commenter's suggestion that implementation of the plan amendments will "significantly impair" the City and County of San Francisco's (CCSF's) benefits under the 4th Agreement with MID and TID, and thus violates the contract clause of Article I, Section 9 of the California Constitution, is wholly unsupported. The contract clause of the California Constitution prohibits a state from passing laws that impair the obligation of contracts. However, this prohibition is not absolute, because "not only is the existing law read into contracts in order to fix their obligations, but the reservation of the essential attributes of continuing governmental power is also read into contracts as a postulate of the legal order. [Citations omitted.]" (Teachers' Retirement Bd. v. Genest (2007) 154 Cal.App.4th 1012, 1027). "[T]he proscription of 'any' impairment contained in the contract clauses must be interpreted to accommodate the inherent police power of the state to safeguard the vital interests of its residents." (Hermosa Beach Stop Oil Coalition v. City of Hermosa Beach (2001) 86 Cal.App.4th 534, 554). As discussed in response to comment 1345-27 water rights are non-possessory rights of use subject to the overriding limitations and restrictions of California's reasonable use and public trust doctrines. A water right holder may be prevented from diverting the maximum quantity of water under its water right in order to prevent harm to fishery resources and other beneficial uses of the source of water from which the water is diverted. Such limitation does not infringe on any vested right. The plan amendments are a legitimate exercise of the State's police power and potential reductions in diversions to storage by MID and TID do not operate as a substantial impairment of CCSF's contract rights.</p>
1345	30	<p>The DRSED states in several places that its flow and carryover storage requirements may be implemented against MID and TID via the Clean Water Act Section 401 process. (See, e.g., Appx. K, p. K-26). The Board has the authority and duty to certify that any discharge from MID and TID's operation of the Don Pedro Project under a new FERC license will comply with the CWA and any appropriate water quality requirement of State Law. (33 U.S.C. 1341 (a), (d)). Much of the DRSED does not fall within this authority granted to the Board by Congress and thus cannot be applied to MID and TID via the Section 401 process.</p>	<p>Please see response to Comment 1345-31.</p>
1345	31	<p>The Alleged Harms to Native Fish To Be Rectified by the DRSED Is Not a Point Source Issue that Can Be Addressed Via the 401 Process.</p> <p>The CWA regulates point-source pollution, and "[n]onpoint source pollution is not regulated directly by the [CWA]. . ." (ONDA v. Dombeck, (9th Cir. 1998) 172 F.3d 1092, 1096). Section 401 certification thus does not apply to nonpoint source pollution. (Id. at 1097-1099). Traditionally, harms to fish allegedly caused by the existence of dams have been considered nonpoint source pollution. (See United States ex rei. TVA v. Tenn. Water Quality Control Bd., (6th Cir. 1983) 717 F.2d 992, 999); See also, Nat'l Wildlife Fed'n v. Gorsuch, (D.Ci. Cir. 1982) 693 F.2d 156, 177).</p> <p>Significantly, the Board has relied upon this very distinction to argue that EPA cannot promulgate water quality objectives based upon streamflow under the CWA. According to the Board, "These cases demonstrate . . . that changes in water quality caused by dams</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process regarding the State Water Board's authority to issue water quality certifications and how it is premature to object to the water quality certification process as a means of setting conditions for the protection of beneficial uses and attainment of water quality objectives. The comment selectively quotes from the 1994 comments the State Water Board made to U.S. EPA on U.S. EPA's draft water quality standards for the Bay-Delta to argue that the comments are the Board's "policy" that dam-induced water quality changes are a non-point source problem and are, therefore, by the Board's own assertion not subject to Clean Water Act § 401, which only applies to point sources. The State Water Board adopts water quality control policies in accordance with the Porter-Cologne Water Quality Control Act, not through public comments to another agency. Moreover, the issue raised by the commenter has since been settled by the U.S. Supreme Court's in S.D. Warren v. Maine Bd. of Environmental Protection (2006) 547 U.S. 270, under which the Court held water releases from dams and the river changes they can cause to affect fish and other aquatic organisms are appropriately within the ambit of Clean Water Act § 401. The commenter relies on the Board's purported policy to argue this case</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>are the result of nonpoint sources of pollution . . . Where the predominant or sole cause of pollution in a water body is operation of water diversions, as is the case with the proposed salmon smolt survival criteria . . . adoption of water quality standards under the Clean Water Act is not an appropriate method of regulation." March 11, 1994 letter of the Board to U.S. Environmental Protection Agency, (p. 28, cited by the Board in its 2006 WQCP, p. 4, fn. 3).</p> <p>Controlling case law and Board policy [Footnote 19: Because of this policy, the holding of S.D. Warren Co. v. Maine Bd. Of Environmental Prot., 547 U.S. 370 (2006) is not controlling here. In that case, the parties conceded that the pollution at issue was from a point-source. (See Oregon Natural Desert Ass'n v. United States Forest Serv., 550 F.3d 778, 783-784 (9th Cir. 2008)). In this case, no such concession has been made, and in fact, the SWB has made the opposite assertion.] both demonstrate that alleged impacts to fish from the existence of dams is considered a non-point source of pollution. Since the Section 401 process does not apply to nonpoint source pollution, the flow and carryover storage requirements of the DRSED which are designed to provide floodplain, temperature and other benefits for native anadromous fish species cannot be applied to MID and TID via the Section 401 process.</p>	<p>does not apply; however, for the reasons given above, the comment is incorrect.</p>
1345	32	<p>Section 401 Applies Only to Water Quality Issues, Not Streamflow, Operations or Water Rights.</p> <p>The Section 401 process applies to ensure a federal permittee complies with the CWA and any appropriate water quality requirement of State law. (33 U.S.C. 1341 (a), (d)). In this case, the UIF and carryover storage requirements proposed to be applied against MID and TID are not related to water quality and thus cannot be implemented via the Section 401 process. For purposes of the CWA, "water quality" does not include impacts associated with reductions in freshwater flows caused by dams and diversions. (33 U.S.C. 1252(b); 33 U.S.C. 1313(c)). Thus, Board cannot rely on the authority of Section 401 (a) for authority to apply the DRSED against MID and TID.</p> <p>Nor can the Board rely upon the authority of Section 401(d), which enables a state to provide water quality certification to assure that the permitted activity complies with "any other appropriate requirement of State law. . ." This provision is limited in scope, and only authorizes a state to impose conditions "affecting water quality in one manner or another." (American Rivers v. FERC, (2d Cir. 1997)129 F.3d 99, 107; Arnold Irr. Dist. v. Department of Environmental Quality, (1986) 717 P.2d 1274, 1279; Matter of Eastern Niagara Project Power Alliance v. New York State Department of Environmental Conservation, (2007) 42 A.D.3d 857, 859-860). In this case, it is clear that the flow and carryover storage requirements are not related to water quality, but rather are matters of streamflow, water rights, and operations of dams and diversions.</p> <p>In 1994, EPA published a proposed rule to protect fish migration and protect cold water habitat pursuant to CWA Section 303(c), 33 USC 1313 (c)). In the proposed rule, EPA suggested that the Board should implement such criteria by amending water rights permits. These "salmon smolt survival" standards included both export limitations and minimum streamflow requirements. (59 Fed Reg. 810, 825-826 (January 6, 1994)). [Footnote 20: SWB Chairwoman Marcus was the regional administrator for EPA Region IX at the time.] In comments filed on March 11, 1994, the Board objected to the proposed rule, arguing strenuously that because the "salmon smolt survival criteria" were flow and export standards, they were not properly considered "water quality" issues for purposes of the</p>	<p>Regardless of the position the State Water Board took in March of 1994 against U.S. EPA's water quality standards for the Bay-Delta, the U.S. Supreme Court two months later in May 1994 concluded that water quantities can be regulated under the Clean Water Act. (PUD No. 1 of Jefferson County v. Washington Dept. of Ecology (1994) 511 U.S. 700, 719-720 [the Clean Water Act provisions governing</p> <p>water quality certification requirements for hydroelectric projects allows regulation by states</p> <p>of water "quantity" as well as water "quality"].) Thereafter, the state and federal governments reached agreement in December 1994 that minimum instream flow requirements and other actions to protect fish and wildlife were a necessary component of the Bay-Delta Water Quality Control Plan. (<a href="http://www.calwater.ca.gov/content/Documents/library/SFBayDeltaAgreement.pdf">http://www.calwater.ca.gov/content/Documents/library/SFBayDeltaAgreement.pdf</a>.) Thus, the commenter's assertions are incorrect and the Board is not precluded from implementing the plan amendments in 401 certifications.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>CWA.</p> <p>The Board argued, for example:</p> <p>-"the salmon smolt survival standards . . . take direct control of the heart of the State's water rights and water distribution system." (p. 9)</p> <p>-"Streamflow Matters Are Not To Be Regulated By EPA" (section heading, page 10).</p> <p>-"For purposes of the Clean Water Act the proposed criteria for . . . salmon smolt survival are streamflow requirements, not water quality criteria." (p. 1 0).</p> <p>-The only means of meeting EPA's . . . salmon smolt criteria would be for the State to regulate water project operations and allocate water storage and streamflow. . . for instream flows." (p. 11 ).</p> <p>-"It is beyond dispute that outflow and water project operations are not water quality matters." (p. 11-12). -That the EPA had written that impacts caused by reductions in streamflow were a "stream flow/water allocation issue, not a water quality issue under Section 303." (p. 15).</p> <p>-"Here, EPA apparently wants the State to 'work back' and cut diversions to attain the water quality standards. This method is inappropriate. . . ." (p. 26).</p> <p>Each of the above statements apply equally to the UIF and carryover storage requirements of the DRSED. Although described as being promulgated as part of a water quality control plan amendment, clearly such requirements have nothing to do with "water quality" as described and understood in the CWA. As a result, the Board will not be able to implement the provisions of the DRSED against MID and TID using Section 401(d). [Footnote 21: PUD No. 1 v. Wash. Dept. of Ecology, 511 U.S. 700 (1994) will not be of any assistance to the SWB. While the Supreme Court did conclude that Section 401 (d) could be used to impose minimum instream flow requirements, in that case such requirements were adopted pursuant to CWA Section 303, 33 U.S.C. 1313. (Id. at 712-713). However, the SWB takes the position that Section 303 "is not intended to regulate pollution caused by reduction of fresh water flow." (March 11, 1994 letter, p. 10; cited as current view at 2006 WQCP, p. 4, fn.. 3).]</p> <p>Because the UIF and carryover storage requirements are not related to water quality, they exceed the authority delegated by Congress. This is significant since Section 401 is the only opportunity states get to expressly affect conditions imposed on federal power licenses; all other authority is vested in FERC. (See, e.g., Karuk Tribe of Northern Calif v. California Regional Water Quality Control Bd., (2010) 183 Cal.App.4th 330, 359-360 [CWA gives the states a significant role in federal hydropower licensing, but this is the only area Congress has allowed]; American Rivers, supra, 129 F.3d at 111 [noting the preemptive reach of the Federal Power Act had been diminished by Section 401]; First Iowa Hydro-Elec Coop v. FPC, 328 U.S. 152, 180 (1946) [detailed provisions of federal plan for regulation of power leave no room for conflicting state regulation]).</p> <p>This means that while the Board can participate in the relicensing process of Don Pedro, and provide FERC with suggestions and comments as to what the streamflow downstream of Don Pedro should be, FERC retains sole and exclusive jurisdiction to establish minimum streamflow and other conditions of the license. As explained by the U.S. Supreme Court when California made a prior effort to require flow requirements on a FERC-licensed</p>	

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>project, "We conclude that the California requirements for minimum in-stream flows cannot be given effect and allowed to supplement the federal flow requirements. . . . As Congress directed in FPA 10(a), FERC set the conditions of the license, including the minimum stream flow, after considering which requirements would best protect wildlife and ensure that the project would be economically feasible, and thus further power development.</p> <p>"Allowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal agency determination. . . . We agree that allowing California to impose the challenged requirements would be contrary to Congressional intent regarding [FERC's] licensing authority and would 'constitute a veto of the project that was approved and licensed by the FERC.'" California v. FERC, 495 U.S. 490, 506-507 (1990))(citations omitted).</p> <p>Even if adopted, the UIF and carryover storage requirements cannot unilaterally be applied against MID and TID. Absent agreement by FERC, and inclusion of such requirements by FERC in any new license issued, the UIF and carryover storage requirements set forth in the DRSED will simply not apply to MID and TID.</p>	
1345	33	<p>Section 401 Certification is Likely Unnecessary for New Don Pedro.</p> <p>Generally, an applicant for a FERC license for the operation of a hydroelectric facility that may result in a discharge into navigable waters must obtain certification from the state that the project will comply with state water quality standards. (33 U.S.C. 1341). However, not every circumstance requires a 401 certification from the state, particularly those that will either reduce the amount of water currently flowing through the turbines, or for which an increase may occur that will not have an adverse impact on the water quality of the discharge. Either of these exceptions will likely apply to New Don Pedro.</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process, regarding implementation of the plan amendments in future water right and water quality proceedings. Comments regarding the need to obtain a 401 certification are premature. The State Water Board will consider all appropriate actions within its authority to require implementation of the objectives and it is not making individualized implementation decisions in this proceeding.</p>
1345	34	<p>MID and TID May Apply for a New License that Will Reduce the Amount of Amount of Water Discharged By New Don Pedro Dam and Reservoir, Thus Nullifying the Need for Certification Under Section 401.</p> <p>As part of their effort to relicense the Don Pedro hydroelectric project, MID and TID may request a new license that results in less water being passed through the turbines than happens under the existing license. Such effort would eliminate the existence of a "discharge" as defined under the Clean Water Act. (North Carolina v. FERC, 112 F.3d 1175, 1188 ["A decrease in the volume of water passing through the dam turbines cannot be considered a 'discharge' as that term is defined in the CWA."]) (Citation omitted).</p> <p>Since a "discharge" is a prerequisite for Section 401 to apply, MID and TID will not need to obtain, and FERC will be able to issue a new license, without first obtaining a water quality certification from California. (Id., p. 1189; See also 105 FERC ¶ 61,226 (2003) ["new certification would be required only if extending the license term would result in a new or greater discharge from the project."]).</p>	<p>Please refer to response to comment 1345-33.</p>
1345	35	<p>Even if MID and TID Seek a New License that Would Keep the Flows through the Dam Substantially the Same or Even Result in a Slight Increase, Section 401 Certification May Not Be Needed.</p> <p>Not all increases in flows from hydroelectric projects will trigger the need for Section 401 certification. Under FERC's rules, only those increases which will have a material adverse</p>	<p>Please refer to response to comment 1345-33.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>impact on the water quality of the discharge require Section 401 certification. (106 FERC ¶ 61,037 (2004)). For example, a licensee sought permission to replace its turbine generators, which would increase the project's hydraulic capacity and enable water to be discharged more quickly. Parties argued that a new Section 401 certification was necessary, but FERC disagreed. FERC found that while increased discharges could occur, the "nature of the discharge would not change."</p> <p>FERC also found that the environmental analysis accompanying the proposal revealed that the changes would have no adverse impact to the water quality. (106 FERC ¶ 62,014 (2004)). For the Don Pedro hydroelectric project, MID and TID are confident that the studies they have performed at FERC's direction, the proposed new terms and conditions, and the supporting environmental analysis under NEPA and CEQA will demonstrate that the nature of the discharge will not materially change from what it is now, and even if there is a slight increase in certain circumstances in terms of rate or volume, such increase will not result in a material adverse impact. As such, certification under Section 401 will not be required, and thus the DRSED will not be applied to MID and TID via Section 401.</p>	
1345	36	<p>The DRSED has Improperly Exercised Quasi-Adjudicatory Authority.</p> <p>The DRSED is a water allocation decision that acts upon the USBR's and the CDWR's water rights by using the USBR/CDWR operations model, CalSim as the basis for the Board's WSE. [Footnote 22: It is also objectionable that Mr. Grober was a member of the CalSim peer review panel; that he did not speak up at the Technical Workshop to disclose this information and arguable expertise; and that he is also a party promulgating a regulation derived from the same model that he peer reviewed, which serves as an undisclosed potential, if not actual, conflict of interest because Mr. Grober's prior determinations about the acceptability of the model likely clouded his judgment as to its utility or acceptability in the WQCP process and may be violative of Health &amp; Safety Code 57004(c)'s prohibition that "No person may serve as an external scientific peer reviewer for the scientific portion of a rule if that person participated in the development of the scientific basis or scientific portion of the rule." Here, Mr. Grober has served as the scientific peer reviewer of the CalSim model, which is the parent and validating model to the Board-created WSE model. CalSim serves as the scientific basis to setting the flow objectives insofar as the WSE is the sole tool to quantify and analyze water flow, and the LSJR Flow Objective is solely and uniquely a flow objective. The Board-Staff chose the WSE model to be the sole resource of information to describe the sole tool to accomplish the LSJR Objective. The DRSED cites its compliance with this statute and must comply if it so represents. Otherwise, the Revised DRSED is materially misleading if it purports to comply with a statute that it has not.]</p> <p>The DRSED 'baseline' established by CalSim has the USBR and the CDWR continuing to receive their customary entitlements to water as well as an additional, fictional water supply that represents the volume of water that would have been used to comply with water quality obligations but-for the USBR's failure to ever actually meet those same obligations. The WSE bases all analyses upon this assumption and it is a fatal flaw to the DRSED's credibility.</p> <p>To the extent the DRSED specifically identifies the USBR as the water right holder subject to the Delta Salinity Objective; then identifies a relaxation in the salinity standard that explicitly correlates with a decrease in the USBR's environmental flow obligation; then identifies a "complementary" benefit of the LSJR Objective to the Delta Salinity Objective because of the increased flows from the LSJR Objective; the DRSED has engaged in a violation of due</p>	<p>Please see Master Response 1.2 for an explanation that the plan amendments have yet to be implemented to assign responsibilities among water right holders. The proposed revisions to the salinity water quality objective are based on the level of salinity needed to protect agricultural beneficial uses. USBR's obligation to meet the salinity objectives is not changing. Please see Master Response 3.3 on USBR's responsibilities to meet the salinity objective. There has been no implied or tacit water allocation or any due process violations.</p> <p>Please refer to Master Response 3.2, Surface Water Analyses and Modeling, for response to comments regarding the methods and data used in the SED hydrologic modeling, including use of the Water Supply Effects (WSE) model to evaluate changes in streamflow and water supply and discussion of why it was appropriate to calibrate the WSE against other models.</p> <p>Appendix C lists the peer reviewers for the scientific basis of the plan amendments. Les Grober is not among them. Health and Safety Code § 57004(c) seeks to prevent a person from reviewing the scientific basis of the rule he or she was involved in developing. The scientific basis of the plan amendments were peer reviewed by external third parties through a rigorous peer review process. The Board staff who worked on the plan amendments were not involved in the peer review of their own work.</p> <p>USBR and DWR developed CalSim II as their official planning model for their water projects. It is the standard tool for water operations. A general external review of it occurred in 2003. CalSim II specific to the San Joaquin River Model was reviewed by an external panel of scientists in 2006 unrelated to any rulemaking. The fact that a former Board staff member was involved in that review while at his prior job underscores how Board staff were intimately familiar with how credible the model is. Health and Safety Code § 57004 does not stand for the proposition that if Board staff ever peer review any model, he or she is precluded from ever using that model in the future. The commenter is incorrect that CalSim II is the "scientific basis to setting the flow objectives." Rather, the State Water Board staff developed the WSE model using inputs from CalSim II as a means to quantify the potential effects the flow alternative could have on water supplies, which, as stated earlier, was independently peer reviewed and found to be a sound approach. In sum, the comment does not provide any basis for finding potential or actual bias or a violation of Health and Safety Code § 57004.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>process because there is an explicit water allocation decision being made and other water right holders or affected parties are not being provided the opportunity to be noticed of this change and afforded an opportunity to a hearing to specifically deal with this change.</p> <p>The DRSED must explicitly document in the record which findings or conclusions are based on an exercise of quasi-legislative authority and which are based on the quasi-adjudicative authority. There are separate legal obligations with respect to each type of authority.</p>	
1345	37	<p>The Board Impermissibly Excluded The Public From Discussing Cal WaterFix During The Public Hearings.</p> <p>The Board explicitly and repeatedly excluded information that members of the public attempted to provide during the public hearings about Cal WaterFix, a topic of discussion within the DRSED itself, by falsely claiming that the Board Directors were legally prohibited from receiving such information.</p> <p>Chair Marcus repeatedly stated throughout the proceeding that the Board would not receive any information about the Cal WaterFix proceeding, notwithstanding the DRSED's discussion of same in the cumulative impacts section. (DRSED at 17-5). The Cal WaterFix description had been updated as of July 2016. (DRSED at 17-6). Further, the Revised DRSED's describes Cal WaterFix as a project that is able "to affect hydrodynamics . . . and water quality in the Delta, including the southern Delta." Elsewhere, the DRSED states that "Cal WaterFix . . . could also change south Delta water circulation and salinity by reducing the amount of Sacramento River water drawn into the southern Delta, thereby increasing salinity in the southern Delta." (DRSED at 17-51). The southern Delta Salinity Objective is at issue in the DRSED, which is elsewhere acknowledged as 'complementary' to the LSJR Objective.</p> <p>In short, Cal WaterFix is intrinsically connected to the Project as was obvious to members of the general public. It was unquestionably a proper topic for discussion at the public hearing because the DRSED contains an analysis about it. It is an astonishing lack of coordination between the drafters of the DRSED, the Board Staff that presented it and the legal advisors to the Board Directors that the Board Directors would repeatedly discourage and outright reject information from the public on this important corollary Project. The Board Directors and Staff were in error to conflate their own responsibilities to remain impartial and unbiased in the Cal WaterFix proceeding with excluding other parties' statements and information about Cal WaterFix in this WQCP process.</p> <p>There are extenuating circumstances that make this rejection of relevant information particularly noteworthy. Cal WaterFix's environmental analysis fails to analyze this Plan Amendment, which is astonishing in light of the interrelated, if not duplicative, water allocation issues. Also, both proceedings (Cal WaterFix and this Plan Amendment) are active proceedings being heard separately but simultaneously before the Board. However, the WQCP is the broader environmental analysis between the two and the only analysis of the two that addresses the impacts of Cal WaterFix in the broader environmental context of the Plan Area. Whether due to political favoritism or a remarkable inattention to detail, it is objectionable that the sole public outlet to discuss Cal WaterFix's broader impact on the environment stumbled upon an artificial and somewhat illogical roadblock to receiving any public input or to encouraging informed discussion about Cal WaterFix' s potential impacts on the broader environment, the Plan Area.</p>	<p>Cal WaterFix is a pending adjudicatory proceeding before the State Water Board for which ex parte communication prohibitions apply. The ex parte communications prohibition for adjudicative proceedings originates in court decisions and has been codified in Chapter 4.5 of the Administrative Procedure Act. The Administrative Procedure Act prohibits "direct or indirect" communications to State Water Board members about an issue in a pending adjudicative proceeding without notice and opportunity for all parties to participate. (Gov. Code, § 11430.10.) The 5-day public hearing was a noticed hearing on the plan amendments, not on WaterFix; therefore, it was appropriate for Chairwoman Marcus to not accept testimony concerning pending WaterFix issues, which are extensive and the subject of months of hearings. The SED evaluates the cumulative impacts of the plan amendments combined with WaterFix, as required under CEQA. It does not contain any impermissible communications, but rather presents publicly available and vetted information such as the environmental document for WaterFix. Finally, the commenter's speculation about the plan amendments being mitigation for WaterFix and a means to export water from the Delta are both untrue and unfounded.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>In particular, the Cal WaterFix has the acknowledged adverse impact on the water quality of the Delta by routing relatively clean water from the Sacramento River in the North Delta via the twin tunnels to the South Delta for export. The Project as set forth in the DRSED acts as de facto mitigation for these Cal WaterFix's adverse impacts by routing the clean water from the three Eastside tributaries directly to the Delta to replace the lost clean Sacramento River water. The Project (DRSED) also facilitates the Cal WaterFix's stated objective to "restore and protect the ability of the State Water Project and Central Valley Project to deliver up to full contract amounts" from the South Delta.</p>	
1345	38	<p>The Revised DRSED Affirmatively Imperils the Health and Safety of Domestic Well Owners and Does Not Propose Any Mitigation.</p> <p>At the November 18, 2016, Technical State Water Board Staff/Community Water Interests Meeting, the Board Staff stated that the 2010 Census identified "approximately 1.25 million people living in the area overlying the four sub-basins" with approximately 130,000 people or 11% of the overlying population relying "on domestic, that is, private wells for their drinking water supply." [Footnote 23: Nov182016 Technical Meeting (Audio Transcription, pg. 15, Ins.14-23).]</p> <p>The DRSED states that domestic wells primarily draw from shallow aquifers. It further concludes that groundwater impacts will include "Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies" [DRSED at p. 9-33] and an increased likelihood for domestic wells to be taken out of operation because the groundwater contamination might simply make the water unusable or the well owner cannot afford the water treatment costs. Board Staff has also stated that "there might be potential impact(s) on domestic well users because, unlike public water systems there's no systematic monitoring of water quality in domestic wells." [Footnote 24: Nov182016 Technical Meeting (Audio Transcription), pg.19, Ins. 2-9.]</p> <p>Taken together, these statements identify the creation of a public health crisis as domestic well owners are likely to be impacted by the Project with contaminated wells and no identifiable manner to inform them of the contamination or a manner to remediate the harms to reestablish the well users' water supply. The DRSED cannot choose an infeasible mitigation measure which results in a multiple impacts that could each threaten public safety. Further, it cannot create a public health crisis by implementing a Project that will contaminate the domestic wells in the Plan Area, which is 75% comprised of disadvantaged communities.</p>	<p>Chapter 9, Groundwater Resources, acknowledges that groundwater overdraft is an ongoing problem in the plan area both due to agricultural expansion and the historic local response to reduced surface water supplies, which has been to pump more groundwater. Chapter 13, Service Providers, also correctly identifies that groundwater over-extraction can cause contaminant plumes to move and that private wells are located on private property and unregulated; therefore, it is difficult to determine when those wells are suffering from water quality impairment. These are all existing conditions in the plan area. The commenter appears to place responsibility upon the State Water Board if the referenced local behavior - pumping more groundwater if surface water supplies are reduced - occurs in response to the plan amendments. Taken to its logical conclusion, the commenter is asserting that the State Water Board is prohibited from requiring the reasonable protection of beneficial uses for fish and wildlife, because locals will inevitably choose, in response, to create an alleged "public health crisis." This assertion is speculative and unsupported in both fact and law. As discussed in Chapter 13, Service Providers, Section 13.4.3, Impacts and Mitigation Measures, and Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act, cities and counties can, and should, exercise their police powers so as to prevent and/or mitigate drinking water impacts on private domestic wells from groundwater over-extraction. In addition, local public agencies can, and should, use their groundwater management authority under SGMA. Currently, all basins in the plan area are covered by Groundwater Sustainability Agencies (GSAs). Under SGMA, those GSAs must develop and implement Groundwater Sustainable Plans (GSPs) that achieve sustainable groundwater management to prevent undesirable results. (Wat. Code, § 10721, subd. (v). abd) "Undesirable results" includes "significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies." (Wat. Code, § 10721, subd. (x)(4).) Therefore, the public health crisis imagined by the commenter is speculative and predicated on the assumption that local regulators will abdicate their responsibility to protect public health and safety.</p>
1345	39	<p>Doctrine of Coordination Under the U.S. Land Management Policy Act.</p> <p>The DRSED fails to identify the manner in which the relevant federal agencies (e.g., the STM Working Group and the federal agencies that will be consulted under the Endangered Species Act) will coordinate the Plan Amendments under the Federal Land Management Policy Act's relevant provisions (43 U.S.C. § 1720) governing federal/state cooperation of private land use activities on federal lands. Here, the Project appears to necessarily require the use of the local agencies' private property (e.g., reservoir storage space) that operate on federal lands (e.g., Don Pedro Dam is partially located on Bureau of Land Management lands) and therefore the Board must coordinate its WQCP activities with the appropriate federal and local agencies in conformity with the FLMPA.</p>	<p>There is no obligation for the State Water Board to identify the coordination and consultation obligations of federal agencies who may or may not participate in the STM Working Group, a voluntary group that has yet to be formed. Section 1720 of the Federal Land Management Policy Act pertains to notices to states prior to the sale of federal public lands and is not applicable.</p>

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
1345	40	The DRSED did not provide information to establish how the Board's staff consulted with the requisite federal and state agencies as required under the state and federal Endangered Species Act protection statutes. [Footnote 25: 16 U.S.C. § 1538 (LexisNexis, Lexis Advance through PL 114-329, approved 1/6/17); and Cal. Fish & G. Code, § 2080 (Deering, Lexis Advance through all 2016 legislation and propositions (20 16 Regular and 2015-2016 2nd Ex. Sessions)).]	These statutes require consultation with state and federal wildlife and fish agencies where an action will take or otherwise harm a threatened or endangered species. The plan amendments are to protect fish and wildlife beneficial uses. The cited consultation requirements are not applicable.
1345	41	The DRSED clearly does not use the best available science to determine impacts to the indicator-species, the fall-run Chinook salmon. The DRSED uses three tools that are severely discredited and cannot serve as substantial evidence that the Project does not adversely impact the fall-run Chinook salmon. In fact, the DRSED's science only demonstrates that the Project affirmatively harms the FRCS in many respects. For example, significant mitigation must occur to simply realize 1.5 months of Project benefits to water temperatures each year. The DRSED's scientific basis to propose increased floodplain habitat only create more risks to the FRCS and not benefits.	Please review Master Response 3.1, Fish Protection, for information about comments presenting information that do not conflict with or contradict the key scientific information used to support the impact determinations or benefit assessments in the plan amendments. Please also refer to Master Response 3.1 for a discussion of the use of best available science and the adequacy of modeling to support the analyses.
1345	42	The DRSED is unable to provide any quantitative assessment of fish population benefits but for the SalSim results that promise approximately 1,100 fish per year.	Please see Master Response 3.1, Fish Protection, for responses to comments regarding the limitations of SalSim model and how the State Water Board did not rely on it.
1345	43	The DRSED does not use the best available science to analyze potential Project impacts to the terrestrial protected species. The DRSED's analysis of terrestrial species is entirely limited to riverine species. The DRSED does not provide the underlying data or its analysis to justify how a species that lives in the water can be the appropriate proxy for the harms that may occur to avian or terrestrial species that are not located next to a river.	Potential impacts on non-riverine species are not based on characteristics or needs of riverine species. Chapter 8, Section 8.4.2, Methods and Approach, describes how impacts on terrestrial species were determined and includes a discussion of potential plan-induced changes in agricultural practices that could affect terrestrial species. Since the LSJR alternatives affect river flows and reservoir levels, the impact analysis in Chapter 8 focuses on effects on terrestrial biological resources within these areas. However, Section 8.2, Environmental Setting, also describes non-riverine terrestrial species and their habitats that could be affected by the plan amendments, such as vernal pools, grassland, pasture, and scrub. The State Water Board used the best available science throughout the SED and Chapter 8 as indicated in the reference section. A variety of data were obtained for the water quality planning process: quantitative data from peer-reviewed published literature on topics specific to the plan area; peer-reviewed published literature outside the plan area but on relevant topics; or qualitative data or personal communication with topical experts. Potential impacts on sensitive non-riverine terrestrial animal species are discussed under Impact Bio-4, under the subheading Area of Potential Indirect Effects. These species include blunt nosed leopard lizard, San Joaquin kit fox, and Swainson's hawk. Impact mechanisms, including habitat changes due to reduced availability of surface water are described and potential impacts are analyzed based on the species and their habitat needs.
1345	44	The DRSED fails to analyze the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (2000), which affects 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 400+ square miles and 900,000+ acres, which include 43% of the Sacramento-San Joaquin Delta's Primary Zone.	The San Joaquin Valley Multi-Species Habitat Conservation and Open Space Plan is described in Chapter 8, Section 8.3.3, Regional or Local, along with other relevant regional or local programs, policies, plans, or regulations related to terrestrial biological resources. Species covered by this plan are addressed throughout Chapter 8 (see Tables 8-18-2, 8-3a, 8-3b, 8-4a and 9-4b), and Impact Bio-5 addresses potential terrestrial biological resources impacts in the context of this plan.
1345	45	The DRSED acknowledges that the agricultural lands underlying the Pacific Flyway are in the Plan Area; later that the agriculture will be adversely impacted by the Project; but then fails to analyze Project impacts on the Pacific Flyway and the protected species and habitats including the federal wildlife preserves that will not be provided sufficient surface water due to the DRSED.	Table 8-2, in Chapter 8, Terrestrial Biological Resources, provides the relevant environmental setting information for wildlife refuges in the LSJR Alternatives plan area. Impacts Bio-1 and Bio-4 address impacts on wildlife refuges and sensitive species therein. The Pacific Flyway comprises habitats addressed in Chapter 8 (e.g., wetlands), but is itself not a specific habitat.
1345	46	The DRSED Fails to Adequately Analyze Climate Change Impacts.	Please see Master Response 3.2, Surface Water Analyses and Modeling, regarding the modeling of the 82-year period, the adequacy of the model inputs and parameters, and climate change as it relates to the

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>The DRSED does not provide sufficient information to determine impacts related to climate change. The DRSED's only analysis is to pledge to incorporate climate change analyses into future Board planning documents and that the STM Working Group's real time operations (which we have not been identified) will address the impacts from climate change as they arise. This is clearly inadequate because, at base, it does not comply with state law, state policy or even Board policy to analyze climate change. This information must be provided to be "complete, reasoned, or adequately explained." (Nw. Coal. for Alts. to Pesticides (NCAP) v. US. E.P.A., 544 F.3d 1043, 1052 n.7 (9th Cir. 2008)).</p> <p>The California Water Action Plan ("CWAP") states that "the effects of climate change are already being felt" and that "the Sierra Snowpack is decreasing, which reduces natural water storage and also alters winter and spring runoff patterns." (CWAP (2016), p. 3.) Additionally, the CWAP goes on to state that climate change will factor in "higher river and ocean temperatures" that will "make it harder to maintain adequate habitat for native fish species." (CWAP (2016), p.3-4.) These factors are all immediately relevant to the Plan Area and the Project but none are analyzed, notwithstanding the Governor's planning document's recognition that these are factors of our current environment. As a result, the DRSED underestimates the impacts of the Project on groundwater, drinking water, agricultural resources and other parts of the environment because the State Water Board will likely need higher levels of UIF (e.g., 50%) in order to attain its water temperature and floodplain inundation objectives.</p> <p>According to California and federal studies, climate change would likely also result in more extreme weather events, such as more intense droughts, which will potentially increase future impacts of the Project. These governmental studies also conclude that climate change would change the timing of flows (e.g., more late fall and winter flows, less spring flows) which would result in less efficient reservoir storage and likely impact carryover storage. These potential issues were not analyzed in the DRSED. Clearly, the Board should follow the Plan and incorporate the two active, elemental factors that the CWAP identifies as an ongoing impact from climate change, namely sea-level rise and the warming temperature of rivers.</p> <p>Additionally, the Governor has issued Executive Orders that inform the analysis that the DRSED should contain. The Governor's Executive Order #S-13-08 (November 14, 2008) [Footnote 26: <a href="https://www.gov.ca.gov/news.php?id=11036">https://www.gov.ca.gov/news.php?id=11036</a> (website visited December 2016.) states as a recital that "California's water supply and coastal resources, including valuable natural habitat areas, are particularly vulnerable to sea level rise over the next century and could suffer devastating consequences if adaptive measures are not taken. . ."</p> <p>The Order goes further to state that the Board is privy to a report from the National Academy of Sciences and the Office of Planning and Research that tracks sea level rise, which is an integral component of climate change analysis if the Project has a Salinity Objective in the tidal Delta. Executive Order # B-30-15 (April 29, 2015) [Footnote 27: <a href="https://www.gov.ca.gov/news.php?id=18938">https://www.gov.ca.gov/news.php?id=18938</a> (website visited December 2016).] "specifically addresses the need for climate adaptation and directs state government to. Factor climate change into state agencies' planning and investment decisions." The Order further states that "The impacts of climate change are already being felt in California and will disproportionately impact the state's most vulnerable populations."</p> <p>Additionally, the California Natural Resources Agency has led California's climate change adaptation strategy since 2008. The State of California released its "first comprehensive plan</p>	<p>quantitative analysis. Please see Master Response 3.7, Greenhouse Gas Emissions and Analysis, regarding quantifying greenhouse gas emissions and the scope and approach to the analysis in Chapter 14, Energy and Greenhouse Gases. The State Water Board appropriately analyzed the potential effects of the LSJR alternatives in Section 14.4.3, Impacts and Mitigation Measures, LSJR Alternatives, GHG Emissions/Climate Change, under Impact EG-3: Generate GHG emissions, either directly or indirectly, that may have significant impact on the environment, and Impact EG-4: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions. The analysis of the plan amendments contribution to climate change are also addressed in Chapter 16, Evaluation of Other Indirect and Additional Actions, as well as Chapter 17, Cumulative Impacts, Growth-Inducing Effects, and Irreversible Commitment of Resources. These chapters describe how the LSJR alternatives would potentially contribute to global climate change.</p> <p>Chapter 14 summarizes and incorporates the hydrology effects associated with climate change as described in the California Water Plan Update 2013, Chapter 3, California Water Today; Volume 2 regional reports for San Joaquin River Hydrologic Region and Sacramento-San Joaquin Delta; and Chapter 22, Ecosystem Restoration (The California Natural Resources Agency and DWR 2013). This information is also consistent with information contained in the Sacramento and San Joaquin Basins Climate Impact Assessment (USBR 2014, 2016). Chapter 14, Section 14.2.3 Climate Change: Climate Change Effects on State Climate Trends, acknowledges annual precipitation may experience a declining trend; however, there is a "high degree of scientific uncertainty that still exists with regard to characterizing future climate characteristics and predicting how various ecological and social systems will react to any changes in the existing climate at the local level." Chapter 14, Impact EG-5, acknowledges a reduction in water supply and water supply reliability associated with climate change and based on the documents cited above. It also acknowledges potential decreases in snowpack and heavier and warmer storms in the winter.</p> <p>The comment also indicates the plan amendments would affect compliance with renewable energy targets specified by SB 350. The SED evaluation represents a comparison of the LSJR alternatives to baseline conditions. Baseline conditions generally represent those present at the time of the release of the NOP, which do not include the 2015 passage of Senate Bill 350. Please see Master Response 2.5, Baseline and No Project, regarding baseline conditions. Please also see Master Response 8.4, Non-Agricultural Economic Considerations, regarding potential hydropower economic effects in relations to renewable sources of energy.</p> <p>The commenter has indicated that the plan amendments would adversely affect utility rates, presumably because it "removes an important carbon-free source of generation" while "requiring substantial infrastructure" to replace water supplies. The analysis in Chapter 20, Economic Analyses, examined the effects of the plan alternatives on hydropower generation concluded in Section 20.3.4, Effects on Hydropower Generation Revenues, and the Regional Economy, that only a small fraction (less than 0.0003 percent) of the state's electricity production would be affected, and "the impacts of the LSJR alternatives on hydropower related revenues are relatively small and would not likely affect ratepayers in any substantial way."</p> <p>Finally, with respect to "invest[ing] in substantial infrastructure," it should be noted that municipalities may already have in place plans for new water supplies or new infrastructure as a part of addressing future needs. As acknowledged within Chapter 20, the plan amendments may require acceleration of new supply development, or the possibility of additional infrastructure. However, municipalities may already have in place plans for new water supplies or new infrastructure as part of addressing future needs (see also Master Response 8.4, Non-Agricultural Economic Considerations). Please also see Master Response 2.7, Disadvantaged Communities, for a discussion of funding sources and assistance opportunities for disadvantaged communities regarding water supply infrastructure and sources.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>for adapting to climate change in 2009, and updated that strategy (in 20 14). (California Natural Resources Agency: Safeguarding California: Implementation Action Plans (2014), pg. 9.) The CNRA states that "the first step in addressing climate change is to analyze impacts and the vulnerabilities they create." (California Natural Resources Agency: Safeguarding California: Implementation Action Plans (2014), pg. ii.) The DRSED has failed to incorporate what was and is considered the "first step" in addressing climate change, which is to analyze the impacts.</p> <p>The CNRA goes on further to state that "[e]nsuring that California is ready for the changing climate will also require revising routine tasks of State governance" such as revising the DRSED to include a climate change analysis for the WQCP process instead of deferring it to some future date and circumstance. Finally, the CNRA states that the 2014 climate change plans "demonstrate how state agencies are implementing the Governor's directive to take climate change into account in all planning and investment decisions. . ." [(California Natural Resources Agency: Safeguarding California: Implementation Action Plans (2014), pg. 12]. Clearly, both the Governor and the California Natural Resources Agency expect the Board to include a climate change analysis in the DRSED to comply with state climate change policies.</p> <p>Additionally, the CNRA also states that "for lower-income individuals and communities, the challenges of responding and adapting to climate change are even greater." As stated often, the Plan Area is comprised of approximately 75% of disadvantaged communities. These communities especially require a climate change analysis of the Project impacts because they "lack the financial and organizational resources to respond to and recover from a disaster." (California Natural Resources Agency: Safeguarding California: Implementation Action Plans (2014), pg. 11.) SB 350 (20 15) directs the California Energy Commission to study the barriers that disadvantaged communities encounter when trying to invest in solar, energy efficiency and other renewable energy generation opportunities.</p> <p>The DRSED fails to comply with these important state legislative priorities by deliberately proposing a plan that will counter the CEC's work under SB 350 because the Project involves removes an important carbon-free source of generation from the Plan Area service providers and also mitigates the Project by proposing that the Plan Area communities (comprised of approximately 75% disadvantaged communities) invest in substantial infrastructure to replace the water supplies that are being taken away by the Project.</p> <p>As proposed, the LSJR Flow Objective will adversely impact the utility rates of, and sources of supply for, these communities in a way that can only defeat the purposes of SB 350 (2015) which aims to assist in removing barriers--not to create new, expensive ones--to the benefits of renewable energy in disadvantaged communities. Further, the DRSED's wholesale deferral of any analysis of climate change is fatal to informed analysis or discussion about the Project.</p>	
1345	47	<p>The Board Failed to Consider Environmental Justice.</p> <p>The total DRSED plan area encompasses approximately 1.5 million (M) acres, with an extended plan area of approximately 3.7M acres. As highlighted in Figure #1 [ATT2], (approximately 1.8M acres of this area is made up of severely disadvantaged and disadvantaged communities. The Board has made no effort to include these minority and low-income citizens and communities within the DRSED's impacted area, nor has the Board fully analyze the DRSED's effect on these communities, despite the fact that these citizens</p>	<p>The State Water Board is committed to environmental justice and the human right to water. The proposed plan amendments do not discriminate against people on the basis of race, color, culture or income.</p> <p>Consideration of DACs in the context of public health is provided in Chapter 22, Integrated Discussion of Potential Municipal and Domestic Water Supply Management Options. Please see Master Response 2.7, Disadvantaged Communities, for further discussion on consideration of disadvantaged communities (DACs [including environmental justice communities]) in the SED, the plan amendments as they relate to DACs, and the State Water Board's technical and financial assistance programs for small public water systems serving</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>will bear the greatest environmental burdens.</p> <p>While environmental justice is not a mandatory topic in the Plan there is a strong case for its inclusion. There is a long history of applying federal and state anti-discrimination statutes to state projects. Furthermore, state and federal environmental justice laws and policies have strongly emphasized the need for public participation in the decision-making process. State law defines environmental justice as, "The fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." (Gov't Code §65040.12) Further, the Legislature has found that, "the diversity of the state's communities and their residents requires planning agencies and legislative bodies to implement this article in ways that accommodate local conditions and circumstances, while meeting its minimum requirements." (Gov't Code §64300.7).</p> <p>Environmental justice is defined in state planning law as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. (Gov't Code §65040.12(e)). The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution. The Fourteenth Amendment expressly provides that the states may not "deny to any person within [their] jurisdiction the equal protection of the laws." (U.S. Constitution, amend. XIV, §1). On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." In a memorandum accompanying E.O. 12898, President Clinton underscored existing federal laws that can be used to further environment justice.</p> <p>These laws include Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act (NEPA), among others. Title VI prohibits any recipient (state or local entity or public or private agency) of federal financial assistance from discriminating on the basis of race, color, or national origin in its programs or activities. (42 U.S.C. §2000(d)(7)). State and local agencies that receive federal funding must comply with Title VI. Pursuant to the Civil Rights Restoration Act of 1987, this requirement applies to all agency programs and activities, not just those that receive direct federal funding.</p> <p>Consideration of environmental justice is not only consistent with federal law, but also expected at the state level. Anti-discrimination laws existed in California prior to the passage of the first state environmental justice legislation in 1999. The California Constitution prohibits discrimination in the operation of public employment, public education, or public contracting. (CA Constitution, Article I, §31). State law further prohibits discrimination under any program or activity that is funded or administered by the state "on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation." (Gov't Code §11135(a)).</p> <p>CEQA governs the Boards implementation process. Because the Plan is a certified regulatory program, a SED may be prepared in lieu of an EIR. (Pub. Res. Code, §21080.5). The SED must describe the project, reasonable alternatives, and mitigation measures to minimize any adverse effect on the environment, and must also be available for a reasonable time for review and comment by other public agencies and the public. (Pub. Res. Code, §21080.5(d)(3)). Consistent with CEQA and other mandates, the Board is establishing an Environmental Justice Program "to promote and ensure public outreach, participation, and</p>	<p>DACs.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>education regarding meetings, hearings and activities for all Californians." (SWRCB Webpage-Water Issues Outreach-Education-Environmental Justice). Pursuant to this program, the Board must integrate environmental justice considerations into the "development, adoption, implementation and enforcement" of its decisions.</p>	
1345	49	<p>The Board must promote meaningful public participation in its decision-making processes. The SWRCB failed to encourage meaningful participation from those within the SED impacted area. CEQA requires reasonable time for public comment and participation. (cite: Pub. Res. Code, §21 080.5(d)(3)(b).) However, because the SED failed to consider the ethnic makeup of the impacted community, and therefore, failed to consider possible language barriers that may exist, the public process failed to encourage meaningful participation from those most impacted by the proposal.</p> <p>Chapter 22 of the SED concedes the fact that the effects of drought and water quality issues are not felt equally, but instead are intensified in disadvantaged communities. However, even after acknowledging these impacts, and despite requests from the public for the SWRCB to allow for minority and low-income citizen participation, the SWRCB has failed to engage or involve these populations in the process. The project area consists in large part of agricultural lands with many of its citizens relying on farm labor to survive. The majority of these citizens identify as Hispanic with a large portion of these individuals identifying as Spanish-speaking only. These citizens have not been given a meaningful opportunity to participate. The SED was only printed in English, and at the public hearings, SWRCB staff only presented in English. The SWRCB has failed to meaningfully involve the community in the public decision making processes.</p>	<p>Please see Master Response 1.1, General Comments, regarding the outreach process. The State Water Board in its notice of the five-day hearing notified the public both in English and Spanish that on-site Spanish translation may be provided upon request. No requests for accommodation were made.</p>
1345	50	<p>The SWRCB failed to adequately analyze the impacts of the SED on Disadvantaged Communities.</p> <p>When analyzing a project's impact on the environment, a lead agency must consider "adverse effects on human beings, either directly or indirectly." (Pub. Res. Code, §21083(b)(3)). Public Resources Code § 15064(b) emphasizes that the significance of an activity may vary with the setting. Specifically, § 15064(b) notes that "an activity which may not be significant in an urban area may be significant in a rural area." In addition to consideration of setting, CEQA requires a lead agency to consider the cumulative effect of a project. (Pub. Res. Code, §21 083(b)(2)). Though each impact may appear minor in isolation, considering all impacts together could result in a significant effect on the environment.</p> <p>Though the DRSED briefly identifies the setting of the impacted area, it fails to adequately analyze the effects of the setting and the cumulative effects of the various impacts. Chapter 22 of the DRSED indirectly notes that the DRSED impacted area includes disadvantaged communities. The report then briefly addresses the disproportionate impacts to drinking water supply that disadvantaged communities face. (DRSED Chapter 22.4.2 Disadvantaged Communities). Specifically, Chapter 22 notes that: "the systems serving DACs are more likely to have a difficult time responding to impacts on their water supply because they lack the infrastructure and financing that exists for the water systems serving more affluent communities, which may make them unable to afford treating or finding alternative supplies for a contaminated drinking water source. As a result, DACs may be more vulnerable than other municipalities and cities to impacts associated with the LSJR alternatives."</p> <p>This is the extent of the analysis regarding the impacts to disadvantaged communities. The DRSED fails to fully analyze the settings of the impacted area, including the minority and low</p>	<p>A lead agency must make a mandatory finding of significance if a project's physical changes to the environment may cause substantial adverse effects on human beings, either directly or indirectly, and prepare an EIR. (Pub. Resources Code, §21083(b)(3); Cal. Code Regs., tit. 14, § 15065.) Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. The State Water Board identified the impact of the plan amendments to human beings as a potentially significant impact in its Environmental Checklist and, therefore, prepared the SED and evaluated throughout it the environmental impacts that may cause substantial adverse impacts to human beings. Changes to the environment that could affect human beings are addressed in most of the resource areas analyzed in the SED, including hydrology, erosion, groundwater, recreation, agriculture, service providers, and GHGs. In other words, most of the SED's analysis is an analysis of impacts to human beings—all human beings at that, not just disadvantaged communities. CEQA does not require separate analyses of impacts to population sub-groups. Nevertheless, the SED does identify the unique challenges facing disadvantaged communities and discusses technical and financial assistance programs available to small public water systems serving these communities.</p> <p>For groundwater supply and domestic well impacts, which affect disadvantaged communities, the SED concludes that the proposed plan amendments' impacts to groundwater supplies and domestic wells will be significant. The SED proposes mitigation measures, including calls to manage local groundwater basins for sustainability and to prevent undesirable results. Water supply and water quality issues facing disadvantaged communities are an existing condition caused in large part by groundwater over-extraction and the State Water Board has been at the forefront of providing assistance to these communities in terms of water supply and water quality. Please see Master Response 2.7 regarding consideration of disadvantaged communities in the SED, the plan amendments as they relate to them, and the State Water Board's technical and financial assistance programs for small public water systems serving disadvantaged communities.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>income populations, the reliance that the affected disadvantaged communities place on fanning, and the already strained drinking water situation. The SWRCB must consider that the community is predominately identified as disadvantaged because, as the DRSED notes, disadvantaged communities often feel the effects of reduced surface water more severely than non-disadvantaged communities.</p> <p>In addition to its failure to consider the specific settings of the impacted area, the DRSED also fails to consider the impacts of the plan on a cumulative level. The DRSED considers impacts to drinking water, groundwater, and the economy of the impacted area. However, the document fails to consider these impacts cumulatively. Individually these impacts will be harmful to the disadvantaged communities within the DRSED territory. When combined, the impacts will have severe, unavoidable consequences on a community largely made up of minority and low income populations. The DRSED failed to adequately analyze the impacts of the DRSED on the largely disadvantaged population within the plan's territory.</p>	
1345	51	<p>[Page] ES-1: Responsibility for implementing flow objectives will be assigned through water right actions and water quality actions, including Federal Energy Regulatory Commission (FERC) hydropower licensing processes.</p> <p>[Comment:] There are numerous other citations (e.g., Appendix K) to the DRSED's intent to implement the LSJR Objective through hydropower licensing proceedings. To be clear, there are only two such proceedings at issue and the Board has been party to both for the five-plus years that both proceedings have existed. Notwithstanding the DRSED's clear intention to implement through hydropower licensing proceedings, there has also been contradictory information from the Board Directors about such an intent. To the point, the Board Directors repeatedly stated in the DRSED's Public Hearings [See e.g., 12192017 DRSED Public Hearing, Merced Irrigation District Panel] that it does not intend to implement Phase I through FERC hydropower licensing proceedings.</p> <p>There are only two FERC licensing proceedings within the DRSED's Plan Area, both of which the Board is intimately involved and aware. There are sufficiently tangible and relevant facts within the Board's possession from which to communicate a clear message about the Board's intentions. Once those intentions are made explicitly clear in an environmental document, the regulated community and the public can make a reasonable analysis of the Project's potential impacts. The DRSED is required to specifically describe its Project and the proposed program of implementation to implement the Project Objectives. The current document is invalid for its failure to do so.</p>	<p>Refer to Master Response 1.2, Water Quality Control Process regarding implementation of the plan amendment through water quality certifications associated with FERC hydropower licensing processes. The plan amendments in Appendix K do specifically and clearly state that the State Water Board will implement the flow objectives "through water right actions or water quality actions, such as Federal Energy Regulatory Commission (FERC) hydropower licensing processes" as the commenter acknowledges.</p>
1345	52	<p>[Page] ES-2: The State Water Board also encourages voluntary agreements that will assist in implementing the flow objectives.</p> <p>[Comment:] The DRSED is not clear how voluntary agreements can be accomplished when the DRSED acknowledges that further project-level analysis is required to implement the Program of Implementation. The MID Board of Directors cannot commit to a plan of action without appropriate project-level analysis and the DRSED's expectation that they do so is inappropriate and unlawful with respect to the particular project-level facilities and projects that have already been identified as part of the Project, such as carryover storage requirements that can only be accomplished by the Don Pedro Project on the Tuolumne River.</p> <p>As stated by MID Director Jake Wenger at the 12202016 Public Hearing, the DRSED does not</p>	<p>Please see Master Response 1.1, General Comments, for additional information on voluntary agreements and what may be acceptable for the State Water Board in terms of requirements in voluntary agreements. The plan amendments at Appendix K allow for the possibility of voluntary agreements to serve as an implementation mechanism for the flow objectives. Such agreements, if accepted by the Board, will likely include non-flow actions that may impact the environment; therefore, they are evaluated on a programmatic basis in the SED. It is not possible to do a project-level analysis of non-flow actions because the specific details of where they would occur, their scope, and timing are unknown.</p>

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
		<p>provide any details about what the two words, "voluntary agreement," are supposed to mean vis-a-vis the 3500-plus page DRSED. Who are the parties to these agreements? What does the Board expect these agreements to be if nothing more than implementation of the DRSED's proposed Project? What is the assumed consideration for these agreements? The DRSED represents that "voluntary agreements" are reasonably likely and are therefore appropriate items for discussion in the environmental review.</p> <p>The DRSED should clearly define the elements of a voluntary agreement, to include the data upon which it bases its claims that they are feasible, and analyze them as part of the Project and analyze it as part of the potential alternatives. Generally, the term 'voluntary agreements' should be stricken if there is no factual basis upon which to justify its inclusion into the environmental analysis or, even if included over objections, there is no factual basis provided in the DRSED to allow for an environmental analysis of the project's impacts if it is implemented in this way.</p>	
1345	53	<p>Page ES-2: In a separate process, referred to as Phase II, the State Water Board is reviewing and considering updates to other elements of the Bay-Delta Plan, including Delta outflows, Sacramento and tributary inflows (other than the SJR flows), and ecosystem regime shift. In Phase III, the State Water Board will consider changes to water rights and other actions to implement changes to the Bay-Delta Plan from Phases I and II. Phase IV is focused on the development and implementation of flow objectives in the Sacramento River Watershed to address public trust needs, with consideration for other beneficial uses of water.</p> <p>[Comment:] The phasing separates out each step of the Amendment so that it is impossible to analyze the whole of the Amendment in any one review. There are numerous citations throughout the DRSED that demonstrate unquestionable physical connections (e.g., territory, water, etc.) as between Phases I, II and IV but there is no analysis to demonstrate how each affects the other to ensure there is a holistic analysis of the whole Project.</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process, for a discussion of the water quality control planning process, including the State Water Board's protection of beneficial uses in the Bay-Delta and tributary watersheds through independent proceedings and how environmental review has not been piecemealed. Implementation of the plan amendments (what the commenter refers to as Phase III) has been evaluated on a programmatic level in the SED. Future updates to the Bay-Delta Plan are evaluated in the cumulative impact analysis in Chapter 17.</p>
1345	54	<p>[Page] ES-12: The current flow objective is tied, in part, to the hydrology of the Sacramento River Basin, meaning that if precipitation and runoff is high in the Sacramento River, higher SJR flows are required even if the conditions on the SJR are drier, and vice versa.</p> <p>[Comment:] As stated at the 01032017 Public Hearing, the Sacramento River and San Joaquin Rivers are inextricably linked in any environmental analyses about the Delta. It is critical for the DRSED to explicitly identify the factors of each phase that scientifically justify a Phase I analysis that is independent from Phase II and the same is necessary as between all four proposed Phases. Ecosystem regime shift requires definition and, to our knowledge, has no scientific basis outside of the DRSED's recitation. Further, because the DRSED intends to use "adaptive implementation," which involves an "infinite" variety of possible scenarios that will be made "in real time" at some future date, it is critical for the public to understand how the Board intends to apply the tenets of the Board-created theory of 'ecosystem regime shift' to these unreviewable, "real time" goal-setting and decision-making.</p>	<p>Per the Executive Summary, the project consists of the following proposed updates to the 2006 Bay-Delta Plan that are separate and distinct from other elements of the plan: SJR flow objectives for the protection of fish and wildlife; and southern Delta salinity objectives for the protection of agriculture.</p> <p>The reference to ecosystem regime shift refers to a future update of the Bay Delta Plan. The following excerpt from the Executive Summary, is provided for context: "In a separate process, referred to as Phase II, the State Water Board is reviewing and considering updates to other elements of the Bay-Delta Plan, including Delta outflows, Sacramento and tributary inflows (other than the SJR inflows), and ecosystem regime shift. In Phase III, the State Water Board will consider changes to water rights and other actions to implement changes to the Bay-Delta Plan from Phases I and II."</p> <p>Questions and comments on subsequent updates to the Bay-Delta Plan should be directed to the process that is updating the other elements of the Bay-Delta Plan.</p> <p>Master Response 2.2, Adaptive Implementation, provides discussion of the STM Working Group, and the processes to develop and use information to inform adaptive management, including flow shaping and shifting.</p>
1345	55	<p>Page ES-2: Phase IV is focused on the development and implementation of flow objectives in the Sacramento River Watershed to address public trust needs, with consideration for other beneficial uses of water.</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process, regarding State Water Board authorities related to the water quality control planning process, State Water Board protection of beneficial uses in the Bay-Delta and tributary watersheds through independent proceedings, including a discussion on</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>[Comment:] The DRED must explicitly identify the factors of each phase and the scientific justification for four, independent phases of analysis. Per this statement, there is no physical distinction between Phase II and Phase IV but for the Board's arbitrary decision to separate them because, presumably, public trust needs must be exercised in all Board decisions. A separate proceeding is unnecessary, duplicative, and unlawful piece-mealing of the CEQA analysis unless the decisions made throughout Phases I through III are incomplete, and therefore unimplementable, without the necessary public trust analysis in Phase IV that must accompany all Board decisions to plan and allocate water resources.</p> <p>The DRSED must be updated to clarify how the public trust does or does not factor into each Phase, the respective Projects associated with each of those Phases, its respective role in their forthcoming record of quasi-adjudicative and quasi-legislative orders and decisions, and its anticipated physical dimensions of Phase IV with respect to the Plan Amendments more generally.</p>	<p>implementation of the plan amendments through water rights proceedings, and public trust resources.</p> <p>The Bay-Delta Plan's program of implementation to achieve the water quality objectives – a component of the Plan required by the Porter-Cologne Act – is a separate and distinct process from the future implementation of the plan in a water right or water quality proceeding. Through the Bay-Delta Plan's program of implementation, the State Water Board establishes a framework for achieving the Plan objectives, including specific measures or recommendations for appropriate action by certain entities (Wat. Code, § 13242, subd. (a)). This may include recommended actions by agencies other than the State Water Board, experimental studies, or voluntary measures. (See State Water Resources Control Bd. Cases (2006) 136 Cal.App.4th 674, 705 [recommending measures by fish agencies to improve fish and wildlife habitat]). Adoption of the plan amendments, including the program of implementation does not impose enforceable requirements on any entities; rather, implementation of the plan objectives in a State Water Board adjudicative proceeding or by regulation will involve a specific exercise of the Board's authority to impose enforceable obligations on specific entities.</p> <p>The plan amendments establish the desired condition of water quality in a specific area consistent with state and federal law. Any responsibility to achieve the Plan objectives will be imposed through a future proceeding.</p>
1345	56	<p>Page ES-4: The flow proposal would change the existing requirement from a specific monthly requirement that changes by month and year type to a flow parameter that more closely tracks natural flow variations.</p> <p>[Comment:] The flow proposal does not "change" the monthly/year type requirement but, instead, extends the methodology to new locations at greater quantities than previously imposed on the USBR in the 1995 Bay Delta Plan and D-1641 (2000 et al.). DRSED @Appendix K, Table 3, clearly retains a static quantity of water that is tracked in monthly metrics and that only changes between the 800cfs to 1200cfs range in light of that year's water conditions, which is another way to say "water year type." The current flow proposal does not and will not vary from the existing methodology.</p> <p>The extension of this methodology reinforces objections lodged elsewhere in this Comment that the Board must provide the scientific basis that justifies continued reliance on the 1995 Bay-Delta Plan's goals, objectives and science, especially to protect the DRSED's goals of fish and wildlife. The DRSED did not provide information to justify the continued use of the flat, monthly flows and, instead, provides information that undercuts its utility, most notably the need to "change" to natural flow variations.</p> <p>Especially because the modeling only analyzes flat, monthly flows (and therefore the modeling never actually analyzes the project or LSJR Objective), it is critical for the DRSED to provide the factual basis upon which it has concluded that the Project should include the prior methodology and the "change" in methodology. The ES further states that "[t]hough unimpaired flow is not the same as natural flow, it is nevertheless reflective of the frequency, timing, magnitude, and duration of the natural flows to which fish and wildlife have adapted and have become dependent upon."</p>	<p>Please refer to SED Chapter 3, Alternatives Description, for information that shows the distinction between the existing SJR flow objectives at Vernalis and the plan amendments. The comment is incorrect. The plan amendments are a change in the fixed monthly flows or blocks of water that vary by water year type or other variables. The percent of unimpaired flow method proposed by the plan amendments is proportional to yearly hydrology as defined by unimpaired flow. The Vernalis baseflow objective does retain the fixed monthly flow approach, however, baseflows at Vernalis should be exceeded in most years by the percent of unimpaired flow objectives required on the three eastside tributaries. In order to prove reasonable protection for fish and wildlife this base flow is needed because it provides a minimum, for example in critically dry years, when meeting the unimpaired flow percentage would otherwise result in flows below that baseline.</p> <p>The numeric LSJR flow objective requires 40 percent of unimpaired flow, based on a minimum 7-day running average, from each of the Stanislaus, Tuolumne, and Merced Rivers from February through June. In addition, a minimum flow must be maintained at Vernalis at all times. The minimum flow is not a "ceiling" on the unimpaired flow but is instead a "floor." It means that if, under the required percent of unimpaired flow, the volume of water in the San Joaquin River as measured at Vernalis drops below 1,000 cfs then the three tributaries must provide sufficient flows to maintain 1,000 cfs. The 1,000 cfs base flow at Vernalis can be adaptively implemented between 800 and 1,200 cfs. Please see Master Response 2.1, Amendments to the Water Quality Control Plan, for responses to comments concerning the justification for the base flow objective.</p> <p>Please see Master Response 3.1, Fish Protection, for responses to comments regarding the unimpaired flow approach to improving protection of fish and wildlife beneficial uses. The analysis in the SED did not use unimpaired flow as representation of natural flow conditions and the SED analysis did not analyze only flat monthly flows. Distinctions between both types of flow are described in multiple locations of the SED, see Chapter 4, Chapter 5, Appendix C, and Appendix F.1. The intent of using the unimpaired flow approach was to allow increased instream flows for the protection of fish and wildlife beneficial uses, and capture the natural pattern of variability to retain the attributes of the natural flow regime to which native LSJR basin fish and wildlife adapted, and that is important to support key ecosystem processes.</p>
1345	57	<p>Page ES-4: In an emergency, a temporary change in the implementation of the flow requirements may be allowed in a water right proceeding, but measures must be taken to</p>	<p>Refer to Master Response 2.1, Amendments to the Water Quality Control Plan, for a description of</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>reasonably protect the fish and wildlife beneficial use in light of the circumstance of the emergency.</p> <p>[Comment:] The Water Quality Control Plan must be "actually implementable" under the law. Appendix K's Program of Implementation is not implementable because it is impossible to implement a plan with no goal, no measure of success and a "virtually unlimited number of flow options." The DRSED must identify what environmental condition it presupposes will trigger a request for emergency relief from the WQCP requirements. Identifying these conditions are important because many parties including MID will allege that the WQCP is supposed to be relevant during times of drought. The ability to implement the plan during a drought is what makes it actually implementable.</p> <p>Further, the DRSED's citation to drought conditions does not alleviate the Board Staff from identifying the role of the WQCP during those times of drought. In fact, water supply planning during times of drought is one of the most critical, if not the most critical, function of water supply planning.</p> <p>The DRSED fails to provide an analysis of the reasonably foreseeable, if not certain, occurrence where the WQCP's minimums (either D-1641 or as proposed) are not met. The Board approved multiple Temporary Urgency Change Petitions throughout 2014, 2015 and 2016 from the USBR and the CDWR for relief from the D-1641 requirements. At a minimum, the DRSED must provide an analysis of the WQCP's role in drought conditions from the USER's and the CDWR's TUCP experiences as part of its "drought analysis."</p> <p>The DRSED's instruction that a "temporary change . . . of the flow requirements may be allowed. . ." and that certain "measures must be taken" in any such future emergency water rights proceedings appear to be outside the scope of the DRSED's analysis. The DRSED does not provide any information upon which to base conclusions related to drought conditions and, further, refuses to identify or analyze a scenario to prepare for drought or emergency conditions where the Appendix K minimum flow of 800cfs is not available. This failure to analyze potential impacts from the project is a violation of CEQA.</p>	<p>emergency provision related to drought.</p>
1345	58	<p>Page ES-7: The program of implementation contains actions that the SWB will undertake, including monitoring and special studies, to achieve the objectives and measure their benefits to fish and wildlife.</p> <p>[Comment:] The objectives are not achievable as stated in the TUR Technical Report and elsewhere in this Comment. The DRSED states that "the program of implementation contains actions the Board will undertake." However, Appendix K clearly shows how the Board's "action" in an adaptive implementation plan is to have other agencies develop a list of actions. So, the "action" required in the adaptive implementation plan is to require others to take unspecified "actions."</p> <p>The program of implementation does not identify any manner in which to measure benefits to fish and wildlife. The program explicitly states that biological goals to measure fish and wildlife benefits will be established only after the Plan is adopted and only after the Board convenes, staffs, funds and organizes a multi-agency, multijurisdictional, multi-water user 'working group' to identify these goals while making "real time" decisions at the beginning and during each water year.</p> <p>The DRSED's promise to measure at some future date by some future parties in some as-</p>	<p>Please refer to Master Response 2.1, Amendments to the Water Quality Control Plan, and Master Response 2.2, Adaptive Implementation for information on how the actions in the program of implementation will assist in monitoring compliance and measure benefits to fish and wildlife and regarding the development of biological goals. If other entities choose not to participate in the STM Working Group, it will be comprised of State Water Board staff who will undertake the actions in the program of implementation.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		yet-unknown manner cannot support a statement in the executive summary that the program of implementation will ". . . measure benefits to fish and wildlife."	
1345	59	<p>Page ES-9: New flow objectives will fill the void left by the termination of the flow experiment conducted through the Vernalis Adaptive Management Program to determine flows and barrier operations that could be used to protect salmon.</p> <p>[Comment:] The DRSED must describe or clarify how the proposed Project is capable of "fill[ing] the void" left by discontinuation of the VAMP. The VAMP flows, and presumably all the benefits that will accrue from them, are built into the baseline conditions. Therefore, there is no basis upon which the DRSED could analyze or discuss VAMP benefits as different from or an addition to the benefits that are calculated in the baseline setting.</p>	Please refer to Master Response 2.5, for responses to comments regarding VAMP flows, baseline, planning-level modeling, and comparative analysis between the baseline conditions and the plan amendments.
1345	60	<p>Page ES-11: The narrative element of the objective is framed in terms of maintaining viable native migratory San Joaquin River fish populations.</p> <p>[Comment:] The DRSED does not contain any analysis about the 'migratory' path or activities of the target-species, FRCS. There is no evidence in the record to demonstrate how the Project or the LSJR Objective may potentially affect "migration" into or outside of the Plan Area. Notably, there is an absolute failure to describe the potential challenges that FRCS face when migrating through the lower Tuolumne River, through the Delta and while living in the ocean. At a minimum, the DRSED must analyze the effects of predation, climate change impacts like the warming of rivers and sea-level rise, and the commercial fishery catches in order to justify the statement that it analyzed migratory aspects of the FRCS.</p>	<p>The comment is not correct that the Recirculated SED did not describe environmental stressors fall-run Chinook face during migration. Please see SED Chapter 7, Aquatic Biological Resources, and Appendix C, Scientific Basis Report, for a description of indicator species, including fall-run Chinook salmon, and environmental stressors (including, but not limited to, predation, poor ocean conditions and elevated water temperatures) that affect these species in the Merced, Tuolumne, Stanislaus, LSJ Rivers and the Delta.</p> <p>Temperature and predation are both evaluated in the SED. Please refer to Chapter 7, and Chapter 19, Analyses of Benefits to Native Fish Populations from Increased Flow between February 1 and June 30, respectively, for descriptions of potential impacts from suboptimal temperatures, and measureable benefits to migration of fall-run Chinook salmon. Please also see Master Response 3.1, Fish Protection, for responses to comments regarding the consideration of predation.</p> <p>Please refer to the SED Chapter 14, Energy and Greenhouse Gases, for an evaluation of the effect of climate change on the LSJR alternatives (i.e. EG-5).</p> <p>Please refer to the SED Chapter 20, Economic Analysis, regarding potential economic effects concerning commercial and sport fisheries (i.e. Section 20.3.5, Effects on Fisheries and Associated Regional Economies).</p> <p>Please refer to Master Response 2.1, Amendments to the Water Quality Control Plan, regarding the importance, and consideration in the plan amendments, of migratory corridors.</p>
1345	61	<p>Page ES-12: Expressing the objective as a numeric range achieves the following goals. Provides sufficient inflow conditions to support and maintain the natural production of viable native SJR Watershed fish populations migrating through the Delta. Provides maximum flexibility in addressing scientific uncertainty and changing conditions, developing scientific information that will inform future management of flows, and meeting biological goals, while still reasonably protecting the fish and wildlife beneficial uses. Provides the opportunity to manage flows in a manner that considers other beneficial uses, such as agricultural, municipal, and recreational uses, as long as intended benefits to fish and wildlife beneficial uses are not reduced.</p> <p>[Comment:] The Board determines the balance between beneficial uses upon Project adoption. It is an unlawful modification of the adopted WQCP for there to be an "opportunity" at a later date to essentially re-weigh the Board's decision that sets the balance between beneficial uses.</p>	The proposed flow objectives are a range with a starting percent of unimpaired flow of 40 percent. In considering whether to adopt the proposed flow objectives, the Board has to consider past, present and probable future beneficial uses, among other factors. If the Board adopts the flow objectives proposed, it would have to be implemented. Whatever consideration of other beneficial uses that could occur during implementation of the flow objectives is not a re-weighing of competing beneficial uses under Water Code section 13241, because the flow objectives would have to be implemented to protect fish and wildlife beneficial uses over any other beneficial uses.
1345	62	Page ES-13: Unimpaired flow clearly identifies the allocation of a seasonally and annually variable quantity of water between the reasonable protection of fish and wildlife and other	All that the quoted statement means is that the unimpaired flow approach allows for a better determination of how much water is allocated, at different times, for fish and wildlife and other beneficial uses, which

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>beneficial uses of water.</p> <p>[Comment:] This statement exemplifies a persistent analytical flaw where fish and wildlife benefits are specifically identified as the sole use to be protected and that it must be protected from all other uses combined. This "fish versus everything else" focus clearly contradicts scientific inquiry, state policy to protect the dual goals of the Delta, legislative priorities for various uses in the Water Code, and the Board's obligation to balance all beneficial uses of the water.</p>	<p>currently is not readily identifiable. We disagree with the commenter that there is an analytical flaw where fish are protected above everything else in the SED. The proposed plan amendments are based on sound science, take into consideration other beneficial uses, and comply with all applicable laws and policies.</p> <p>Please see</p>
1345	63	<p>Page ES-13: New flow objectives have not been proposed outside of the February-June timeframe. Through adaptive implementation, however, a portion of the Feb-June flows could be shifted to other months to avoid adverse temperature impacts to fish and wildlife.</p> <p>[Comment] Please see Technical Report. The DRSED's own analysis demonstrates that the UIF proposal actually causes harm to fish and wildlife through temperature impacts for several months of the flow proposal. Therefore, every alternative without adaptive implementation adversely impacts "all" fish and wildlife if the FRCS is believed to be the appropriate proxy. The DRSED must clearly explain why the LSJR Objective and associated flow proposals are a "benefit," and not a degradation of water quality.</p> <p>Again, it is critical for the DRSED to specifically describe the Project so that parties may understand its component parts and any proposed mitigation measures. Here, it is critical to understand whether the "flow shifting" away from the February through June timeframe is a part of the Project or a mitigation measure.</p>	<p>Please see Master Response 3.1, Fish Protection, which explains how the plan amendments would substantially reduce harmful and lethal temperatures during the period for migrating salmonids in the Stanislaus, Tuolumne and Merced Rivers. As described in the plan amendments in Appendix K, flow shifting is part of the plan amendments. It is not mitigation as characterized by the commenter. Please see Master Response 2.2, Adaptive Implementation, on how flow shifting can be used to better achieve the narrative flow objective.</p>
1345	64	<p>Page ES-16: It is intended to determine a quantity of water that can be "shaped" or shifted in time to provide more functionally useful flows.</p> <p>[Comment:] The quantity of water to be "shaped" is the granting of a water right to the Board Staff without any due process or even a basic showing of how the water will be put to beneficial use. The state constitution commands that all water be put to beneficial use, which further evidences that this is a water allocation decision since the Board Staff require another lawful water right holder's beneficial use to apply the UIF theory.</p>	<p>Please see Master Response 1.2, Water Quality Control Planning Process, for responses to comments regarding the distinction between establishing a water quality objective in a Water Quality Control Plan and implementing the objectives through water rights actions. This Bay-Delta Plan update is determining the quantity of water that must remain instream to reasonably protect fish and wildlife beneficial uses, which is a beneficial use of water. Implementation of these Plan flows may include placing conditions in in existing water rights or otherwise requiring bypass flows to achieve the flow objective. Shaping flows will not change the amount of water that needs to be bypassed by current water right holders.</p> <p>Master Response 2.2, Adaptive Implementation, provides additional description and examples of how adaptive management may proceed, and the bounds under which it may do so.</p>
1345	65	<p>Page ES-18: The program of implementation requires the development of biological goals. . .</p> <p>[Comment:] This statement contradicts a prior statement that the biological goals would be satisfied with the program of implementation. Worth noting, the DRSED is herein stating that the eventual development of biological goals is the DRSED's biological goal.</p>	<p>Refer to Master Response 2.2, Adaptive implementation regarding development and implementation of biological goals.</p>
1345	66	<p>Page ES-19: Hydrological conditions, and water supply needs experienced during the current drought were analyzed in this SED, and so the analyses in this SED have accounted for a wide range of hydrologic conditions.</p> <p>[Comment:] The DRSED sets the baseline at 2009 but then selectively incorporates data to include the drought years of 2014 to 2016. If the Board Staff believed that the drought constituted new and relevant information sufficient to update the entire analysis, then the Board must update the environmental document and recirculate to reflect the substantial</p>	<p>The 2016 Recirculated SED used the historical runoff sequence of WY 1922-2003 for the environmental impact and economic analyses. Chapter 21, Drought Evaluation, specifically evaluated if the extended runoff sequence of WY 2004-2015 was substantially different from the historical runoff sequence of 1922-2003. The results in Chapter 21 demonstrate the dry year sequences in the WY 2004-2015 period were similar to the dry-year sequences in the WY 1922-2003 period, as shown in Figures 21-1, 21-2, and 21-3; therefore, it is not necessary to extend the runoff sequence for the analysis of other potential impact topics (i.e., resources) and recirculation is not needed. Please see Master Response 1.1, General Comments for a discussion regarding the legal basis for recirculation. Please see Master Response 2.5, Baseline and No</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		new developments.	Project, for a discussion on data and the baseline.
1345	67	<p>Page ES-19: The flow proposal therefore includes a provision to adjust flows for a state of emergency, such as the current drought. . . Under this emergency provision, the SWB, at its discretion or at the request of any affected responsible agency or person, may authorize a temporary change to the implementation of the LSJR flow objectives in a water right proceeding. . .</p> <p>[Comment:] It is a fundamental flaw of the DRSED that it deliberately avoids an environmental analysis of the WQCP's role in drought planning and under drought conditions. The DRSED itself acknowledges that it can identify and analyze 'emergency conditions' because it clearly states that the current drought has been analyzed and can be identified as such an emergency. It is incumbent upon the DRSED to then analyze those circumstances and craft a project and program of implementation that remain applicable during these certain future occurrences, and are therefore 'actually implementable' under the law.</p> <p>A future water rights proceeding is an inappropriate forum for the Board to identify its environmental standards for fish and wildlife in critical drought situations. A water rights proceeding, like the explicitly contemplated Temporary Urgency Change Petition process under Water Code §1435, is simply not capable of providing a holistic environmental analysis of the Project's benefits or impacts during drought conditions. TUCP proceedings only analyze the following issues with respect to the petitioning water right holder's operations: if there is an urgent need to make the proposed change; if the change causes injury to other lawful users of water; if the change causes unreasonable effects on fish and wildlife; and if the change is in the public interest.</p> <p>This DRSED is the sole forum to have an environmental review of the entire Project's potential impacts. The very purpose of a water resource planning document is to provide instructions and guidance for conditions of shortage, which is the exact planning function that the DRSED attempts to defer to the future, urgently-timed and surely controversial water rights proceedings. The DRSED must include an environmental analysis under drought conditions to reflect, at a minimum, potential impacts when the baseline flow of 800cfs cannot be met, which is the very circumstance that the DRSED confirms is certain but does not provide any further analysis to elucidate.</p>	Refer to Master Response 2.1, Amendments to the Water Quality Control Plan, regarding the emergency provision and dry year relief.
1345	68	<p>Page ES-21: The Water Supply Effects analysis takes into account greater reliance on storage to meet water demand in all years, so an additional effect of the flow proposal would be an overall decrease in the quantity of water stored in reservoirs. In other words, reservoir levels would be driven lower more frequently, but still would be required to maintain adequate cold water storage.</p> <p>[Comment:] The DRSED's program of implementation does not explicitly identify the need to use the storage facilities on the tributaries but there are clearly statements elsewhere (e.g., the above statement) that explicitly identify the need to use the storage facilities of the FERC licensees on the tributaries. The DRSED must be clearly define its Project and its requirements if there is to be informed public analysis of the Project.</p> <p>Elsewhere in Appendix K, the Board Staff acknowledges that it intends to impose storage conditions on the USBR's storage facilities in the future by instituting appropriate due process to secure the public's use of private (non-State) property, to include notice and a</p>	Please see Master Response 2.1, Amendments to the Water Quality Control Plan, regarding the project description, program of implementation, and carryover storage. Please see Master Response 3.2, Surface Water Analyses and Modeling, for responses to comments regarding carryover storage. Please see Master Response 1.2, Water Quality Control Planning Process, regarding State Water Board implementation of the plan amendments through independent water right proceedings, including discussion of water quality certification and the Federal Energy Regulatory Commission (FERC) process. Any adjudicatory proceeding to implement the plan amendments will necessarily afford due process.

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>hearing to determine the issues. The DRSED does not explain why the owners of Don Pedro Reservoir, the only storage facility on the Tuolumne River in the Plan Area, are not afforded the same procedure even though Don Pedro Reservoir is similarly situated to the USBR. The same is true for the owners of the sole storage facility on the Merced River.</p>	
1345	69	<p>Page ES-23: Specifically, the major districts analyzed in the plan area account for 98, 99 and 94 percent, respectively, of the water authorized for diversion (based on face value) under non-power, post-1914 water rights in the Stan, Tuolumne and Merced Watersheds.</p> <p>[Comment:] The above statement can be interpreted to mean that the Board Staff performed a water right analysis to serve as the basis for determining the very scope of the Plan Area, which evidences the Board's conflation of its water rights and water quality authority because a water allocation is the sole tool authorized to implement the project. To the extent that the DRSED intends to define the Plan Area consistent with the area's major water right holders, the DRSED is obligated to perform a correspondingly detailed project-level analysis of potential project impacts and to explicitly describe proposed implementation measures, to include its intentions regarding carryover storage requirements.</p> <p>The DRSED's states elsewhere that "the impacts to water right holders is unknown." The above statement (and many others within the DRSED) clearly contradict this conclusion. The DRSED fails to perform a correspondingly detailed project-level analysis of potential project impacts and to explicitly describe proposed implementation measures (including due process afforded to private property).</p>	<p>The statement referenced by the commenter should be interpreted as part of the description of the setting of the plan area. The plan area is defined in SED Chapter 1, Introduction, section 1.2, titled "Plan Area." Contrary to the commenter's assertion, the State Water Board did not perform "a water right analysis to serve as the basis for determining the scope of the plan area." Merely knowing the major districts who hold water rights in the plan area does not mean it is known how responsibility for meeting the flow objectives will be allocated. Precisely how and to whom the State Water Board will ultimately assign responsibility for implementing the flow objectives cannot be determined because the facts and project-specific details relevant to the Board's future consideration are unknown. Case-by-case evaluations will be necessary. For example, while the Board must assign responsibility for meeting water quality objectives in a manner that does not undermine water right priorities, there may be facts in a specific case where there is substantial justification for not doing so. (El Dorado Irrigation District v. State Water Resources Control Board (2006) 142 Cal.App.4th 937.) Thus, a project-level analysis as to how and who will be allocated responsibility for meeting the flow objectives cannot be performed. Please refer to Master Response 1.1, General Comments, for a discussion of the programmatic nature of the SED.</p>
1345	70	<p>Page ES-24: Direct effects on surface water supplies in the CCSF and other areas served by CCSF. The effects on CCSF and related service areas would not be additive to the surface and GW effects in the plan area.</p> <p>[Comment:] The Board Staff must explain the basis upon which the DRSED can conclude that there are "direct effects" to the parties in the extended plan area but that these same parties are not part of the Plan Area. Again, this is another instance of unlawful and arbitrary cherry-picking of information to present in the DRSED and, further, is a violation of CEQA's piece-meal prohibitions, both of which frustrate CEQA's central goals of meaningfully informing decision makers and the public about the potential impacts of proposed projects.</p> <p>Further, the DRSED must identify or describe any data or evidentiary basis for its statement that the Project's surface water and groundwater effects in the extended plan area would "not be additive" to the effects in the Plan Area. As currently written, the DRSED can only make this assertion because the analysis artificially separates and silos the analyses of the Plan Area from the extended plan area.</p>	<p>The State Water Board prepared the SED with a sufficient degree of analysis to inform the decision-makers about the environmental consequences of its decision and in light of what is reasonably feasible considering the magnitude and complexity of the plan amendments and their geographic scope. Chapter 4, Introduction to Analysis, describes the framework for the analysis in the SED, including the analysis performed to determine impacts to surface and groundwater resources in the plan area and extended plan area. The basis for this analysis is further described in Chapter 5, Surface Hydrology and Water Quality. Any differences between the impact determinations in the plan area and extended plan area are summarized in Table 18-2. Please see Master Response 1.1, General Comments, for responses to comments regarding the approach to analysis, including a clarifying discussion regarding the watersheds considered in the plan area and the extended plan area and the level of analysis performed, and the State Water Boards's effort to use the best available science and data available throughout the SED. The Executive Summary states, "The effects on CCSF and related service areas would not be additive to the surface and groundwater effects in the plan area." This means that CCSF and related service areas and water users within the plan area will be affected by a portion of the total potential decreases in surface water supplies and groundwater effects described in the SED. These effects will not be in addition to or greater than the groundwater and water supply effects described in the SED. Please also see Master Response, 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, for a further clarifying discussion.</p>
1345	71	<p>Page ES-29: The effect of the flow proposal on specific water rights is unknown.</p> <p>[Comment:] It is misleading for Board Staff to make the above statement in light of the information contained within the DRSED. The DRSED explicitly identifies the central dispute is the quantity of flow, such flow serving simultaneously as the Plan's tangible goal, the underlying scientific theory and the sole tool of compliance. The Division of Water Rights, and not the Division of Water Quality, is promulgating this WQCP Amendment and the status of water rights is more consistent with the Division's traditional workload than</p>	<p>Please refer to response to comment 1345-69 and 1345-70.</p> <p>Please refer to Master Response 1.2, Water Quality Control Planning Process, for a discussion of the State Water Board's establishment of water quality objectives, consideration of the factors identified in Water Code Section 13241, balancing the competing uses of water, and future implementation of the objectives in water right and water quality proceedings. Please also see Master Response 3.2, Surface Water Analyses and Modeling, on how modeling was done at a watershed-scale to evaluate changes in available water supply. The modeling is reasonable and sufficiently informs the analyses in the SED and the State Water Board's</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>promulgating WQCPs.</p> <p>Below are several citations in the DRSED demonstrating that a water rights analysis had indeed been performed for several water right holders and that the DRSED intends to rely upon the results of those analyses.</p> <p>ES-23: "Specifically, the major districts analyzed in the plan area account for 98, 99, and 94 percent, respectively, of the water authorized for diversion. . ."</p> <p>ES-31: that "the effects of agriculture are analyzed for the irrigation districts that regularly obtain water. . . They are collectively referred to as the irrigation districts and include: South San Joaquin Irrigation District (SSJID), Oakdale Irrigation District (OID), Stockton East Water District (SEWD), Central San Joaquin Water Conservation District (CSJWCD), Turlock Irrigation District (TID), Modesto Irrigation District (MID), and Merced Irrigation District (Merced ID)."</p> <p>ES-33: "Irrigation districts that also have surface water supplies use groundwater pumping to compensate for reduced surface water supplies in dry years. On average, however, for irrigation districts with access to surface water supplies (SSJID, OID, MID, TID, Merced ID, and the portions of SEWD and CSJWCD that use Stanislaus River water), their combined contributions to groundwater recharge in the plan area exceeds [sic] their combined groundwater pumping."</p> <p>ES-31: "Minimum and maximum quantities of groundwater pumping, to supplement surface water supplies, are determined in this step."</p> <p>ES-33: "Although the water balance for the water districts shows that they are currently recharging groundwater. . ."</p> <p>ES-36: "CCSF's water rights for the Hetch Hetchy water system on the Tuolumne River are junior to the most senior rights held by MID and TID. . ."</p> <p>ES-37: "Water supply effects were evaluated for two different scenarios that result from two different interpretations of the Fourth Agreement."</p> <p>ES-73: "The analysis in Appendix L is based on two different scenarios that result from different interpretations of the Fourth Agreement between CCSF and the MID and TID, which is an agreement that describes the details of the water banking and storage operations in New Don Pedro Reservoir. The two scenarios represent different outcomes regarding CCSF's responsibility for additional flow releases that may result from the FERC relicensing process for New Don Pedro Reservoir."</p> <p>Here, the Board Staff not only identified potential impacts to water right holders but has analyzed varying scenarios about how these water rights interrelate with other water right holders.</p> <p>16-9: "Water transfers involving reservoir storage releases in excess of what would normally be released annually is less likely to occur especially under the LSJR alternatives because most of the water rights associated with existing reservoirs would be fully used and the reservoir releases would occur regardless of the water transfer (i.e., release of excess water would not be a response to the LSJR alternatives)."</p>	<p>decision-making. The commenter suggests the State Water Board conducted a "water rights analysis" and disputes the statement in the Executive Summary that the effects of flow proposal on specific water rights is unknown. The SED discloses the analysis the State Water Board conducted to assess the impacts of the plan amendments and the statement with respect to specific water rights remains correct, especially since the flow objectives have yet to be implemented.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>ES-31: "Although water users other than these districts could be affected by implementation of the LSJR alternatives, the overall effects would not be different or greater than described here."</p> <p>ES-31 explicitly presupposes that the senior water right holders and the junior water right holders would be affected the same, which is contrary to the state law of water right priority. Additionally, the DRSED does not provide a scientific or evidentiary basis for this statement in the DRSED. If the status of the water rights is "unknown," how can the effects of the lost water be examined with any degree of reasonable certainty? How can the DRSED purport to know the impacts to water users but simultaneously state that it doesn't know about the water rights that, under state law, would set the order of parties to analyze for those impacts?</p> <p>The Board must "balance" the uses. If the DRSED cannot provide any metrics to explain benefits to fish populations (described elsewhere), and the DRSED herein acknowledges that its conclusions about impacts to water users is highly uncertain (if not "unknown"), then what information will the Board Directors have to weigh their decision?</p>	
1345	72	<p>Page ES-29: In no case, however, would the total effect be greater than has been quantified and explained for the plan area.</p> <p>[Comment:] The DRSED does not provide the evidentiary basis for this statement. On its face, this statement does not appear credible. There are significant differences between the two areas with respect to geography, socio-economics, utility governance and access to water supply. Arguendo, if this statement is accurate, then the Board should merge the Plan Area and the extended plan area to perform one, single holistic analysis. The request appears both feasible and desirable. The Board Staff saw fit to create a formula to compare the impacts from the two areas in an 'apples to apples' manner so as to make the above statement. This demonstrates the desirability of viewing these environmental analyses together in a connected manner. The analysis has been performed already, as demonstrated by the above statement, so feasibility is self-evident.</p>	<p>Please see Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, in regard to water supply effects outside the immediate plan area. Please also see response to comment 1345-70.</p>
1345	73	<p>Page ES-31: Although water users other than these districts could be affected by implementation of the LSJR alternatives, the overall effects would not be different or greater than here.</p> <p>[Comment:] The DRSED states elsewhere in the Executive Summary that the "effects of the flow proposal on specific water rights is unknown." Here, the effects appear to be known. The DRSED must provide the evidentiary basis for this statement. The DRSED must identify the parties that it identifies as ". . . water users other than these districts" that could be affected in order to establish and verify the universe of potentially impacted water users that exist and whether they are accurately grouped and analyzed here and elsewhere in the DRSED.</p>	<p>Please refer to Master Response 1.1, General Comments, regarding program-level analysis and program-level document. Please see Master Response 1.2, Water Quality Control Planning Process, regarding the program of implementation, future proceedings, and water rights. The State Water Board is not currently undertaking a water right proceeding, and as such, the effects of the LSJR flow objectives on specific water rights is unknown. Please also see response to comment 1345-71.</p>
1345	74	<p>Page ES-32: While it is possible that some of the water-diversion and use measures, including irrigation efficiency, may have some applicability to reducing impacts or could be implemented as part of the water right proceedings that are expected to take place to implement the flow objectives, any application of these measures at this point would be speculative. Furthermore, it is unknown whether these activities would reduce the significant impacts to less-than-significant levels.</p>	<p>The quoted language from the Executive Summary pertains to why the SWAP model does not assume any irrigation efficiencies, namely because many irrigation efficiencies rely on eliminating percolation losses and therefore would not result in overall benefits to water supply because of the conjunctive use of surface and groundwater supplies. In this context, the application of any specific irrigation efficiencies are entirely speculative and could lead to underestimating water supply and economic impacts. Knowing water savings associated with certain irrigation efficiencies as a general matter is an entirely different matter than knowing</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>[Comment:] The Board is required to mitigate the impacts of its projects to the maximum extent and dismissing a difficult analysis as "speculative" in nature does not meet the substantive informational requirements of CEQA or the ESA. Additionally, it is arbitrary for the Board to see fit to analyze how building multi-million dollar water treatment and water conveyancing facilities was not speculative but that it was too "speculative" to identify potential mitigation measures related to conservation.</p> <p>Elsewhere, the DRSED touts the lessons that must be incorporated from the recent drought. To wit, the most recent drought involved nearly every water utility providing the Board with monthly conservation statistics and reports of conservation measures. In fact, the Board is uniquely capable of identifying, analyzing and quantifying the application of these measures, as well as their efficacy, because the Board enforced the water use and measurement regulations and the water conservation mandates all throughout the drought. The above statement is an arbitrary conclusion and the topic requires further analysis.</p>	<p>what choices will be made or required at the local level regarding irrigation efficiencies.</p> <p>The SED does identify irrigation efficiencies as mitigation measures for agricultural impacts in Chapter 11, drawing very much from the Board’s experience with the recent drought: (1) Increase the use of irrigation management services to better determine how much water is needed by a crop and when to apply it; (2) Convert less efficient irrigation systems (e.g., surface irrigation) to more efficient ones (e.g., microirrigation); and (3) Increase the capability of irrigation water suppliers to provide delivery flexibility, such as the use of irrigation district regulating reservoirs, to allow flexible delivery durations, scheduling, and flow rates. However, as discussed in Master Response 3.5, the actual effects of the demand management measures identified in Chapter 11 cannot be fully described or quantified because there are many factors that could influence a grower’s decision to implement one of the measures. These decisions would be based on considerations such as crop mix, acres grown, market conditions, actual applied water needs, and actual water supply received. All of these are beyond the control or purview of the plan amendments. Thus, it would be purely speculative to identify the potential use of these demand management measures, including where would be applied and the extent of their application.</p>
1345	75	<p>Page ES-33: Although the water balance for the water districts shows that they are currently recharging groundwater and would continue to do so under LSJR Alternative 3, this is not the case for the groundwater subbasins in the plan area.</p> <p>[Comment:] There is no scientific or evidentiary basis upon which the DRSED can make any conclusions that compare the groundwater impacts to the Study Area (which is the geographic area specifically used in the groundwater impact analysis) to the Plan Area, which is a different and much larger geographic area than the Study Area. Further, according to the DRSED, the groundwater impact analysis was confined to the Study Area. The DRSED purportedly does not contain any analysis of groundwater impacts outside of the Study Area. From the above statement, it appears that the Board Staff performed a groundwater analysis of the Plan Area but then chose to remove that information from the DRSED save the above statement. Until this information is provided, the public is unable to analyze the DRSED’s conclusions or analyses on the issue.</p>	<p>Chapter 9, Groundwater Resources, Section 9.4.3, Impacts and Mitigation Measures, discusses the potential impacts of the plan amendments on groundwater resources. The analysis described in Section 9.4.3 is appropriate for a program-level evaluation in accordance with State CEQA Guidelines. For further information on CEQA requirements and program-level analysis, please see Master Response 1.1, General Comments.</p> <p>For the purpose of analyzing impacts to resources, the plan area is divided into sub-areas depending on natural or physical boundaries appropriate to the resource being assessed. For groundwater resources, impacts are assessed for the four groundwater subbasin underlying the plan area (Eastern San Joaquin, Modesto, Turlock and Extended Merced—i.e. the study area referenced in the comment). The study area represents the primary area that could potentially experience groundwater effects associated with the LSJR alternatives, because the study area underlies the surface water delivery area for the three eastside tributaries. Groundwater is pumped from these four subbasins for agricultural and municipal uses within the plan area. If water users choose to pump more groundwater in response to reductions in surface water supply, these four subbasins would be the primary areas that could be potentially impacted. Furthermore, geographically, the plan area is largely within the boundaries of the four subbasins (Figure 2-3, San Joaquin River Basin and Groundwater Subbasins, and impacts at one location of the basin can eventually spread to an entire subbasin.</p> <p>As explained in Appendix G, Agricultural Economic Effects of the Lower San Joaquin River Flow Alternatives: Methodology and Modeling Results, the LSJR alternatives would only affect the availability of surface water in the LSJR Watershed—groundwater pumping and recharge for areas outside of the districts would not change in any of the LSJR alternatives. Therefore, irrigation districts are the only parties analyzed for the groundwater balance. The estimated groundwater effect is then standardized by dividing the estimated net change in groundwater balance by the subbasin surface area, not the irrigation-district service area, because the analysis is at the subbasin scale.</p> <p>Section 9.4.3, Impacts and Mitigation Measures, acknowledges that effects would vary depending on location and many other factors, all of which are currently unknowable. It is speculative to assume how pumpers in each area will respond to implementation of the flow objectives, because it will depend on many individual and collective decisions including, but not limited to, the discrete actions of local water users in response to reductions in surface water, crop choices in response to markets and other factors, and implementation of SGMA and conservation measures.</p> <p>The "one inch" threshold is a metric used to assess impacts on a subbasin scale, not impacts at specific</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
			<p>locations, which is reasonable and appropriate for a program-level analysis. Therefore, it is speculative to estimate the level of subsidence and change in groundwater elevations at a specific location.</p> <p>Please refer to Appendix F.1, Hydrologic and Water Quality Modeling and Appendix G, Agricultural Economic Effects of Lower San Joaquin River Flow Alternatives: Methodology and Modeling Results, for a detailed description of the models and related assumptions used to evaluate impacts.</p> <p>Please see Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act, for further discussion regarding the speculative nature of evaluating the change in groundwater levels and subsidence, the threshold and criteria used to evaluate impacts on groundwater resources, and consideration of groundwater pumping outside of irrigation districts.</p>
1345	76	<p>Page ES-35: The reduction in surface water supply would therefore affect the entities that rely upon groundwater as their principal source of drinking water by (1) increasing the need to drill deeper well to continue to access groundwater, (2) increasing groundwater pumping costs, (3) degrading groundwater quality, and (4) making groundwater completely unavailable in some areas after some period of continued unrestricted groundwater pumping.</p> <p>[Comment:] CEQA demands that an agency mitigate the impacts of its projects. In this case, it is unclear whether the flow shifting is the mitigation measure or if these groundwater impacts are the "resources" to mitigate the Project's Objectives, which is objectionable. Clearly, if the Board Staff identifies the groundwater impacts as the mitigation, the DRSED has simply failed to identify a lawful mitigation measure because it is neither feasible nor consistent with state policy to purposefully create a condition of unmitigated, unsustainable overdraft.</p>	<p>Please see Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act, for a discussion of the approach to evaluate the impact of the proposed LSJR flow objectives on groundwater resources in the plan area, assumptions made, use of relevant data, and models used for this evaluation.</p>
1345	77	<p>Page ES-36: Under the assumption that SFPUC would purchase replacement water supplies from MID and TID, water costs to SFPUC were calculated based on the predicated annual average shortages that would occur. . .</p> <p>[Comment:] There is no information in the record to demonstrate how MID and TID would have sufficient water available to accomplish these proposed transfers. This is especially true in dry and critically dry years when, presumably, MID and TID may not have sufficient supplies to meet each agency's own water supply obligations.</p>	<p>As explained in Chapter 16, Evaluation of Other Indirect and Additional Actions, in San Francisco Public Utilities Commission's (SFPUC's) Water Supply Improvement Program (WSIP) Program Environmental Impact Report (PEIR), a water transfer between SFPUC and Modesto Irrigation District (MID) and Turlock Irrigation District (TID) for 25 million gallons per day (mgd) during drought years was evaluated, and the final WSIP PEIR reduced the water transfer to 2 mgd during droughts. This transfer was considered in the past, this information provides context for the potential to transfer water, the types of impacts associated with the transfer of water, and potentially mitigation measures needed to reduce potentially significant impacts. Although agencies may elect not to pursue certain actions under particular circumstances, it is reasonable to include them in a portfolio of potential actions because they were considered in the past and may be appropriate for further consideration in light of the plan amendments and depending on how circumstances change.</p> <p>Please see Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, regarding a discussion of water transfers in the context of approaches to address potential water supply reductions, and water supply planning and demand management.</p>
1345	78	<p>Page ES-37: Water supply effects were evaluated for two different scenarios that result from two different scenarios that result from two different interpretations of the Fourth Agreement.</p> <p>[Comment:] The DRSED chose to perform this one impact analysis to recognize the state law of priority. Notwithstanding this unexplained anomaly in methodology for the impact analysis, the DRSED's deeply-flawed interpretations of the Fourth Agreement do not accurately depict the situation where all three parties to the agreement are without a stable</p>	<p>Please see Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, in regard to water supply effects outside the immediate plan area.</p> <p>WSE modeling in the SED does not allocate water rights or contract obligations to meet flow targets established by baseline or LSJR flow alternatives. The WSE is used to describe the environmental impacts of the proposed plan amendments without allocating responsibility to any particular water user or contractor. The primary utility of a planning-level model is a comparative analysis, where the physical system is represented at a sufficient level of precision in order to accurately represent the most important effects of</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>water supply, which the DRSED concludes is a certain impact of the LSJR Objective.</p> <p>The DRSED fundamentally undercuts water supply stability and must analyze the impacts by incorporating this fundamental factor. The DRSED cannot substitute 'contract interpretation' for an actual analysis of the physical Project impacts to the environment. The above statement contradicts the DRSED's previous statement at ES-29 that "The effect of the flow proposal on specific water rights is unknown." This analysis demonstrates that the Board Staff has not only analyzed and assessed the water rights of the parties subject to the Fourth Agreement, it also analyzed various scenarios that may befall the parties.</p>	<p>changes. In this case, the WSE model is configured to determine the change from baseline of water supply stored and available to meet diversion demands as a result of alternatives incorporating streamflow requirements. The general approach is to calculate available water for diversion in each water year based on inflows, net available water from storage after carryover guidelines, after streamflow targets are met. The State Water Board has not determined who will share in the responsibility for meeting the LSJR flow objectives or how the water supply impacts will be allocated. SED Appendix K and Master Response 1.2, Water Quality Control Planning Process, clearly explain the allocation process will be the subject of future proceedings to begin following adoption of the plan amendments. The purpose of the environmental document is to disclose environmental and other impacts, not to specify the allocation of flows.</p>
1345	79	<p>Page ES-38: As mentioned in ES2.1, Need for Flow Objectives, nearly every feature of habitat that affects native fish and wildlife is, to some extent, determined by flow (e.g., temperature, water chemistry, physical habitat complexity).</p> <p>[Comment:] The DRSED needs to provide information upon which to base this statement with respect to non-aquatic wildlife. It is not clear how flow would affect the temperature, water chemistry and physical habitat complexity of non-aquatic species that the FRCS-proxy is supposed to represent. Additionally, the DRSED must provide its data and analysis upon which it identifies the benefits to native fish and wildlife as opposed to non-native fish and wildlife.</p>	<p>Fall-run Chinook salmon (the commenter refers to FRCS, which is assumed to mean Fall Run Chinook Salmon) was not used to determine less than significant impacts on terrestrial species. Potential impacts on terrestrial and aquatic species were evaluated consistent with Appendix C, the State Water Board's Environmental Checklist, which asks whether there could be a substantial adverse effect, either directly or through habitat modification to any species identified as candidate, sensitive, or special status. This includes fish and wildlife listed as threatened or endangered under the state and federal endangered species acts. Section 8.4.2, Methods and Approach, describes how impacts on terrestrial species were determined and includes a discussion of potential plan-induced changes in agricultural practices that could affect terrestrial species. Impact Bio-4 specifically addresses terrestrial species, including upland (non-riverine) species such as blunt-nosed leopard lizard and San Joaquin kit fox. As discussed in Sections 8.2, Environmental Setting, and 8.4, Impact Analysis, the baseline habitat condition for many terrestrial species is relatively degraded, and the LSJR alternatives are not expected to result in substantial further decline relative to baseline conditions. Impacts on fish are evaluated in Chapter 7, Aquatic Biological Resources. As described in Section 7.4.1, Methods and Approach, the impact evaluation uses indicator species such as fall-run Chinook salmon, steelhead, and other native riverine and reservoir fish species to evaluate the impacts on fish species in the three eastside tributaries and the LSJR. The State Water Board is required to consider all beneficial uses during the water quality control planning process and is following that requirement through the preparation and approval of the SED.</p>
1345	80	<p>Page ES-49: SDWQ Alternative I, together with LSJR Alternative 1, comprises the No Project Alternative assumes full compliance with all flow and water quality objectives in the 2006 Bay-Delta Plan as implemented through D-1641 and the NMFS BO on the Stanislaus River (which is included in the baseline). . .</p> <p>[Comment:] Please reconcile the above statement with the closing statement of the paragraph that "Under baseline, these salinity levels are not always met." The Board cannot rely upon information that it knows to be inaccurate. If the baseline salinity levels are not always met, it is inaccurate to "assume full compliance" in the No Project Alternative. The assumption simply "creates" water that is not otherwise present, which disguises or confuses Project impacts.</p>	<p>Please refer to Master Response 2.5, Baseline and No Project, regarding the purpose and description of the No Project Alternative. As described in Master Response 2.5, CEQA does not require the baseline and the No Project Alternative to be the same.</p>
1345	81	<p>Page ES-50: Substituting these three stream reaches or fixed-point compliance locations is designed to provide more accurate representations of salinity throughout the southern Delta.</p> <p>[Comment:] The DRSED did not provide data upon which to base this conclusion. At base, the DRSED chose not to analyze the Delta Salinity Objective and the LSJR Objective together and it is unclear upon what basis the DRSED would conclude that elements of the LSJR Objective would provide increased benefits (i.e., ability to measure compliance) for the Salinity Objective.</p>	<p>The passage cited in the comment describes the proposal to update how salinity compliance is measured by changing the salinity compliance locations of the interior southern Delta to channel segments. Please see Master Response 3.3, Southern Delta Water Quality, for responses to comments regarding measurement of salinity in the southern Delta. The flow objectives are intended to protect fish and wildlife beneficial uses on the Eastside tributaries. The additional flow will provide incidental benefit to salinity conditions in the southern Delta by reducing the salinity concentration of water flowing into the southern Delta.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
1345	82	<p>Page ES-50: The program of implementation for this alternative would continue to require DWR and USBR to address the impacts of their operations on interior southern Delta salinity levels.</p> <p>[Comment:] This statement reflects the DRSED's attempts to unlawfully impose water right allocation decisions on specific parties without appropriate due process to all affected parties. This statement appears to contradict the DRSED's explicit, deliberate decision to not include the Cal WaterFix proceeding into the impacts analyses. Cal WaterFix is a water right proceeding for the CDWR and the USBR that is underway in a simultaneous proceeding to this environmental document and both are under review by the Board's Division of Water Rights.</p>	<p>Water Code section 13242 requires a program of implementation for achieving water quality objectives, which must include a description of the nature of actions that are necessary to achieve the objectives. Consistent with this requirement, the proposed implementation program sets forth the actions necessary to achieve the salinity objectives. Please see Master Response 3.3, Southern Delta Water Quality, for discussion of DWR and USBR's responsibilities.</p> <p>It is unclear why the comment states the quoted language contradicts the prohibition on ex parte contacts in the WaterFix proceeding. Please see Master Response 1.1, General Comments, for discussion of the Cal WaterFix and its relationship to the SED.</p>
1345	83	<p>Page ES-50: The SJR flow element complements the southern Delta salinity element by augmenting flow in the southern Delta that would have the incidental benefit of flushing of salts early in the irrigation season.</p> <p>[Comment:] While framed in terms of water quality, this statement clearly demonstrates the DRSED's unlawful water rights allocation decision. The DRSED explicitly states that the salinity objective is and shall remain the responsibility of the USBR and the CDWR. The DRSED also proposes a less-stringent salinity objective, which translates into less water from the USBR to meet that decreased flow objective.</p> <p>Here, the above statement explicitly acknowledges that the basis for lowering the salinity objective is because other water rights holders, those that are subject to the LSJR Objective, will provide water to "augment" the salinity objective by way of "flushing of salts early in the irrigation season." The DRSED acknowledges the physical connections between the water right allocation decisions for the USBR (and the CDWR) but then fails to analyze that connection and, further, fails to acknowledge how the change in the Salinity Objective is an explicit water allocation decision.</p>	<p>The basis for updating the southern Delta salinity objective is provided in the Hoffman Report (Appendix E), which determined that the southern Delta salinity objective of 0.7 dS/m was more protective than necessary for southern Delta agriculture and that agriculture could still be protected with a salinity objective of 1.0 dS/m. The flow objectives are intended to protect fish and wildlife beneficial uses on the Eastside tributaries. The additional flow will provide incidental benefit to salinity conditions in the southern Delta by helping dilute salts in the San Joaquin River compared to the current conditions, reducing the salinity concentration of water flowing into the southern Delta. Please see Master Response 3.3, Southern Delta Water Quality, for discussion of why the southern Delta Salinity objectives are being updated and USBR's and DWR's responsibilities.</p>
1345	84	<p>Page ES-51: The baseline reflects the physical conditions in 2009 as they existed under the 2006 Bay-Delta Plan.</p> <p>[Comment:] This statement is inaccurate according to the DRSED. The baseline describes a physical state of affairs where there is perpetual compliance with the prior WQCP and such compliance has never occurred. For example, the DRSED at ES-51 states that "periodic exceedances of salinity objectives at the three interior southern Delta salinity compliance locations occur in the historical record. . ."</p> <p>As another example, Table ES-26 shows that Appendix D "provides a technical evaluation of the No Project Alternative and assumptions used to estimate the changes in flow needed to fully comply with the No Project Alternative (i.e., the 2006 Bay-Delta Plan as implemented through D-1641)." The DRSED itself provides evidence that the baseline conditions are not and have never been an accurate description of the environment.</p>	<p>Please see Master Response 2.5, Baseline and No Project, regarding the baseline used in the SED, and Master Response 3.2, Surface Water Analyses and Modeling, regarding the modeling approach used in the Recirculated SED.</p>
1345	85	<p>Page ES-51: These changes could occur as a result of releasing stored water, by reducing surface water diversions through bypassing flows at reservoirs or direct diversion points, or by re-operating reservoirs, all of which are reasonably foreseeable methods of compliance.</p> <p>[Comment:] The DRSED does not provide any information upon which to base the above statement or to inform the public about the activities necessary to implement these</p>	<p>As described in Chapter 4, Introduction to Analyses, the methods of compliance are those actions the regulated community would take to comply with the plan amendments. There are limited methods in which to keep water in a river, and these methods were identified and analyzed throughout the SED.</p> <p>There is no analytic disconnect. The plan amendments require more instream flow, which will result in reduced surface water availability. The plan amendments do not require, mandate or otherwise encourage</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>proposed methods of compliance. If part of the Project, then they must be specifically described and analyzed in the DRSED. The DRSED should describe the analytical disconnect whereby the Board Staff can determine what is 'reasonably foreseeable' for surface water diverters that will lose their surface water supply (e.g., the above statement) but then does not analyze what groundwater pumpers would do to replace the groundwater supply that would be impacted by the LSJR Objective as "too speculative."</p> <p>There must be an analysis of an alternative where the impacted parties simply run out of water (no groundwater to unsustainably pump; no water transfers from other parties impacted by the LSJR Objective), which is the DRSED's unanalyzed but anticipated Project impact.</p>	<p>groundwater pumping. It is, however, reasonably foreseeable that the local response to reduced surface water would be to pump more groundwater, and the SED analyzes the impacts to groundwater on a programmatic level. Beyond that, it is speculative to assume how pumpers in each area would respond and a project-level analysis is not possible.</p> <p>The purpose of an alternatives analysis is to evaluate alternatives to the project that can reduce environmental impacts, not hypothetical worst-case scenarios."</p>
1345	86	<p>Page ES-51: Reservoirs and streamflows in the extended plan area are smaller than reservoirs and streamflows in the plan area and, thus, are potentially more susceptible to variations resulting from the LSJR Alternatives 2, 3, or 4 than in the plan area. Changes in river flow, and water supply effects, will be bigger in the plan area than in the extended plan area. Separate impact determinations are therefore identified for the plan area and extended plan area.</p> <p>[Comment:] It is unclear why the Plan Area and extended plan area should have been analyzed separately based on their reservoir storage capacity and quantity of streamflow, which are elements traditionally analyzed in a water rights analysis. The DRSED must explain its choice of these factors and why they served as threshold factors for analysis.</p> <p>The statement that "... water supply effects will be bigger in the plan area than in the extended plan area" does not support the conclusion that "separate impact determinations" are appropriate to describe the Project impacts. In fact, the statement demonstrates that the extended plan area and the Plan Area should be analyzed as a single Plan Area to demonstrate the Project's entire impact and not just the 'bigger impacts' for one analysis and a second, separate analysis for what the Board Staff assumes (without evidence) will be an area to suffer smaller impacts.</p>	<p>Please refer to SED Chapter 1, Introduction, for a definition of the plan area and extended plan area. The plan area encompasses the areas where the plan amendments apply to protect beneficial uses of water, including native migratory fish. The rim dams on the Stanislaus, Tuolumne and Merced Rivers have blocked upstream migration of anadromous species into the extended plan area and therefore are not the focus of the plan amendments. This is an appropriate reason for distinguishing impact determinations. Surface water in the extended plan area may be relied upon for implementing the plan amendments in the plan area. The State Water Board will evaluate, in a subsequent water rights proceeding, whether to impose responsibility on surface water users who divert surface water from the Stanislaus, Tuolumne, and Merced River Watersheds in the extended plan area, above the major dams.</p>
1345	87	<p>Page ES-52: Table ES-20.</p> <p>[Comment:] The DRSED has no basis upon which to determine that there are Less than Significant impacts to terrestrial species. The DRSED does not have any data upon which to base its conclusion that FRCS serves as an appropriate proxy for all fish and wildlife in the Plan Area. This analysis fully fails to analyze the Project under the Endangered Species Act. Finally, the analysis fails as a threshold matter because the DRSED fails to analyze any piece of non-riverine territory and therefore there are thousands of unanalyzed acres in the Plan Area without scientific explanation.</p>	<p>Please see response to comment 1345-79.</p>
1345	88	<p>Page ES-53: The No Project Alternative is not included in this table because it would have no effect in the extended plan area.</p> <p>[Comment:] The DRSED does not provide any information or data upon which to base this conclusion. This Amendment is the first time that the Board has included the extended Plan Area into its environmental analyses. Therefore, the above statement is a matter that has never undergone an environmental analysis.</p>	<p>Please refer to SED Chapter 15, No Project Alternative. The SED states the following: "The State Water Board implemented the No Project Alternative through Decision 1641, and the responsibility for implementation does not extend to the extended plan area. Thus, there are no impacts in that area resulting from the No Project Alternative." The plan area and extended plan area are defined in SED Executive Summary and Chapter 1, Introduction. The SED appropriately provided an analysis of potential effects for resources in the plan area, extended plan area, and outside the plan area.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
1345	89	<p>Page ES-53: The SDWQ alternatives are not included in this table because they would have no effect in the extended plan area.</p> <p>[Comment:] The DRSED does not provide any information or data upon which to base this conclusion. This Amendment is the first time that the Board has included the extended Plan Area into its environmental analyses. Therefore, the above statement is a matter that has never undergone an environmental analysis.</p>	<p>Please refer to SED Chapter 15, No Project Alternative. The SED states the following: "The State Water Board implemented the No Project Alternative through Decision 1641, and the responsibility for implementation does not extend to the extended plan area. Thus, there are no impacts in that area resulting from the No Project Alternative." The plan area and extended plan area are defined in SED Executive Summary and Chapter 1, Introduction. The SED appropriately provided an analysis of potential effects for resources in the plan area, extended plan area, and outside the plan area.</p>
1345	90	<p>Page ES-54: The chapter identifies actions that the regulated community could take to reduce potential reservoir or water supply effects associated with implementing. . . The activities evaluated in Chapter 16 that result in significant and unavoidable impacts include: [specified list]</p> <p>[Comment:] The DRSED must provide sufficient information to demonstrate that each or any of the listed activities is a reasonably foreseeable occurrence. Of the list proposed, two are simply not reasonably foreseeable in light of the Board's experience with permitting in-Delta diversions (or the lack thereof). For example, the USBR and the CDWR have been trying, unsuccessfully, for at least ten years to permit their in-Delta project.</p>	<p>The plan amendments do not mandate or require any action evaluated in Chapter 16 be implemented. Chapter 16, Evaluation of Other Indirect and Additional Actions, lists and analyzes the potential actions that may be taken in response to the plan amendments and Chapter 4, Introduction to Analysis, describes the overall approach to the analysis. Actions were included because they are reasonably foreseeable in light of the plan amendments. For example, documents indicated the listed actions had previously been under consideration. Although agencies may elect not to pursue certain actions under particular circumstances, it is reasonable to include them in a portfolio of potential actions because they were considered in the past and may be appropriate for further consideration in light of the plan amendments and depending on how circumstances change.</p> <p>Please see Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, regarding in-Delta diversions.</p>
1345	91	<p>Page ES-61: Table ES-26.</p> <p>[Comment:] The DRSED states that Appendix D "provides a technical evaluation of the No Project Alternative and assumptions used to estimate the changes in flow needed to fully comply with the No Project Alternative (i.e., the 2006 Bay-Delta Plan as implemented through D-1641)." This statement demonstrates the inaccuracy of the baseline because the current water quality objectives are not being met. Further, it demonstrates that additional flow must be manufactured through a Board Staff "estimate" to justify using the proposed baseline.</p>	<p>Please refer to Master Response 2.5, Baseline and No Project, for a description of the context of the baseline and a description of the purpose of the No Project Alternative, which demonstrates potential conditions without approval or implementation of the plan amendments.</p>
1345	92	<p>Page ES-62: The State Water Board is the only public agency with discretionary approval over the proposed amendments to the Bay-Delta Plan and, therefore, no other agencies are expected to use this SED for decision making.</p> <p>[Comment:] The Revised SED identifies the FERC relicensing proceedings as a forum where related measures would be implemented to further the WQCP. The above statement appears inaccurate with respect to the FERC proceedings. The DRSED also identifies the USFWS, NOAA-NMFS and the CDFW as parties that will actually implement the Program of Implementation through adaptive implementation and the STM Working Group, all of which would require using the DRSED for these future projects.</p> <p>And finally, any agency that has ESA responsibilities within the Plan Area will be required under federal law to consider (i.e., "use") the DRSED when adopting plans or undertaking actions in the Plan Area.</p>	<p>Please refer to Master Response 1.2, Water Quality Control Planning Process, for responses to comments regarding the State Water Board and lead agency status for the plan amendments project.</p> <p>Public Resources Code section 21067 defines "lead agency" as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Section 21069 defines "responsible agency" as "a public agency, other than the lead agency, which has responsibility for carrying out or approving a project."</p> <p>The State Water Board is the only state agency with authority for carrying out or approving the project. The regulation of other state and local agencies through the adoption and implementation of the plan's requirements does not bestow them with approval power over the project; rather they are regulated parties, not responsible agencies, who must comply with the Bay Delta Plan. Further, federal agencies are not responsible agencies because they are not public agencies within the meaning of CEQA. (Cal. Code Regs., tit. 14, § 15379.)</p>
1345	93	<p>Page ES-63: The statute further requires that the environmental analysis, at a minimum, include ... an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation.</p> <p>[Comment:] The DRSED simply fails to provide any information demonstrating the</p>	<p>The SED does evaluate the reasonable foreseeable alternative methods of compliance in Chapter 16, Evaluation of Other Indirect and Additional Actions and in the SED. Chapter 16 augments the analyses in the preceding chapters relating to the reasonably foreseeable methods of compliance, such as reducing surface water diversions and releasing or bypassing flows at reservoirs in order to comply, each of which are</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>statutorily-required analysis of the "reasonably foreseeable alternative means of compliance" to the LSJR Flow Objective as required under Public Resources Code 21159(a). By simply defining the tool (flow) as the only means of compliance, the DRSED simply fails to consider any alternatives as required by law.</p> <p>Most notably, the DRSED defines the Project, the goals and the objectives as the same thing, the quantity of water that is flowing down a river during a given time period. There is no substitute. There is no alternative. It becomes impossible to analyze an alternative means because only the proposed Project can meet the goals (like 40% of the flow of a given river between months X and Y) and, therefore, only the proposed Project can meet the threshold requirements for further analysis.</p>	<p>alternative methods of compliance with the flow objectives.</p> <p>Multiple commenters suggested that the LSJR plan amendments are incorrectly or too narrowly defined because they address flow in isolation of or instead of other water quality and habitat metrics such as temperature, floodplain activation, predator suppression, or habitat restoration. Flow is the regulatory parameter for LSJR plan amendments because current flows are insufficient to protect fish and wildlife beneficial uses in the LSJR and flow is uniquely within the State Water Board's authorities to regulate. See SED Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives, SED Chapter 1, Introduction, and SED Executive Summary, SED Chapter 3, Alternatives.</p>
1345	94	<p>Page ES-65: The SJR flow element of the proposal complements the southern Delta salinity element by augmenting flow in the southern Delta, particularly in February-June. Increased flows under the flow alternatives would have the incidental benefit of flushing of salts. . .</p> <p>[Comment:] The DRSED must analyze the impacts of the LSJR Flow Objective and the Delta salinity objective together, instead of separately, because CEQA requires an analysis of the entire Project and the DRSED itself acknowledges the 'complementary' connection between the two. The above statement is a water right allocation decision without appropriate due process or analysis. The USBR is responsible for meeting the Delta salinity objective, primarily by releasing fresh water from New Melones Reservoir on the Stanislaus River to dilute the saltier water in the south Delta.</p> <p>Here, the DRSED acknowledges that the LSJR Flow Objective is "augmenting flow" in the southern Delta to "complement" the Delta salinity objective's goal. This 'augmentation' is explicitly relieving the USBR from releasing water that it otherwise would have to release in order to dilute the saline water in the south Delta. Additionally, the USBR has a lower priority to water than any of the named parties in the DRSED under the state's law of water right priority. It violates the state's law of priority for the DRSED to allocate out the water to the junior water right holder without appropriate findings and due process.</p>	<p>The SED does evaluate the entire project. For example, please see Chapter 5's analysis of southern Delta salinity impacts from each of the LSJR Alternatives and the SDWQ Alternatives. Please see Master Response 3.3, Southern Delta Water Quality, regarding the continuing responsibility of USBR. As explained in the Executive Summary, the LSJR plan amendments complement the southern Delta salinity plan amendments by augmenting flow in the southern Delta that has the incidental benefit of flushing salts early in the irrigation season. Any incidental benefit resulting from the LSJR flow objectives does not change any existing obligations imposed on USBR to meet the southern Delta salinity objectives. Please refer to Master Response 1.2, Water Quality Control Planning Process, for information regarding implementation of the Bay-Delta Plan in future proceedings and water right priority. See also, Master Response 2.1, Amendments to the Water Quality Control Plan, for information regarding the plan amendments and Appendix K, Revised Water Quality Control Plan, for the text of the plan amendments.</p>
1345	95	<p>Page ES-73: . . . the regional effects on the four-county Bay Area regional economy and ratepayers are evaluated based on the need to obtain replacement water as a result of the LSJR alternatives.</p> <p>[Comment:] The DRSED does not contain any information upon which to base this conclusion that water supply impacts to the CCSF equates perfectly with the 'regional effects' of the four-county Bay Area regional economy. To the extent the DRSED recognizes a connection between these two areas, especially one so inextricable that the DRSED attempts to declare them duplicative analyses, then the DRSED should provide the information relevant to demonstrate that connection and perform an adequate environmental analysis of the four-county Bay Area region.</p> <p>It is a matter of Board Staff conjecture to make a threshold scoping decision that an analysis isn't necessary because the impacts are somehow already known. The DRSED does not provide an evidentiary basis to determine that there is available replacement water to either CCSF or to the four-county Bay Area region. This type of "impact" is one of many potential impacts, and is sufficiently unlikely that it cannot credibly serve as the sole metric to determine Project impacts. The choice to use this sole metric was a threshold determination based on Board Staff conjecture that deliberately removed any analysis of</p>	<p>It is unclear what "two areas" the comment is referencing. The cited sentence in the comment occurs on page ES-75 in Section ES11.9, Analyses of the Potential Effects on the City and County of San Francisco. There is no mention of "two areas" in this section, but a mention of two scenarios representing different outcomes regarding CCSF's responsibility for additional flow releases that may result from the FERC relicensing process for New Don Pedro Reservoir. The information in the SED evaluated the regional economic effect of the four county Bay Area region under these two scenarios (Appendix L, City and County of San Francisco Analyses).</p> <p>It is unclear from the comment what is meant by a "threshold scoping decision" or a "threshold determination." Please see Chapter 4, Introduction to Analysis, Section 4.4.1, Resource Chapters, for a discussion of the information contained in each of the resource chapters, including the methods and approach and thresholds. As discussed in Chapters 5 through 14, the thresholds used to evaluate impacts are generally from the State Water Resource Control Board Checklist (Appendix B, State Water Board's Environmental Checklist). The State Water Board used the thresholds in its environmental checklist appropriately throughout the SED and describes how they are used to evaluate each resource in the Methods and Approach sections of each chapter. For example, using its environmental checklist, the State Water Board qualitatively evaluated potential effects to service providers in Chapter 13, Service Providers. Impacts SP-1, SP-2a and SP-2b qualitatively evaluate potential impacts due to surface water reductions within the general context of water supply agreements and contracts. The State Water Board is not required</p>

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
		<p>the Project's potential impacts upon an area that the DRSED acknowledges will certainly be impacted.</p> <p>The DRSED provides no information upon which to justify its conclusion that replacement water would be available for use. The very purpose of the LSJR Flow Objective is to identify and seize a unique resource, the surface water flow from the rivers, and the DRSED has not (and cannot) credibly claim that there is a readily available but as-yet-unnamed source of replacement water available to the named irrigation districts, the residents of the Plan Area, and the millions of Bay Area residents. The DRSED contemplates that they will all lose the primary source of their water supply but not their water supply reliability.</p>	<p>to mandate the types of actions discussed in Chapter 13 (and referenced in Chapter 16, Evaluation of Other Indirect and Additional Actions), but rather is required to evaluate other indirect actions that entities could take. Please see Master Response 8.5, Assessment of Potential Effects on the San Francisco Bay Area Regional Water System, regarding the State Water Board's evaluation of potential reductions in water supply to CCSF's regional water system or RWS service area during consecutive drought years with implementation of the plan amendments and approaches to address the potential reductions.</p>
1345	96	<p>Page 9-1: This chapter analyzes increased GW pumping, reduced GW recharge from SW percolation, and related effects (i.e., subsidence) that may occur as a result of the effect of the LSJR alternatives on surface water supplies to the irrigation district service areas.</p> <p>[Comment:] The DRSED does not and must explain why the irrigation districts are the only parties analyzed for groundwater impacts. Each irrigation district belongs to a groundwater management entity, which is the proper agency to review for groundwater impacts for each subbasin. Framing the groundwater impact analysis in this way clearly communicates the DRSED's deliberate and unscientifically-sound limitation to the environmental analysis, which results in a predetermined water allocation decision.</p>	<p>Please see response to Comment 1345-75.</p>
1345	97	<p>Page 9-1: Southern Delta WQ alternatives are not discussed in this chapter because the SDWQ alternatives would not result in a change in groundwater pumping or groundwater recharge from surface water that currently takes place in the plan area.</p> <p>[Comment:] The DRSED does not disclose the evidentiary basis upon which it based this conclusion. Elsewhere, the DRSED refuses to analyze the potential mitigation measures to significant and unavoidable groundwater impacts specifically because the Board Staff determined that estimating groundwater pumping responses would be "too speculative." There is no evidentiary basis upon which the DRSED can make this conclusion because the groundwater impact analysis was solely focused on the Study Area, which is a much smaller geographic area than the plan area. The DRSED must expand the groundwater impact analysis to the entire Plan Area in order to justify the above statement.</p>	<p>Please see response to Comment 1345-75.</p>
1345	98	<p>Page 9-2: The study area represents the primary area that could potentially experience GW effects associated with the LSJR alternatives.</p> <p>[Comment:] The DRSED does not provide the evidentiary basis upon which it based this conclusion. Namely, what was the geographic or hydrographic relationship substantiating the use of four Irrigation District service areas as the only proxy to determine impacts to the entire Plan Area? The DRSED must describe and provide any analyses that it performed regarding the potential for groundwater impacts to the entire Study Area as well as any analyses about the effects of the salinity objectives' potential impacts to groundwater.</p>	<p>Please see response to Comment 1345-75.</p>
1345	99	<p>Page 9-2: The impacts of the LSJR alternatives on GW elevations, aquifer storage, and risk of subsidence cannot be determined with certainty because GW conditions vary within each aquifer subbasin and water users would have varied responses to reduced surface water deliveries.</p> <p>[Comment:] These are unsubstantiated conclusions that purport to excuse a lack of analysis.</p>	<p>Please see response to Comment 1345-75.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>The DRSED should provide information to explain how the above statement is reconciled with the determination of "one inch" impacts, which is an undoubtedly specific metric in light of the above statement.</p>	
1345	100	<p>Page 9-33: If local agencies are unwilling or unable to manage their GW resources, SGMA authorizes the State Water Board to step in to protect a GW basin in limited circumstances: (1) if no agency has opted by the June 30, 2017 (sic) to serve as a GSA for a basin, (2) when a GSA does not complete a GSP by the relevant deadline (2020 or 2022, or (3) when the GSP is inadequate or the GSP is not being implemented in a manner that is likely to achieve the plan's sustainability goal(s), and the basin is either in a condition of long-term overdraft or, after 1/31/25, the SWB determines that the basin is in condition where GW exactions result in significant depletions of interconnected surface waters.</p> <p>[Comment:] In this instance, it is the SWB that is proposing a Project that results in significant and unavoidable impacts to groundwater. In light of this, it is difficult not to interpret the above statement to mean that (1) the Board admittedly is removing the primary and historical tool to recharge groundwater basins to sustainably manage them and (2) once the Project is imposed, the Board intends to act upon the unsustainable situation that it created to allege that the Board should "step in" because the local agencies cannot manage their sub-basins sustainably. It is a Catch-22 and obvious circumvention of the legislature and state constitution's mandates that local agencies manage their groundwater.</p>	<p>Please see Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act, for discussions on State Water Board authorities under SGMA, groundwater recharge, and compliance with SGMA in the context of the plan amendments.</p> <p>The State has taken many steps to support successful implementation of SGMA. For example, the Department of Water Resources and State Water Board have provided technical and financial assistance to GSAs including, recommended grants to Merced County (\$499,952), San Joaquin County (\$249,950), and Stanislaus County (\$250,000) under the Proposition 1 Sustainable Groundwater Planning Grant Program solicitation for Counties with Stressed Basins in January 2016 (See: <a href="http://www.water.ca.gov/irwm/grants/sgwp/archive.cfm">http://www.water.ca.gov/irwm/grants/sgwp/archive.cfm</a>).</p>
1345	101	<p>Page 9-35: The SWB also has authority to address the waste, unreasonable use, unreasonable method of use, and unreasonable method of diversion of water through quasi-legislative action.</p> <p>[Comment:] Citations to the DRSED's bases for this statement should be included. Until then, the statement is objectionable as an inaccurate statement of the law.</p>	<p>The statement is not inaccurate. Please see Water Code § 275. The citation has not been added as it is included in the preceding paragraph to the quoted sentence.</p>
1345	102	<p>Page 9-44: In order to assess the effects of the LSJR alternatives on GW, GW in the four subbasins was considered to be four separate pools of water, each with no separation between shallow and deep aquifers.</p> <p>[Comment:] The DRSED must provide the scientific basis for choosing this methodology. An arithmetic exercise is not the best available science for the analysis. If the DRSED did not intend to analyze impacts related to the "depth" of any of the subbasins, what is the significance or relevance of the maps provided at Figures 9-3 to 9-5?</p>	<p>Figures 9-3 to 9-5 and the related discussion in Chapter 9, Section 9.2.1, San Joaquin Valley Groundwater Basin and Subbasins are provided to describe the environmental setting for groundwater resources, including the physical characteristics of the four groundwater subbasins underlying the plan area. The scientific basis for making the assumptions referenced in the comment is stated in the latter half of the paragraph from which the quoted text is extracted, which states, "[t]he evaluation of groundwater effects was not separated by depth because (1) there is some connectivity between the different depths, and (2) increased groundwater pumping would occur in both shallow and deep wells. Substrate with low permeability (e.g., the Corcoran Clay at the western side of the four subbasins) might slow the interaction between deeper confined and shallower unconfined sections of the aquifer, but water pumped from a deeper confined section of the aquifer would eventually be replaced by water from above or from the edges. Furthermore, within the four subbasins, the number of deep and shallow wells is too large to feasibly assign pumping increases to separate sections of the aquifer. The simplifying assumptions of separating the aquifers by subbasin and not depth are acceptable because the purpose of the analysis is to estimate the average effect of the LSJR alternatives on the subbasins as a whole, not effects at specific well locations."</p>
1345	103	<p>Page 9-44: The evaluation of GW effects was not separated by depth because: (1) there is some connectivity between the different depths (2) increased GW pumping would occur in both shallow and deep wells.</p> <p>[Comment:] Please cite to the evidence supporting the statement "increased GW pumping would occur in both shallow and deep wells." Elsewhere, the Revised SED fails to identify the potential for groundwater impacts because it was too "speculative" to try and identify</p>	<p>As discussed in Chapter 9, Groundwater Resources, Section 9.4.2, Methods and Approach, an increase in groundwater pumping in both shallow and deep wells was an assumption used in the SED analysis, based on the geographical treatment of the aquifer with no separation between shallow and deep aquifers. The approach to the groundwater impact analyses is reasonable and appropriate for a program-level evaluation and is not meant to be, nor required to be, a site-specific analysis of, for example, each cone of depression or potential cone of depression in each basin. Moreover, it is speculative to assume how pumpers in each</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>potential groundwater pumping patterns in response to the Project. Please provide the data to demonstrate the scientific soundness of this analytical methodology. This is especially important because groundwater impacts are described in terms of "depth," as in one-inch as across hundreds of square miles, while the above statement clearly acknowledges that the Revised SED did not analyze "depth" in its impact analysis.</p>	<p>area will respond to implementation of the flow objectives, because it will depend on many individual and collective decisions including, but not limited to, the discrete actions of local water users in response to reductions in surface water, crop choices in response to markets and other factors, and implementation of SGMA and conservation measures. For further discussions of the programmatic scope of the SED and use of best available science, please see Master Response 1.1, General Comments.</p> <p>The comment refers to two different concepts of "depth:" depth as a threshold and depth to groundwater. The SED evaluates the significance of impacts of LSJR alternatives on groundwater resources at the subbasin scale using a one-inch depth threshold. This depth is determined by dividing the reduction in net recharge, as a volume, by the subbasin area. This threshold is not the same as a change in depth to groundwater. The SED does not evaluate changes in depth to groundwater, because potential changes would depend on the actions of individual water users and site-specific information that are beyond the scope of the SED. For further discussion on the groundwater impact analysis criteria and threshold, please see Master Response 3.4, Groundwater and the Sustainable Groundwater Management Act.</p>
1345	104	<p>Page 9-44: These simplifying assumptions of separating the aquifer by subbasin and not by depth are acceptable because the purpose of the analysis is to estimate the general magnitude of the average effect of the LSJR alternatives on the subbasins, not effects at specific well locations.</p> <p>[Comment:] The DRSED must identify the evidentiary basis for the above statement.</p>	<p>Please see response to Comment 1345-103.</p>
1345	105	<p>MID respectfully requests the Board to rescind the DRSED. The document is scientifically and legally deficient in a variety of areas. The DRSED is a misguided attempt to improperly use the water quality control planning process to adjudicate water rights for MID and several other senior water rights holders in the San Joaquin Valley.</p> <p>This document will completely devastate the entire Central Valley, turning one of the nation's most productive regions into a desert wasteland. Sadly, the DRSED will impose tremendous socio-economic, economic, and environmental costs on the area with little to no improvement to the environment. It will jeopardize the habitat of a variety of terrestrial species which are currently listed under the federal Endangered Species Act, violating that act, and for the hoped-for benefit of a mere 1,100 salmonid species. The human cost will be devastating as families are torn apart and entire communities are turned into ghost towns due to a lack of work, and/or in some instances, the most basic requirement of civilization--a reliable, safe supply of drinking water.</p> <p>Please stop this madness. Rescind this document and utilize the readily available scientific information to set balanced, meaningful, and legal defensible water quality objectives that benefit humans and a variety of other species and their habitats. MID stands ready, willing and able to continue our well-documented, successful, and scientifically based stewardship of our watershed and valley.</p>	<p>Please see Master Response 1.1, General Comments, for responses to comments that either make a general comment regarding the plan amendments.</p>
1345	106	<p>[ATT3: Community Water Interest Meeting - Transcript - Modesto - November 18, 2016. Vol. 1 of 1. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]</p>	<p>The commenter is providing 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.</p>
1345	107	<p>[ATT4: Technical Workshop Transcript - Sacramento - December 5, 2016. Vol. 1 of 1. Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San</p>	<p>The commenter is providing this attachment for reference purposes in support of their comments. Those</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		Joaquin Delta Estuary: San Joaquin River Flows and Southern Delta Water Quality and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	comments are addressed in these responses to comments; therefore, no additional response is required.
1345	108	[ATT5: Technical Workshop Transcript - Sacramento - December 12, 2016. Vol. 1 of 1. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	The commenter is providing 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.
1345	109	<p>[From ATT5:] BILL PARIS: Last week we talked about accretions and how those contributed to meeting some of the requirements. And they were assumptions that we talked about. I think 20 percent was what was in there. Has there been an analysis or evaluation of the potential relationship between--potential impacts to groundwater depths and whether or not the streams would remain gaining or losing or in what percentages or how that might change? And if so, can you tell me where that might be?</p> <p>ANNE HUBER: In Chapter 5 there is a discussion in the setting about the interaction between rivers and groundwater. It is not part of the groundwater use analysis partly because this analysis focuses on the main part of the groundwater budget that would be affected by the alternatives. So if groundwater pumping were to increase, there is some potential that there would be small increases in seepage from the rivers, which would, in a small way, help ameliorate groundwater impacts. But there was not a need to analyze that in detail in order to determine that there would be an impact.</p> <p>The amount of water lost from the rivers is currently--well, there are sections of rivers that are both gaining and losses. If groundwater were to drop over a long time, which is not expected due to SGMA, then seepage, like I indicated, could increase, but it would probably not have a large effect on flows.</p> <p>BILL PARIS: Okay. But is that reflected in the document anywhere, or is that sort of your perception of things in response to the question?</p> <p>ANNE HUBER: Well, like I said, there is the section in Chapter 5 that talks about the existing interaction between surface water and groundwater. Sorry. I am incorrect. It is Chapter 9. I was just looking at--yeah. So there is some uncertainty there, and I don't know that we have a large discussion on that.</p> <p>BILL PARIS: Okay. And I understand that maybe today we are talking about groundwater. I guess, maybe, I should have asked this question last week, and if so, I apologize. I am wondering if from the surface water perspective--and, again, the assumptions regarding accretions--if there should have been some analysis between these two, whether it was in the groundwater section or the surface water section. Has anyone looked at or considered whether or not--and I don't know. I am just asking if anyone had looked at what impact that might have had.</p> <p>TIM NELSON: We haven't published any analysis of that.</p> <p>BILL PARIS: Okay. Thank you. . . . Will, you had mentioned the use of the Tuolumne River daily operations model. Can you explain how the State Board used that model, in what capacity?</p> <p>WILL ANDERSON: The only way we used that was to have another independent view on</p>	<p>Chapter 9 describes the baseline interaction between rivers and groundwater in the plan area (e.g., seepage), and explains “[i]n either the losing or gaining scenario, groundwater-surface water interactions are unlikely to have a large impact on total river flow.” A detailed discussion regarding the assumptions for the groundwater balance methodology used in the groundwater impact analysis is provided in Appendix G, Agricultural Economic Effects of Lower San Joaquin River Flow Alternatives: Methodology and Modeling Results. Section G.3, Estimation of Groundwater Balance, explains that multiple factors, including stream-groundwater interaction, are assumed to be constant for each LSJR alternative. For information about how the individual operations models for the Stanislaus, Tuolumne, and Merced Rivers are considered, please see Master Response 3.2, Surface Water Analyses and Modeling, and Appendix F.1, Hydrologic and Water Quality Modeling.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>what the total diversions might be, the duration of what those total diversions might be.</p> <p>BILL PARIS: Sort of as a check on the accuracy of the other models that you were using and the results that you were getting?</p> <p>WILL ANDERSON: Right. Just another independent use of the weight of evidence.</p> <p>BILL PARIS: Thank you.</p>	
1345	110	<p>[From ATT5:] BILL PARIS: At the beginning of today, I know you guys foreshadowed a little bit some of the analysis that we were going to see regarding San Francisco. And I know--or at least I think I know--from looking at that appendix, there is an emphasis on a five- or maybe six-consecutive-year drop period and what that impact would be on San Francisco. Certainly from an irrigation district perspective, you know, one of the things we are most concerned about is getting through the '28 through '32 or '87 to '92 droughts and looking at those in consecutive years and trying to ascertain the impacts of that particular period, not just the averages. So I am wondering how we do that type of analysis for ag. And if so, where is it, and if not, can you comment on why not?</p> <p>LES GROBER: We--I think as we briefly put up at the last workshop, we showed how the numbers for consecutive years. They are actually the average over that drought of record. The '87 through '92 is similar to the critically dry years in terms of water supply effects. But beyond that, we didn't do any specific detailed analysis about the multi-drought year effects.</p> <p>BILL PARIS: Okay. But we did those for San Francisco; is that right? I know we are going to get to that later. And if I am wrong, you can say, "No. You are wrong. Wait an hour, and we will get there."</p> <p>LES GROBER: Well, we did, as you see in the appendix. And that is because those are the years that there is an effect in years like that. So it--that was the rationale for doing it for those--for the city and county of San Francisco because that is when the effect occurs. There is the available effect that we described with regards to effects on ag on all years. But you have posed the question--or posed the comment before. And you can make that as a comment about, you know, consecutive dry years. But we have both the long-term economic effects showing the exceedance from 1922 to 2002--2004, the CalSim period? Yeah. 2003. So it is encompassed in that analysis of the full record.</p> <p>BILL PARIS: Okay. Thanks.</p>	<p>This attachment is a transcript of the workshop held on December 12, 2016. The purpose of the workshop was to explain technical details of the SED analysis and answer questions related to the analysis. Based on this excerpt of the transcript the questions of the commenter were responded to at the time of the workshop. No further response is necessary.</p>
1345	111	<p>[From ATT5:] BILL PARIS: I may be very dense. So I apologize, but I am going to ask the same question for the fourth or fifth time. But I want to get to this question of additive and what has been wrapped back around or what has been included. Last week--and please bear with me. I may get the numbers wrong, but hopefully you will get the gist of what I am saying. Last week we put up a chart at the last technical workshop, and I think it said during critical years the average reduction was 38 percent. That may not be right, but hopefully that will recall the information that was provided. If I am understanding right, is that number sort of a generic number that is sort of a basin-wide 38 percent reduction, not to each and every entity, but that is just sort of a mathematical equation result? Is that a fair way to say it?</p> <p>LES GROBER: Yeah. That is the average over the entire affected area.</p>	<p>This attachment is a transcript of the workshop held on December 12, 2016. The purpose of the workshop was to explain technical details of the SED analysis and answer questions related to the analysis. Based on this excerpt of the transcript the questions of the commenter were responded to at the time of the workshop. No further response is necessary.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>BILL PARIS: Okay. Under what we are talking about today, though, if the districts went ahead with the water sale, scenario one or scenario two would have a larger individual reduction during those dry and critical years than 38 percent; is that fair? That would be absorbing San Francisco's share of that; is that accurate?</p> <p>LES GROBER: Yeah. Not an additive effect but there would be perhaps--</p> <p>BILL PARIS: Understood.</p> <p>LES GROBER: Yeah.</p> <p>BILL PARIS: Okay. So I think what a lot of us are asking is: "Has that element been wrapped back around, say, through SWAP and IMPLAN at any point?"</p> <p>LES GROBER: To show the reduced effect that it might have--not a reduced but what the effect would be. No. There hasn't been any kind of mix and match of scenarios where--in the scenario where there is that transfer that occurs so you have the water supply effect translated to the area. No, that was not done.</p> <p>BILL PARIS: Okay. Can I ask why that wasn't--oh, go ahead. I'm sorry.</p> <p>ANNE HUBER: I am just thinking--oops. Let me--</p> <p>WILL ANDERSON: Anne Huber from ICF.</p> <p>ANNE HUBER: I don't know if it was clear in the way the analysis was done, but the full shortage was assigned to agriculture, for the purpose of assessing agricultural impacts. And so in that sense, the effect of MID and TID giving water to CCSF is accounted for in the analysis. If some of the CCFS water were to--if CCFS were shorted, then the agricultural impact would be less than what was modeled. I don't know if that was--</p> <p>BILL PARIS: That is very helpful. I did not realize that. Thank you.</p> <p>WILL ANDERSON: If that is the case, then the water has to be bypassed, which is more so than in the baseline. They have found some other alternative supply.</p> <p>BILL PARIS: Okay. Thanks.</p>	
1345	112	[ATT6: Public Hearing Transcript - Sacramento - November 29, 2016. Vol. 1of 1. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	113	[ATT7: Public Hearing Transcript - Stockton - 16, 2016. Vol. 1of 1. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	114	[ATT8: Public Hearing Transcript - Merced - December 19, 2016. Vol 1 of 2. Amendment 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 and on the Adequacy of	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.

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		the Supporting Recirculated Draft Substitute Environmental Document (SED).]	
1345	115	[ATT9: Public Hearing Transcript - Merced - December 19, 2016. Vo. 2 of 2. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	116	[ATT10: Public Hearing Transcript - Modesto - December 20, 2016. Vol. 1 of 2. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	117	[ATT11: Public Hearing Transcript - Modesto - December 20, 2016. Vol. 2 of 2. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	118	[ATT12: Public Hearing Transcript - Sacramento - January 3, 2017. Vol. 1 of 1. Amendment 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 and on the Adequacy of the Supporting Recirculated Draft Substitute Environmental Document (SED).]	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.
1345	119	[ATT13: U.S. DOI Bureau of Reclamation, SECURE Water Act Section Disk 6 9503(c) - Reclamation Climate Change and Water 2016, Chapter 8: Sacramento and San Joaquin River Basins (Mar. 2016).]	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.
1345	120	[ATT14: M.K. Matella and A. M. Merenlender, Scenarios for Restoring Floodplain Ecology Given Changes to River Flows Under Climate Change: Case from the San Joaquin River, California, River Res. Applic. (2014).]	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.
1345	121	[ATT15: California Natural Resources Agency, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008 (2009).]	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.
1345	122	[ATT16: U.S. DOI, Bureau of Reclamation, West-Wide Climate Risk Assessment: Sacramento and San Joaquin Basins Climate Impact Assessment, RECLAMATION: Managing Water in the West (Sept. 2014).]	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.
1345	123	[ATT17: California Attorney General's Office, Addressing Climate Change at the Project Level (Rev. Jan. 6, 2010) (visited Dec. 27, 2016), available at <a href="http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf">http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf</a> .]	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.
1345	124	[ATT18: Assembly Bill No. 32 a/k/a California Global Warming Solutions Act of 2006. Cal. Health & Safety Code § 38500 et seq.]	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.
1345	125	[ATT19: CARB, Climate Change Scoping Plan: A Framework for Change. (Dec. 2008).]	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.
1345	126	[ATT20: IPCC, IPCC Second Assessment: Climate Change 1995, A Report of the Intergovernmental Panel on Climate Change (1995).]	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.

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
1345	127	[ATT21: Dept. of Water Resources, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, Technical Memorandum Report (July 2006).]	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.
1345	128	[ATT22: Sea-Level Rise Task Force, State of California Sea-Level Rise Interim Guidance Document (Oct. 2010).]	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.
1345	129	[ATT23: Executive Order S-3-05.]	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.
1345	130	[ATT24: Executive Order S-13-08.]	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.
1345	131	[ATT25: California Natural Resources Agency, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008 (2009).]	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.
1345	132	[ATT26: Cal. Water Code § 85320(b)(2)(C).]	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.
1345	133	[ATT27: California Dept. of Water Resources, Managing an Uncertain Future; Climate Change Adaptation Strategies for Water (Oct. 2008).]	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.
1345	134	[ATT28: Cal. DWR, California Water Plan Update (2009).]	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.
1345	135	[ATT29: California DWR, Central Valley Flood Protection Plan (2012).]	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.
1345	136	[ATT30: Cal. DFW, Unity, Integration, and Action: CDFW's Vision for Confronting Climate Change in California (2011).]	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.
1345	137	[ATT31: CA Dept. of Food & Agriculture, California Agricultural Vision: Strategies for Sustainability (2010).]	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.
1345	138	[ATT32: CNRA, Safeguarding California Plan (2014).]	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.
1345	139	[ATT33: Cal. Dept. of Forestry and Fire Protection, An Adaptation Plan for California's Forest Sector and Rangelands (Dec. 2008).]	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.
1345	140	[ATT34: CALFED Bay-Delta Program, Independent Science Board Memorandum (2007).]	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.
1345	141	[ATT35: Delta Protection Commission, 2006-2011 Strategic Plan (2006).]	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.
1345	142	[ATT36: Ocean Protection Council, Sea Level Rise Task Force Interim Guidance Document (October 2010, original report).]	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.
1345	143	[ATT37: Ocean Protection Council, Sea Level Rise Task Force Interim Guidance Document	The commenter provided this attachment for reference purposes in support of their comments. Those

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
		(March 2013 Update).]	comments are addressed in these responses to comments; therefore, no additional response is required.
1345	144	[ATT38: Cal. Dept. of Trans., Addressing Climate Change Adaptation in Regional Transportation Plans: A Guide for California MPOs [Metropolitan Planning Organizations] and Regional Transportation Plans Agencies (ongoing).]	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.
1345	145	[ATT39: Caltrans Activities to Address Climate Change: Reducing Greenhouse Gas Emissions and Adapting to Impacts (April 2013).]	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.
1345	146	[ATT40: Cal. EMA & Cal. NRA Climate Adaptation Planning Guide (Sept. 2012).]	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.
1345	147	[ATT41: SWRCB Press Release Re: Revised Draft Resolution No. 2017 - Comprehensive Response to Climate Change.]	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.
1345	148	[ATT42: SWRCB Revised Draft Resolution No. 2017 - Comprehensive Response to Climate Change.]	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.
1345	149	[ATT43: Fourth Agreement Between The City and County San Francisco And TID and MID, Dated June 3, 1966.]	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.
1345	150	[ATT44: Amended and Restated Treatment and Delivery Agreement Between Modesto Irrigation District and City of Modesto, Dated October 11.]	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.
1345	151	[ATT45: Modesto Irrigation District, Fifteenth Issue, New Don Pedro Dam Bonds, Dated August 1, 1967.]	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.
1345	152	[ATT46: SalSim, Salmon Simulator, As Implemented for the San Joaquin River System, Dated June 2013.]	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.
1345	153	[ATT47: SalSim, Salmon Simulator, As Implemented for the San Joaquin River System, Dated February 2014.]	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.
1345	154	[ATT48: Agreement for Mitigation Impacts to Contra Costa Water District from Construction and Operation of Bay-Delta Conservations Plan/California WaterFix. Dated March 24, 2016.]	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.
1345	155	[ATT49: The Vernalis Adaptive Management Plan (VAMP) Report of the 2010 Review Panel.]	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.
1345	156	[ATT50: DWR California Data Exchange Center, Don Pedro Dam, Printed March 15, 2017.]	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.
1345	157	[ATT51: 2016 Final BDCP/California WaterFix EIR/EIS- Volume I.]	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.
1346	1	Overall, the Delta Stewardship Council finds the SED to be a well-written and well-researched document that recognizes the connections among flows, native fish populations, and water quality in the southern Delta.	Please see Master Response 1.1, General Comments, for responses to comments that either make a general comment regarding the plan amendments or do not raise significant environmental issues.
1346	2	The general scientific approach outlined in the SED is sound, but we recommend clarification of how flows will be managed to best achieve more functional, natural flow	Please see Master Response 2.1, Amendments to the Water Quality Control Plan, for a description of the plan amendments, including adaptive implementation (also identified in Master Response 2.2, Adaptive

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		characteristics.	Implementation).
1346	3	The general scientific approach outlined in the SED is sound, but we recommend clarification of the use of flow and non-flow measures to meet yet-to-be-determined biological objectives.	Please see Master Response 2.1, Amendments to the Water Quality Control Plan, for a description of the plan amendments, including the incorporation of non-flow measures (also identified in Master Response 5.2, Incorporation of Non-Flow Measures).
1346	4	The general scientific approach outlined in the SED is sound, but we recommend clarification of adaptive management measures and timelines.	Master Response 2.2, Adaptive Implementation, provides more information on adaptive implementation, including examples of how it can work.
1346	5	The general scientific approach outlined in the SED is sound, but we recommend clarification of the governance structure for achieving stated goals and objectives.	Please see Master Response 2.1, Amendments to the Water Quality Control Plan, and Master Response 2.2, Adaptive Implementation, for responses to comments regarding the STM Working Group, including the governance structure.
1346	6	Properly implemented, the proposed changes to the Bay-Delta Plan have the potential to contribute toward Delta Plan policies and recommendations, including: Delta Plan policy G P1 (Coequal Goals, Best Available Science, and Adaptive Management (23 California Code of Regulations section 5002)), Delta Plan policy ER P1 (Delta Flow Objectives (23 California Code of Regulations section 5005)), Delta Plan recommendation ER R1 (Updated Delta Flow Objectives), and the state's coequal goals for the Delta (Water Code section 85054).	Please see Master Response 1.1, General Comments, regarding the Delta Reform Act and Master Response 2.2 Adaptive Implementation.
1346	7	Council staff and the Delta Independent Science Board (Delta ISB) commented on the prior version of the SED, posted Dec. 31, 2012. Council staff appreciates that many of their comments, and those of the Delta ISB, have been considered in development of the current SED.	Please see Master Response 1.1, General Comments, for responses to comments that do not raise significant environmental issues or make a general comment regarding the plan amendments.
1346	8	The proposed changes to the Bay-Delta Plan include provisions for adaptive implementation (implementing adaptive management through experimentation), and the potential for alternative water management and restoration agreements that would allow for more flexible implementation of the amended Bay-Delta Plan requirements.	Please refer to Master Response 2.2, Adaptive Implementation, for responses to comments and more information regarding adaptive implementation, including examples of how it can work.
1346	9	<p>The [Delta Stewardship] Council recognizes that the revision of flow and water quality objectives is difficult and controversial, and that the State Water Board has challenging questions to answer in balancing the allocation of water among beneficial uses. The State Water Board needs to consider agricultural, urban, and ecosystem beneficial uses of a finite water supply. As the SED recognizes, this water supply will be further constrained by the additional demands imposed by the Sustainable Groundwater Management Act. However, amendment of the Bay-Delta Plan is critically important for the achievement of the state's coequal goals, and the Delta Plan recognizes this importance by calling for the expedited completion of this work. The Delta Reform Act and the Delta Plan call for best available science to guide decision making, and this is especially important given the uncertainty surrounding establishment of flow objectives for the Lower San Joaquin River (LSJR). We submit the following comments for your consideration.</p> <p>Unimpaired Flow and a More Natural, Functional Hydrograph</p> <p>The Delta Plan calls for more natural, functional flows to contribute to achievement of the coequal goals. The Council recognizes that this does not mean we can expect the same flows as those that supported ecosystem functions before the Delta was substantially altered and transformed. However, flows that more closely resemble the natural timing, frequency, duration, volume, and rate of change of flow for a region's dim ate will best support native aquatic communities. This is well-supported by the best currently available science, and we</p>	<p>Please see Master Response 1.1, General Comments, for responses to comments that generally support the plan amendments, a specific percent of unimpaired flow, or an LSJR alternative. The comment summarizes information regarding unimpaired flow and the need for it. The information provided in the comment does not contradict information contained within the SED, including the Executive Summary; Chapter 3, Alternatives Description; Appendix C, Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives; Master Response 2.1, Amendments to the Water Quality Control Plan; and Master Response 3.1, Fish Protection.</p> <p>Please see Master Response 3.2, Surface Water Analyses and Modeling, regarding calculation of unimpaired flow, a discussion of unimpaired flow versus natural flow, and a discussion of why unimpaired flow is an appropriate metric for use in the LSJR flow objectives.</p> <p>Please see Master Response 2.1 for the membership and role of the STM Working Group, as well as a discussion of the timeframe for the LSJR flow objectives (also in Master Response 3.1 with respect to the biological need for February through June).</p> <p>Please see Master Response 2.2, Adaptive Implementation, for information regarding adaptive implementation, shaping flows, and operations plans.</p> <p>Please see Master Response 2.1 for responses to comments regarding the San Joaquin Monitoring and</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>appreciate that it is also recognized in the SED. [Footnote 1: Yarnell, S.M., Petts, G.E., Schmidt, J. C., Whipple, A. A., Beller, E. E., Oahm, C. N., Goodwin, P. and Viers, J. H. (2015). Functional Flows In Modified Riverscapes: Hydrographs, Habitats and Opportunities. BioScience, 65(10):963-972. Retrieved January 2016, from: <a href="https://watershed.ucdavis.edu/files/biblio/BioScience-2015-Yarnell-biosci_biv1_02.pdf">https://watershed.ucdavis.edu/files/biblio/BioScience-2015-Yarnell-biosci_biv1_02.pdf</a>] [Footnote 2: SED, Chapter 3, p. 3.] [Footnote 3: Delta Independent Science Board comment letter to the State Water Resources Control Board dated March 29, 2013 regarding December 2012 Substitute Environmental Document on San Joaquin River Flows.] [Footnote 4: Kiernan, J.D., Moyle, P. B. and Crain, P. K. (2012). Restoring native fish assemblages to a regulated California stream using the natural flow regime concept. Ecological Applications, 22(5):1472-1482.]</p> <p>Unimpaired flows, the approach proposed in the SED, are not the same as "more natural, functional flows" as described in the Council's Delta Plan. [Footnote 5: Delta Stewardship council 2013, The Delta Plan, p. 134.] Unimpaired flow, the flow that would be expected if reservoirs were removed but the contemporary watershed and current land uses remained, differs from natural flow, runoff that would have occurred had the landscape and waterways remained unaltered. This is because natural floodplains and native vegetation would likely have changed the amount and timing of surface runoff. [Footnote 6: Department of Water Resources March 2016 (DRAFT), Estimates of Natural and Unimpaired Flows for the Central Valley of California: Water Years 1922-2014.]</p> <p>However, unimpaired flow is a closer approximation of what is thought to be historical natural flow than current flow objectives for the San Joaquin River and its tributaries. As the SED indicates and the proposed changes to the Water Quality Control Plan allow, flow objectives based on unimpaired flow could be implemented in ways that more effectively achieve desired ecosystem functions than strict adherence to percentage of unimpaired flow.</p> <p>The science community is unlikely to coalesce around a single unimpaired flow value as the "right" value for a given river system, but there is a body of evidence indicating that an unimpaired flow methodology can be effective. The Delta ISB previously raised the importance of effective adaptive management and stated that management of flows at 35% of unimpaired flow appears to be the lower limit for potential improvements to environmental conditions in the LSJR. [Footnote 7: Delta Independent Science Board comment letter to the State Water Resources Control Board dated March 29, 2013 regarding December 2012 Substitute Environmental Document on San Joaquin River Flows.] Flow volume and how it is managed (sculpted and shaped) are both important. The SED should ensure that the level of unimpaired flows ultimately selected as a starting point can be adaptively managed to meet the to-be-identified biological objectives.</p> <p>The State Water Board's proposal to set flows based on a specific percentage of unimpaired flow can be consistent with the concept of more natural, functional flows if these flows are appropriately sculpted, shaped, and managed in order to achieve stated objectives. The calculation of unimpaired flows provides a framework from which to consider possible flow requirements, but the use of water negotiated and allocated using this technique needs to be effectively utilized through careful consideration of the more natural functional flow needs of native fish. The SED recognizes the importance of functional flows, but defers the details of how they will be implemented. For example, exactly how a given volume or "block" of water would be shaped or sculpted during the February-June period is unclear.</p>	<p>Evaluation Program and the February through June time period.</p> <p>Please see Master Response 3.2, Surface Water Analyses and Modeling, for a discussion regarding climate change; please also see Chapter 14, Energy and Greenhouse Gases, Impact EG-5 for a discussion regarding climate change.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>We understand that development of this detail is proposed to be done through the Stanislaus, Tuolumne, and Merced Rivers Working Group (STM Working Group), but it would be helpful to be assured that the STM Working Group will consider variables like the timing, duration, frequency, rate of change, and volumes of flow. It will also be important to link these sculpted and shaped flows to the geomorphology of each river system and to key life history attributes of native fish species. We additionally recommend clarifying what role, if any, the STM Working Group will play in real-time operations. The State Water Board should fully consider how adaptive implementation and use of a given block of water can best be used to optimize ecosystem functions.</p> <p>The SED also considers potential changes to unimpaired flows and water temperature outside of the February-June period. This period of time is especially important given projected climate change effects of higher temperatures and greater amounts of future precipitation falling as rain instead of snow. Flashier fall and winter, flows and lower summer base flows are very likely with a changing climate and warmer temperatures. The future flow conditions from July through January and the late summer and early fall temperature conditions deserve greater attention in the SED.</p>	
1346	10	<p>Importance of Non-flow Measures</p> <p>A successful Bay-Delta Plan amendment should include both flow and non-flow actions. Because the LSJR ecosystem is substantially modified from its pre-20th century state, providing greater unimpaired flows without non-flow, ecosystem restoration actions may be inadequate and inefficient for the recovery of some native species. Non-flow actions include floodplain and riparian zone restoration, placement of fish screens, and predatory fish control. [Footnote 8: SED, Chapter 3, p. 3-18.] In particular, floodplain connectivity has been largely lost along the LSJR tributaries and restoration of floodplain habitat along these tributaries will likely provide significant benefits for native fish.</p> <p>Currently, it is difficult to evaluate potential outcomes of proposed non-flow measures, because it is not currently known what measures will be used, where these measures would be implemented, and what the biological goals will be. We support a mix of non-flow and more functional, natural flow approaches for native fish species recovery in these catchments. To the extent implementation of a combination of flow and non-flow measures is only feasible through voluntary negotiated settlements, we strongly support that approach as long as the outcomes are in keeping with the furtherance of the state's coequal goals.</p>	<p>For discussions on the role of the non-flow measures in protecting fish and wildlife and the incorporation of non-flow measures in the plan amendments, please see Master Response 5.2, Incorporation of Non-Flow Measures</p> <p>Please see Master Response 1.1, General Comments, regarding voluntary agreements and the plan amendments relationship to co-equal goals, as defined by the Delta Reform Act. Please see Master Response 2.1, Amendments to the Water Quality Control Plan for a description of the incorporation of non-flow measures. The plan amendments allow for implementation of non-flow measures as described in Appendix K: "...include non-flow actions recommended in this Plan or by DFW, the non-flow measures may support a change in the required percent of unimpaired flow, within the range prescribed by the flow objectives, or other adaptive adjustments otherwise allowed in this program of implementation. Any such changes must be supported by DFW and satisfy the criteria for adaptive adjustments contained within this program of implementation." Please see Master Response 5.2, Incorporation of Non-Flow Measures, for information regarding non-flow measures that could be implemented through the plan amendments.</p>
1346	11	<p>Adaptive Management</p> <p>Adaptive management is called for in the Delta Reform Act and is prescribed by the Delta Plan for ecosystem restoration and water management covered actions within the Delta (23 California Code of Regulations section 5002(b)(4)). Although the SED includes an area upstream of the Delta, the Delta Plan's adaptive management approach is relevant to the entire project area and would improve outcomes if appropriately implemented. The [Delta Stewardship] Council supports utilization of a clearly described adaptive management methodology in determining the most effective ways to manage flows and non-flow measures. [Footnote 9: SED, Appendix K, p. 29-31.]</p> <p>The State Water Board should clarify the anticipated adaptive measures that could be implemented as part of adaptive management. The SED states that "Implementation of the</p>	<p>Master Response 2.2, Adaptive Implementation, lists and describes the following adaptive implementation information needs and how this information will be used:</p> <ul style="list-style-type: none"> <li>• Calculated unimpaired flow at the major rim dams on each of the three tributaries</li> <li>• Flow measurements at LJR flow compliance gages</li> <li>• Biological goals and other information to inform adaptive implementation</li> </ul> <p>Other types of information will also help to evaluate the effectiveness of the overall program of implementation. Other information includes the tracking of non-flow information such as temperature and habitat improvements, which can be achieved using non-flow measures.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		<p>unimpaired flow requirement for February through June will require the development of information and specific measures to achieve the flow objectives and to monitor and evaluate compliance" and says that the proposed measures would be developed in consultation with the Delta Science Program (DSP).</p> <p>What measures are anticipated and how are these expected to be utilized in adaptive implementation?</p> <p>How do these measures link to LSJR flow objectives and goals, including the biological goals that will be developed subsequent to approval of the amendment to the Bay-Delta Plan?</p> <p>Adaptive management should also address non-flow measures because many of these measures, such as better connecting rivers and floodplains in reaches where feasible, attempting to reduce predation, and improving spawning habitat, are amenable to adaptive management experimentation. It may be useful to consider a decision tree to help with identifying adaptive management actions to take depending on resulting outcomes from the various flow and non-flow actions.</p> <p>We recommend the State Water Board clarify the time line for management actions prior to implementation. The SED states that the ". . . STM Working Group, or State Water Board staff as necessary, will, in consultation with the DSP, develop proposed procedures for allowing the adaptive adjustments to the February through June flow requirements. . . ." [Footnote 10: SED, Appendix K, p. 34.] The SED should make clear the time step(s) covered by these procedures and whether adjustments are real-time, seasonal, or annual. For example, will the adaptive schedules identified in the "annual adaptive operations plans" [Footnote 11: SED, Appendix K, p. 32.] be subject to management of real time operations? If so, how does "adaptive implementation" fit in? Will this be performed during real-time operations, or only through adaptation of subsequent annual operation plans?</p>	<p>The STM Working group, working with the Delta Science program, will determine how to use biological goals and other information to both inform adaptive implementation, and to evaluate the overall effectiveness of the program of implementation.</p> <p>SED Appendix K states that the STM Working Group is required to develop two things within 180 days of Office of Administrative Law approval of the Plan amendment:</p> <ol style="list-style-type: none"> <li>1. Biological Goals</li> <li>2. Unimpaired flow compliance</li> </ol> <p>This relatively short time frame for these items are intended to encourage quick development of information; however, to make clear that the initial set of information need not be final, the following has been added to the Unimpaired Flow Compliance section of Appendix K:</p> <p>"The measures to achieve the flow objectives and to monitor and evaluate compliance may be modified, and submitted for Executive Director approval, as information and methods change and improve."</p> <p>Master Response 2.2, Adaptive Implementation provides additional description and examples of adaptive management and the bounds under which it may proceed.</p>
1346	12	<p>Governance Structure</p> <p>The SED provides considerable background information. However, a few details related to implementation of the proposed amendments remain unclear. In particular, we suggest that the State Water Board clarify: 1) the details of governance structures, and 2) the expected role, where applicable, of the DSP or Delta ISB.</p> <p>The STM Working Group is a central component of the proposed Bay-Delta Plan amendment. As a collaborative stakeholder-government agency group, the proposed STM Working Group would be responsible for providing input for a variety of tasks regarding adaptive management and implementation. These include setting biological goals, developing and implementing monitoring, tracking progress towards those goals, and making recommendations for the adaptive implementation of flows.</p> <p>However, based on the description in the document, the exact composition of the STM Working Group is not fully determined, and it is unclear how decisions would be made. [Footnote 12: SED, Appendix K, p. 30.] We encourage the inclusion of scientific representatives in the STM Working Group, and we recommend that the State Water Board clarify how decision making will be carried out when consensus cannot be achieved.</p>	<p>To afford maximum flexibility, no specific governance structure is required for the STM Working Group. Please see Master Response 2.1, Amendments to the Water Quality Control Plan, and Master Response 2.2, Adaptive Implementation, for further information regarding the STM Working Group, including the governance structure, membership composition, and the group's expected role, and decision making.</p> <p>As stated in Appendix K, Revised Water Quality Control Plan, the State Water Board will seek participation in the group by entities who have expertise in LSJR, Stanislaus, Tuolumne, and Merced River fisheries management, hydrology, operations, and monitoring and assessment needs.</p>
1346	13	<p>We propose to work with the State Water Board to clarify the roles of the DSP and the Delta ISB. The SED notes that the State Water Board will carry out planning activities ". . .with the</p>	<p>Please see Master Response 2.1, Amendments to the Water Quality Control Plan, and Master Response 2.2, Adaptive Implementation, for responses to comments regarding the STM Working Group and the program</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		support of the DSP and the Delta ISB to assure that Plan updates are based on the best available science." [Footnote 13: SED, Appendix K, p. 7.] It is our understanding that this support would be similar to DSP and Delta ISB current activities. As one example, the mission of the DSP is to provide the best possible unbiased scientific information for decision-making, and the DSP regularly consults on adaptive management, supports focused scientific workshops and symposia, and coordinates independent scientific reviews. As a second example, the Delta ISB provides independent oversight of scientific research, monitoring, and assessment programs and conducts high level scientific reviews, such as their reviews of California WaterFix environmental documents, the 2012 draft San Joaquin SED, flows and fishes in the Sacramento-San Joaquin Delta, and adaptive management in the Delta. We ask that these roles be made clear in the SED.	of implementation. Please also see Master Response 2.1 for a summary of plan amendment modifications and Appendix K changes.  State Water Board staff would welcome the participation of DSP and the Delta ISB. To afford maximum flexibility, however, no specific governance structure is required for the STM Working Group. Appendix K, Revised Water Quality Control Plan, does include information regarding consultation and collaboration by the STM Working Group, or State Water Board staff, with the DSP and Delta ISB, as appropriate, to ensure the use of the best available science; compliance with the flow objectives; and to conduct periodic reviews of the San Joaquin River Monitoring and Evaluation Program.
1347	1	Representing myself as a fisherman and sports fishing, the crash of salmon populations have significantly impacted my life and the lives around me. Salmon support coastal activity and awareness.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1348	1	The Board must protect the Public Trust values when feasible. Burdens and costs must not be placed arbitrarily on the public in favor of private interests.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1349	1	The San Francisco Bay area creates more economic value from Tuolumne River waters than any other water system in the U.S. The Board should meet competing needs through voluntary agreements.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1350	1	Let the river flow.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1351	1	I support more water in the rivers and recharged groundwater.  Incorporate economic benefits of water conservation in predictions.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1352	1	Respect the waters. Protect the fish. They're not for profit.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1353	1	I oppose your proposal to raise flows in the Stanislaus, Tuolumne and Merced rivers because of the economic impact on the surrounding area, the negative effects on agriculture and the impact on hydroelectric power. All of these things will negatively effect the valley with little benefit to river ecosystems.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1354	1	Your proposed plan to increase river flows will have more adverse effects than positive outcomes on fish populations.  Agriculture, jobs and groundwater levels all will be negatively effected.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1355	1	I am opposed to your plan to increase flows in the Stanislaus and other rivers. It will destroy riparian habitat that wildlife, hunters and fishermen depend on.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1356	1	I am opposed to raising unimpaired flows on the Stanislaus River: it desperately hurts Tuolumne County recreation with no proven benefit!	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1357	1	The harm to agribusiness by increasing river flows is an irresponsible act by the state. The loss of jobs in the field of agriculture would result in a devastating hit to the economy of the	Please see Master Response 1.1, General Comments for responses to comments that either make a general

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
		<p>Central San Joaquin Valley. The Central San Joaquin Valley is the breadbasket of California; the loss of jobs and revenue for this area would result in exorbitant unemployment rates and a greater reliance on public assistance, which is definitely not needed. The state needs to listen to those who will be negatively impacted by its actions. When the price of groceries skyrockets as a result of this inexcusable action, I hope you are prepared to pay for my groceries.</p>	<p>comment on the plan amendments or do not raise significant environmental issues.</p>
1358	1	<p>More water in the Stanislaus River is not going to change the predatory fish from eating the other fish; it will probably just help them flourish.</p> <p>The low levels of water are getting too warm; this will kill the fish and their eggs.</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1358	2	<p>We know we will have dry winters in the future so we need to plan ahead and have alternatives or we will not have water for anything- including the fish. There are other ways to take care of this problem, maybe more water storage?</p> <p>I have seen the amount of water flushed down the river since this craziness started and it amazes me every time I see a completely full river for the fish. I have witnessed rivers in Alaska with far less water and far more fish, thousands of salmon. So why do we need a pulse flow for so few fish?</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1358	3	<p>The farmers are drilling very deep wells, depleting the water table. Their neighbors are worried that their wells will eventually dry up as they are not nearly as deep as the new wells and will not be deep enough to reach the water.</p> <p>Someday, if we continue to be careless with our water, it will be these people who will pay thousands of dollars for new wells because the farmers were denied water. The farmers need the water so they can stop depleting the water table. It will take years to restore what they have already taken out.</p> <p>It takes 13.8 gallons to grow one orange, 4.9 gallons for each walnut, 3.3 gallons for each tomato, 1.1 gallon for each almond. To pull that amount of water from the water table is going to have an impact.</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1358	4	<p>I am sure the Irrigation Districts have a lot of ideas to ensure there is minimal impact to our environment. New Melones Reservoir is a beautiful place. Please save it!</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1359	1	<p>Forcing farmers to use well water is very short-sighted. Aquifers are not replenished easily and are not self-sustaining.</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1359	2	<p>Sending more water from our watershed south is a misappropriation of our resources and amounts to stealing. You are in a fiduciary position. Don't abuse your position of trust.</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1360	1	<p>We need the water for the valley's economy. Please do not take it away by increasing flows in the Stanislaus River.</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>
1361	1	<p>I know exactly why you want to divert more water from our rivers. A federal judge shut down your plans to pump more water south with your tunnel project due to increased salinity content in the delta, and would have an adverse effect on aquatic and land-based wild life. So now you're willing to dump our water, that is badly needed for agricultural and residential uses and, more importantly, cheap hydroelectric power when it is most needed</p>	<p>Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.</p>

Table 4-1. Responses to Comments

Ltr#	Cmt#	Comment	Response
		during our hot summers, to get your way. No No No.	
1361	2	If you're so hot on providing more water to this state and have funds burning a hole in your governmental pockets, try spending it where it will actually do some good with new infrastructure for capturing and storing water. With population growth we need more dams. You're not going to solve this problem by putting a Band-Aid on a bullet hole. It will cost jobs and will be an economic disaster. Take your blinders off and try smelling what you're shoveling down our throats. Good luck getting any bond measures passed for any special interest. And good luck getting re-elected.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1362	1	Think about our economy. It is imperative that agribusiness in Stanislaus County and surrounding communities remain the consistent catalyst to employment opportunities for the thousands of families that it supports. Your plan to raise unimpaired water flows in the Stanislaus River could decrease vital crop levels and the subsequent jobs directly associated with the processing, distributing and retailing of these crops. Water, crops and jobs ... a complete and contiguous economy.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1363	1	As a lifelong resident of Tuolumne County I do not condone the further draining of the New Melones Reservoir. I am an avid outdoor recreationalist and have every intention of passing that down to my son. I have many memories on that waterway from when I was a kid and I can't imagine what I'm going to try to teach him to appreciate about a big dirty puddle that used to be a lake. The only lesson that could possibly come from that would be yet another example of how the shot callers of this state continue to make detrimental decisions regarding the resources this state has left just to try to capitalize in their own areas. As we see far too often, the needs and way of life of the rural communities are being completely overlooked for "the greater good." That blind allegiance to try to save the world and completely ignore commonsense not only took all of our water last year but you killed all the fish anyway! I would call that more than a slight oversight. I again ask that you reconsider.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1364	1	This is my family's life line. My wife's grandfather and grandmother legally migrated to this area from Mexico in the 1940s. They both worked extremely hard and were able to purchase a 30-acre lot with an almond orchard. Before he passed, he would work that land every day and he asked me to continue his legacy after he was gone. We need that water to keep Eduardo's legacy alive and to feed our family!!	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1365	1	Your proposal to raise unimpaired flows would devastate Central Valley farming.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1365	2	People are more important than fish. This isn't really even about fish; it's about taking our community's water south. Robbing Peter to pay Paul.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1366	1	I do not support your plan to increase river flows because it will harm the economy and not make a damn bit of difference in the fish populations that it will supposedly help.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1367	1	I oppose an increase in unimpaired flows on the Stanislaus River because the expected benefit to fish downstream does not outweigh the devastating economic consequences of the increased flow policy. The unintended economic consequences on thousands of Californians' way of life and economic viability is at stake. Thousands of citizen's incomes and viability depends on the economics surrounding the availability of water for recreation	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.

**Table 4-1. Responses to Comments**

Ltr#	Cmt#	Comment	Response
		in the lakes fed by the Stanislaus River.	
1367	2	A recent study showed a total of 12 salmon in the Stanislaus River and there is a question as to whether those are native salmon or hatchery salmon. There are so many other ways to increase the desired fish populations and those alternatives should be studied before increased flows are approved. These include controlling predator fish, habitat restoration, etc.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1367	3	Please do not flush millions of unnecessary gallons of water down the Stanislaus before carefully reviewing the consequences and understanding all the alternatives. Laws and regulations on the books need to be reviewed to assess their continued applicability and alternatives considered given the changing environment.	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1368	1	We don't have water to waste. The effects your plan would have on so many other aspects would be devastating!	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.
1369	1	I am against your plan to increase flows on the Stanislaus and other rivers in the Central Valley. Don't you think you have destroyed enough of our rivers already?	Please see Master Response 1.1, General Comments for responses to comments that either make a general comment on the plan amendments or do not raise significant environmental issues.