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2600	1	<p>Thank you for the opportunity of commenting on the DEIR/DEIS for the Bay Delta Conservation Plan/California Water Fix (BDCP/CWF). Again, this effort fails to present the required alternatives, to the one presented (Alternative 4A), including the omission of an "additional water storage project(s)" alternative, to reflect some of the original comments. Other alternatives, which include additional water storage projects, can mitigate most, if not all, of the problems that the BDCP/CWF attempts to address. As discussed below, the BDCP/CWF ("Twin Tunnels") has assumed that the Delta levees are threatened by a potential seismic event, when there is some disagreement of the validity of that assumption. Yet, that has driven this exercise to a great extent! Please keep in mind that whatever seismic risk the Delta levees would be subject to, the "Twin Tunnels" would be subject to, as well. As an alternative, the completion of the dam in Auburn would solve most of the Delta ecosystem restoration challenges, help to provide a reliable water supply for the State, furnish needed flood protection to the Sacramento Region, supply at least 800 megawatts of electricity (a source of revenue-bond funding), provide a back-up supply of water to continually maintain the Folsom Reservoir at near capacity, and provide additional water for pulse flows to the Delta. Thus, this would eliminate the current, very costly, drought-related maneuvers and the need for the "Twin Tunnels" alternative.</p>	<p>While water storage is a critically important tool for managing California's water resources, it is not a topic that must be addressed in the EIR/EIS for the proposed project. This is because the proposed project does not, and need not, propose storage as a project component. Although the physical facilities contemplated by the proposed project, once up and running, would be part of an overall statewide water system of which new storage could someday also be a part, the proposed project is a stand-alone project for purposes of CEQA and NEPA, just as future storage projects would be. Appendix 1B, Water Storage, of the 2013 Public Draft EIR/EIS, describes the potential for additional water storage.</p> <p>Please see Master Response 4 regarding the development of alternatives, Master Response 6 for information on Demand Management, Master Response 37 regarding water storage.</p> <p>The Delta is not subject to the same degree of overall seismic risk (i.e., threat of ground shaking and surface fault rupture) as much of the Bay area. However, although there is little threat of surface rupture in the Delta, the hazard of seismic ground shaking is moderate to high, based on expected seismic shaking modeling results conducted by the U.S. Geological Survey and DWR. See Section 3E.2.4.2 Ground Acceleration (Ground Shaking) of Appendix 3E and Section 9.1.1.4.2 Earthquake Ground Shaking in Chapter 9 of the 2013 Public Draft BDCP EIR/EIS.</p> <p>A moderate to strong earthquake could cause simultaneous levee failures on several Delta islands, which would result in island flooding with resultant island flooding. In 2002, the Working Group on California Earthquake Probabilities estimated that an earthquake of magnitude 6.7 or greater has a 62 percent probability of occurring in the San Francisco Bay Area before 2032, and could cause 20 or more islands to flood at the same time.</p> <p>The proposed project does not purport to protect existing levees from seismic ground shaking. Although the proposed project is not intended to provide enhanced flood protection, it does intend to reduce the vulnerability of the water delivery system by making it less reliant upon the Delta levee system (and associated risks thereto). Further, the proposed project does not envision a change in the state's flood protection policies or programs. For more information on levee stability and seismic risk please see Master Response 16.</p>
2600	2	<p>In section ES.1.1, page ES-1, line 15, the BDCP/CWF states that, "the Delta is in a state of crisis." Starting on line 17, ". . . Delta levees and the infrastructure they protect are at risk from earthquake damage, continuing land subsidence, and rising sea level. A major seismic event causing levee failure could cause an interruption of water exports for as long as several months or even years." The point of seismic damage to Delta levees from an earthquake, is not settled science. For one, Dr. Robert Pyke (a Geological Engineer) has conceived the West Delta Intake Concept (WDIC), that argues that Delta levees are not at risk from a seismic event, or that the chance of a damaging seismic event is extremely minimal. Therefore, it's questionable whether the proposed "Twin Tunnels" are necessary to mitigate against a seismic risk, but if seismic risk was a factor, the "Twin Tunnels" would be subject to that risk, as well, creating flooding along the entire reach of the tunnels.</p>	<p>The lead agencies are familiar with Dr. Pyke's proposal, which was considered and screened out as an alternative for further analysis. For more detail about this, please see Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1, in the Final EIR/EIS, Section 3A.11.4.</p> <p>Regarding the part of the comment pertaining to the risk of levee failure by a seismic event, as described in Chapter 9, Geology and Seismicity, the Delta is in an area of moderate seismic risk. A moderate to strong earthquake in the region could cause simultaneous levee failures on several Delta islands, which could result in island flooding. In 2002, the Working Group on California Earthquake Probabilities estimated that an earthquake of magnitude 6.7 or greater has a 62 percent probability of occurring in the San Francisco Bay Area before 2032, and could cause 20 or more Delta islands to flood at the same time.</p> <p>The tunnel and other water conveyance facilities would be constructed to withstand seismic ground shaking and surface deformation. The Conceptual Engineering Reports for conveyance alignments and construction assumptions, appendix 3, provides details related to facility seismic design criteria.</p> <p>The proposed improvements would be designed and constructed to current engineering standards and would have less risk of seismic failure than the Delta levees. Many of the Delta levees were built more than a century ago without modern advances in engineering and construction, and are aging and vulnerable to failure. There have been over 140 levee failures in the last century. The most recent example of levee fragility in the Delta was the Upper Jones Tract levee breach in June 2004 that occurred on a sunny day</p>

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			<p>without a seismic event.</p> <p>Modern tunnels have been constructed in similar ground conditions and seismic environments in the US and abroad. Particularly applicable are the many soft ground tunnels constructed in Japan which have performed well after large seismic events.</p>
2600	3	<p>Page ES-1, line 27, states, ". . .there is an urgent need to improve and modernize the existing SWP/CVP conveyance system, which was designed and built long before the 'environmental era.'" The existing system was also designed with half the State's population in mind and long before there was any thought for, or concern over, climate change. These two issues can only be solved by additional water storage, because the snow pack that California used to depend upon for storage is quickly vanishing!</p> <p>The "reverse flows" created by the pumps, "cause, or contribute to, direct and indirect impacts on fish species such as Delta smelt. . .[and] salmon migration patterns. . . The recent historic drought has only made matters worse." By the "worsened by the drought" admission, "proof" is provided that additional upstream water storage would remedy the adverse effects of "reverse flows". That alternative (additional water storage) was not included in the original BDCP, nor was it presented in the BDCP/CWF proposal.</p>	<p>The existing operation of the SWP and CVP pumps in the south Delta can cause reversals in river flows, potentially altering salmon migratory patterns and contributing to the decline of sensitive fish species such as delta smelt. The new system would reduce the ongoing physical impacts associated with sole reliance on the southern diversion facilities and allow for greater operational flexibility to better protect fish. Minimizing south Delta pumping would provide more natural east–west flow patterns (RDEIR/SDEIS Section 4.1). Overall reductions in OMR reverse flows under all flow scenarios for the proposed project would be beneficial with corresponding increase in net positive downstream flows, during the migration period of Chinook salmon through the interior Delta channels (Appendix B, Supplemental Modeling for Alternative 4A, Section B.7 (RDEIR/SDEIS Section 4.3.7). Operations would still be consistent with the criteria set by the FWS (2008) and NMFS (2009) BiOps and State Water Resources Control Board Water Right Decision 1641 (D-1641), subject to adjustments made pursuant to the adaptive management process as described in the 2008 and 2009 BiOps (RDEIR/SDEIS Executive Summary ES.2.2). For more information regarding alternatives development and new water storage please see Master Response 4 and 37.</p>
2600	4	<p>Page ES-2, line 1 states, "The ecological problems with the current system could be greatly reduced [with] new north Delta intake structures with state-of-the-art fish screens." As previously mentioned, Dr. Pyke's WDIC [West Delta Intake Concept] includes permeable levees, as opposed to fish screens. Although permeable levees require more maintenance, they do not provide the same level of negative pressure, as do fish screens, thus are an infinitely better protection for fish than are screens.</p>	<p>DWR and Reclamation are required to improve fish collection efficiency at the existing south Delta salvage facilities, as part of facility improvements required by the National Marine Fisheries Service 2009 biological opinion on the SWP/CVP. For example, in 2014 Reclamation replaced the secondary louver system with a traveling screen system. These screens provide protection by guiding fish into the holding tanks while catching debris on pegs and transporting debris to a collection system at the work surface.</p> <p>The technology required at the proposed north Delta intakes and the existing south Delta export facilities differ fundamentally. The north Delta intakes would be located on the side of the river channel and so would be designed to comply with CDFW, NMFS, and USFWS fish screening criteria (BDCP Appendix 5B Section 3.B.3.3). The south Delta export facilities are located on dead-end channels and requires active collection and salvage of fishes.</p> <p>Screening the intakes at Clifton Court Forebay was analyzed during the water conveyance alternative development process and is described in the 2013 Public Draft BDCP EIR/EIS, Appendix 3A. This alternative was eliminated from further evaluation because initial results of recent studies, including information included in the recent NMFS biological opinions, supported a phased approach that would emphasize improvements to operations of fish handling facilities and reduced predator potential within Clifton Court Forebay prior to further analysis of installation of fish screens. Nevertheless, DWR and Reclamation will continue investigating strategies to increase fish salvage efficiency, reduce pre-screen losses, and improve screening efficiencies, consistent with the 2009 biological opinion of the SWP/CVP.</p>
2600	5	<p>Page ES-3, lines 8-15, Although DWR would achieve compliance with the federal and State ESAs with this proposal, the 50-year incidental take authorization would not be necessary with a proposal that adds more upstream storage to the State's water system. Even with the five (5) key mitigatory changes listed on the top of page ES-3, these changes do nothing to increase California's overall water supply, and although the three new sub-alternatives would not involve the 50-year take authorization, due to a shorter project implementation period, that interval is not quantified, in the BDCP/CWF.</p>	<p>Please see Master Response 37 regarding water storage. Although conservation components, water storage, and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the state, they are beyond the scope of the proposed project. The proposed project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. The California WaterFix is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies, and the recovery and conservation of threatened and endangered species that depend on the Delta.</p>

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			Appendix 1C, Demand Management Measures, in the EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including storm water drainage. While these elements are not proposed as part of the BDCP or the California WaterFix, the Lead Agencies recognize that they are important tools in managing California's water resources.
2600	6	Starting at line 22, "Implementing a dual conveyance system. . . would align water operations to better reflect natural seasonal flow patterns. . . and allow for greater operational flexibility to better protect fish." This cannot be accomplished without additional upstream storage for low rain-year releases! How can water operations be controlled to any significant extent, without additional storage for timed releases?	Please refer to Master Response 4 regarding how the selection of alternatives was determined, and Master Response 37 regarding water storage.
2600	7	Starting at line 28, "Minimizing south Delta pumping would provide more natural east-west flow patterns." This could also be accomplished with timed releases provided by additional upstream storage. Line 29 states, "The new diversions would also help protect critical water supplies against the threats of sea-level rise and earthquakes." Again, sea-level rise cannot be mitigated against without more water supply upstream for timed releases! This can be seen now with the water levels at Folsom, Shasta, and Oroville, all depleted to mitigate against salt-water intrusion! With regard to earthquakes, any fragility expected to affect Delta levees could also be expected to affect "Twin Tunnels." So, there's no way for Alternative 4A to mitigate against salt-water intrusion or earthquakes!	<p>While water storage is a critically important tool for managing California's water resources, it is not a topic that must be addressed in the EIR/EIS for the proposed project. This is because the proposed project does not, and need not, propose storage as a project component. Although the physical facilities contemplated by the proposed project, once up and running, would be part of an overall statewide water system of which new storage could someday also be a part, the proposed project is a stand-alone project for purposes of CEQA and NEPA, just as future storage projects would be. Appendix 1B, Water Storage, of the 2013 Public Draft EIR/EIS, describes the potential for additional water storage.</p> <p>Please see Master Response 4 regarding the development of alternatives, Master Response 6 for information on Demand Management, Master Response 37 regarding water storage.</p> <p>Regarding seismic threats, Chapter 9 of the 2013 BDCP Draft EIR/EIS and Appendix A of the RDEIR/SDEIS describes the geology and seismicity of the study area. Based on a review of the last 20 years of precast tunnel lining seismic performance histories, it can be concluded that little or no damage to precast tunnel lining was observed for major earthquakes around the world. Based on preliminary data, it is anticipated that the Delta tunnels can be designed to withstand anticipated seismic loads. Design-level geotechnical studies would be conducted to assess site-specific hazards and appropriate mitigation measures would be implemented. Impact GEO- 1 and GEO-7 discusses the possibility of loss or damage resulting from strong seismic activity during construction and operation of water conveyance features. For more information regarding tunnel design please see the 2013 Conceptual Engineering Report.</p>
2600	8	Line 31 states, ". . . habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta." This paragraph goes on to state that the California EcoRestore (EcoRestore), "will pursue restoration of more than 30,000 acres of fish and wildlife habitat by 2020. These habitat restoration actions will be implemented faster and more reliably by separating them from the water conveyance facility implementation." By focusing on additional upstream storage, outside of the Delta, such restoration can proceed more rapidly, as it will with separating EcoRestore from the conveyance project.	<p>The commenter does not raise a specific issue related to the adequacy of the EIR/EIS.</p> <p>Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan..</p> <p>Proposition 1 funds and other state and public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.</p> <p>Additional priority restoration projects will be identified through regional and locally-led planning processes facilitated by the Delta Conservancy. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the Delta.</p>

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2600	9	<p>ES.1.2.2 – Modified Project Objectives and Purpose and Need</p> <p>Line 34 states, "One of the primary challenges facing California is how to comprehensively address the increasingly significant conflict between the ecological needs of a range of at-risk Delta species and natural communities that have been and continue to be affected by human activities, while providing more reliable water supplies for people, communities, agriculture, and industry." Well, first, it is my understanding that the Delta is primarily man-made. There are in excess of 1100 miles of man-made levees that protect valuable farmland from salt-water inundation. Thus, the ecological needs that now exist are not in conflict with human activities, but are a result of human activities. That said, existing Delta species and natural communities ought to be protected to the greatest extent reasonably possible, and as stated on line 39, the relevant State agencies "... endeavor to strike a reasonable balance between these competing public policy objectives and various actions taken within the Delta. . ."</p> <p>The Sacramento-San Joaquin Delta Reform Act of 2009 states the Legislative intent for the Delta, i.e., "...to provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of the water supply from the Delta, and. . ." Although the Delta "serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of north and South America" (California Water Code, Section 85002), as stated above, all 1100+ miles of levees are primarily man made. Thus, mankind will continue to protect the species habitat and environment that he has helped to create, but, due to climate change, that can only be done with addition upstream water storage projects that can offset the diminishing snow pack.</p>	<p>The proposed project was developed to meet the standards of the Clean Water Act and federal and state Endangered Species Acts, the proposed project is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. See also Master Response 31 concerning the Delta Reform Act.</p>
2600	10	<p>Starting on page ES-5, line 9, "The ecological health of the Delta continues to be at risk. . .[with] [1] court decisions regarding the intersection of ESA, CESA, and the operations criteria of the SWP and CVP. . .[2] continuing subsidence of lands within the Delta, [3] increasing seismic risks and levee failures, and [4] sea level rise, associated with climate change, [all] serve to further exacerbate these conflicts. Simply put, the overall system as it is currently designed and operated does not appear to be sustainable from an environmental perspective, and so the proposal to implement a fundamental, systemic change to the current system is necessary. . .to achieve the two coequal goals. . ."</p> <p>Although, it is agreed that a fundamental change could mitigate Delta stressors to a great extent, Alternative 4A is not the only alternative. Again, additional upstream water storage can remedy most of the current challenges to the Delta, and the science is not at all settled on potential seismic risks to the Delta levees.</p>	<p>While water storage is a critically important tool for managing California's water resources, it is not a topic that must be addressed in the EIR/EIS for the proposed project. This is because the proposed project does not, and need not, propose storage as a project component. Although the physical facilities contemplated by the proposed project, once up and running, would be part of an overall statewide water system of which new storage could someday also be a part, the proposed project is a stand-alone project for purposes of CEQA and NEPA, just as future storage projects would be. Appendix 1B, Water Storage, of the 2013 Public Draft EIR/EIS, describes the potential for additional water storage.</p> <p>Please see Master Response 4 regarding the development of alternatives, Master Response 6 for information on Demand Management, Master Response 37 regarding water storage.</p>
2600	11	<p>ES.1.2.2.1 -- Project Objectives</p> <p>Line 23 states, "DWR's fundamental purpose [of Alternative 4A]. . .is to make physical and operational improvements to the SWP/CVP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations." Due to the effects of climate change, with a severely-reduced snow pack and no additional upstream water storage, these objectives cannot be met, and therefore, the Delta, and the water it provides, is not sustainable.</p>	<p>The project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. The project is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies. It is important to note that the project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage.</p> <p>Please see Master Response 3 for information regarding the project purpose and need, and Master</p>

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			Response 19 for a discussion of climate change.
2600	12	<p>ES 1.2.2.1 Project Objectives (paraphrased):</p> <p>"Address adverse effects to state and federally-listed species related to 1) the operation of existing SWP Delta facilities and construction and operation of facilities [related to the "Twin Tunnels"], and 2) to implement actions to improve SWP and/or CVP conveyance that could potentially "take" ESA and CESA listed species." The permeable levees suggested by Dr. Pyke in his WDIC [West Delta Intake Concept] solve the "take" issue, permanently.</p>	<p>15 alternatives and 3 additional subalternatives were analyzed in the EIR/S and the RDEIR/RSEIS respectively. Four major alignments have been included in the EIR/S: Through-Delta, East of the Sacramento River, West of the Sacramento River, and a Tunnel under the Delta. Many additional proposals by public and private individuals and organizations have also been evaluated and described in Chapter 3 of the BDCP EIR/S and Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1.</p> <p>Regarding development of alternatives for the EIR/EIS, a description of the process the Lead Agencies followed to develop and screen alternatives is provided in Master Response 4.</p>
2600	13	<p>ES 1.2.2.1 Project Objectives (paraphrased):</p> <p>"Improve the Delta ecosystem by reducing adverse effects to certain listed species of diverting water by siting additional intakes [presumably upstream] and coordinated operations with the CVP." This objective would be unnecessary with additional water supply provided by additional above-Delta upstream storage.</p>	<p>15 alternatives and 3 additional subalternatives were analyzed in the EIR/S and the RDEIR/RSEIS respectively. Four major alignments have been included in the EIR/S: Through-Delta, East of the Sacramento River, West of the Sacramento River, and a Tunnel under the Delta. Many additional proposals by public and private individuals and organizations have also been evaluated and described in Chapter 3 of the BDCP EIR/S and Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1.</p> <p>Regarding development of alternatives for the EIR/EIS, a description of the process the Lead Agencies followed to develop and screen alternatives is provided in Master Response 4.</p>
2600	14	<p>ES 1.2.2.1 Project Objectives (paraphrased):</p> <p>"Restore and protect the ability of the SWP and CVP to deliver up to full contract amounts, when [available, basically]." This cannot be accomplished without additional upstream storage, and, as ES.1.2.2.2, line 26 states, "It is not intended to imply that increased quantities of water will be delivered under the proposed project." ". . . deliveries of less than full contract amounts are consistent with this purpose." Therefore, it is not the intent of this project proposal to necessarily provide any additional water, under SWP or CVP contracts, i.e., to the Central Valley!</p>	<p>Under the range of alternatives considered in the EIR/S full contract amounts are not delivered in the majority of times to the SWP and CVP water contractors, as presented in Appendix 5A, Section C, CALSIM II and DSM2 Model Results, of the EIR/EIS. Over the long-term, the proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries to SWP and CVP water users in drier periods. Therefore, SWP water users located south of the Delta with storage facilities would increase deliveries under the proposed project as compared to the No Action Alternative. However, the total amount of deliveries for SWP and CVP water contract users would be less under the proposed project as compared to Existing Conditions.</p> <p>The project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. It is important to note that the project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).</p>
2600	15	<p>ES.1.2.2.2 -- Purpose and Need; BDCP/CWF's stated purposes (paraphrased) with responses:</p> <p>Improve the movement of water entering the Delta from the Sacramento Valley watershed to the existing SWP and CVP pumping plants located in the southern Delta.</p> <p>Said movement of water cannot be improved without additional flow. Additional flow requires additional upstream storage. That means the construction of some, or all, CalFed water storage projects and more.</p>	<p>Additional storage facilities are beyond the scope of the proposed project. Please refer to Master Responses 3 and 4 regarding the purpose and need and why additional storage facilities were not included. Please also see the Executive Summary to the RDEIR/SDEIS, which describes how the existing pumps create "reverse flows" that pull river water southward (upstream, in effect) towards the intakes, rather than allowing it to flow downstream. These reverse flows cause, or contribute to, direct and indirect impacts on fish species such as Delta smelt, which are pulled towards the pumps, where adverse conditions, including the presence of predator species, await them. Alternatives 2D, 4A, and 5C address the reverse flow problem by implementing a dual conveyance system, in which water could be diverted from either the north or the south or both, and would align water operations to better reflect natural seasonal flow patterns by creating new water diversions in the north Delta equipped with state-of-the-art fish screens.</p>
2600	16	<p>ES.1.2.2.2 -- Purpose and Need; BDCP/CWF's stated purposes (paraphrased) with</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Appendix 1C of the Final EIR/EIS, Demand Management Measures, describes conservation, water use</p>

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		<p>responses:</p> <p>Achieve the operation of existing and potential new SWP and existing CVP Delta facilities.</p> <p>Because of climate change, the ultimate "fix" is additional storage to restore the originally-intended joint operations patterns of the SWP/CVP.</p>	<p>efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project.</p> <p>For more information on why water storage was not considered as part of the proposed project please refer to Master Response 37 (Storage) and Appendix 1B, Water Storage, EIR/EIS.</p>
2600	17	<p>ES.1.2.2.2 -- Purpose and Need; BDCP/CWF's stated purposes (paraphrased) with responses:</p> <p>BDCP activities avoids adverse effects on listed species, and protects, restores and enhances riparian and associated terrestrial natural communities and ecosystems.</p> <p>Separate water storage alternatives, that include the CalFed project options as well as others, would not create the Delta disruption, and several storage projects could be constructed at the same cost, or less, than the BDCP/CWF.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Appendix 1C of the Final EIR/EIS, Demand Management Measures, describes conservation, water use efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project.</p> <p>For more information on why water storage was not considered as part of the proposed project please refer to Master Response 37 (Storage) and Appendix 1B, Water Storage, EIR/EIS.</p>
2600	18	<p>ES.1.2.2.2 -- Purpose and Need; BDCP/CWF's stated purposes (paraphrased) with responses:</p> <p>Restore and protect and ability of the SWP and CVP to deliver up to full contract amounts. . .</p> <p>Yet the next paragraph says that this, "is related to the upper limit of legal CVP and SWP contractual water amounts and delineates an upper bound. . . , not a target. It is not intended to imply that increased quantities of water will be delivered under the proposed project (emphasis added). . . deliveries of less than full contract amounts are consistent with this purpose." The BDCP/CWF may not be able to provide any additional contract water to the farmers of the Central Valley. If this paragraph addresses purpose and need for Alternative 4A (providing no additional water), then the "No Project" alternative would be the preferred alternative.</p>	<p>Please refer to Master Response 3, which address project objectives and the purpose and need statement.</p>
2600	19	<p>The BDCP/CWF is based upon a questionable assumption that there is a risk to Delta levees by a seismic event. This assumption is addressed, and refuted, by the WDIC [West Delta Intakes Concept] by Dr. Robert Pyke. Although Alternative 4A is DWR's preferred alternative under the California Environmental Quality Act and is Reclamation's preferred alternative under the National Environmental Policy Act, it fails to present other viable alternatives, such as additional upstream water storage alternatives. Without additional storage, and with climate change, there is not enough water to fill "Twin Tunnels," that would bypass most of the Delta, mitigate for salt-water intrusion, and mitigate for drought conditions, all at the same time! As you can see, the questionable assumption of seismic risk and providing additional upstream water storage projects, as an alternate solution to the BDCP/CWF, are the primary themes of these comments. Without additional upstream water storage, the Delta, the water it provides for most of the State, and California's agricultural economy, is not sustainable!</p>	<p>Regarding the part of the comment pertaining to the risk of levee failure by a seismic event, as described in Chapter 9 of the EIR/EIS, the Delta is in an area of moderate seismic risk. A moderate to strong earthquake in the region could cause simultaneous levee failures on several Delta islands, which could result in island flooding. In 2002, the Working Group on California Earthquake Probabilities estimated that an earthquake of magnitude 6.7 or greater has a 62 percent probability of occurring in the San Francisco Bay Area before 2032, and could cause 20 or more Delta islands to flood at the same time.</p> <p>Potential alternatives that included intakes in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) were in Appendix 3A, Identification of Water Conveyance Alternatives Conservation Measure 1. The ability to divert water in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) could be limited due to the presence of delta smelt in the winter and spring months by requirements of the U.S. Fish and Wildlife. In July through November, salinity could be too high for diversion into the SWP and CVP facilities, especially as sea level rise progresses through the end of the study period in 2060. Therefore, these alternatives were not evaluated in detail in the EIR/EIS.</p> <p>Under the range of alternatives considered in the EIR/EIS full contract amounts are not delivered in the majority of times to the SWP and CVP water contractors, as presented in Appendix 5A, Section C, CALSIM II and DSM2 Model Results, of the EIR/EIS. Over the long-term, the proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer</p>

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			<p>and early fall months; and increase exports in the wet winter months when the river flows are high. However, the total amount of deliveries for SWP and CVP water contract users would be less under the proposed project as compared to Existing Conditions.</p> <p>The project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. It is important to note that the project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).</p>
2601	1	<p>How many times do we have to vote no on these tunnels? Do any of you actually represent the majority of the people or just special interest groups (money)?</p> <p>You are completely destroying the whole Delta. We never have had sea lions in Stockton and Sacramento until you put in the Peripheral Cannel which takes a lot of water. Water hyacinths will not flush to the ocean due to lack of water flow into the Delta as we already have two or three large pipe lines taking water from lakes and reservoirs going to Bay Area.</p> <p>When we bought a fishing license \$5 was designated to raise striper. Are we raising striper? No. Has the license gone down? No. Where is that \$5 going to?</p> <p>One good example as to how things are ran.</p> <p>The whole Delta will become a total disaster if you continue to cater to corporate farming groups, special interest groups. I guess the old saying "money talks" is true. You guys are not listening to the people and lining your own pockets.</p> <p>I say no to the water grabbing. Look for other alternatives.</p>	<p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>During the environmental review process, there was an extensive alternatives screening process. Master Response 4 provides additional details on that process,</p>
2602	1	<p>The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the DEIS/DEIR's overly-narrowed focus on threatened and endangered species, which missed opportunities to slightly adjust conservation measures in order to provide benefits to a broader array of species that would suffer impacts arising from the projects</p>	<p>Please note that responses to comments on the Draft EIR/EIS are included in this Final EIR/EIS. For detailed responses to those comments please refer to the original comment letter herein.</p> <p>The commenter states that the DEIR/DEIS was overly focused on threatened and endangered species. The DEIR/DEIS was evaluating the BDCP, which is a proposed HCP/NCCP, with the goal of protecting and contributing to the recovery of federally and state threatened and endangered species, as well as other species meeting the criteria for inclusion. The BDCP is no longer the preferred alternative. Chapter 12 of the EIR/EIS, Terrestrial Biological Resources, did address effects on state and federally listed species as well as other species considered rare under NEPA and CEQA for a total of 149 species addressed. The analysis also addressed effects on shorebirds and waterfowl (Impacts BIO-178 – 183), common wildlife and plants (Impact BIO-184), and wildlife corridors (Impact BIO-185).</p> <p>Under Alternative 4A, 13,340 acres of land would be protected and up to 2,496 acres of habitat would be restored, which would not only address the needs of those species addressed in the analysis but also</p>

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			common species that use these habitats. These protected and restored habitats would include riparian, grassland, vernal pool and alkali seasonal wetland complex, nontidal marsh, tidal marsh, and cultivated lands. These lands will be protected and managed for sensitive species, which will also benefit many other species of plants, fish, and wildlife.
2602	2	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the importance of post-harvest management as a boon for habitat quality and the recommendation that post-harvest, wildlife-friendly agricultural practices be included among conservation measures.	Please refer to response to comment 1 within this comment letter, above.
2602	3	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the incomplete consideration of the conservation benefits of improved water management and vulnerabilities arising from climate change impacts to water delivery in areas where restoration may occur.	The No Action Alternative and all of the action alternatives considered in the EIR/EIS included assumptions for climate change and sea level rise. The analyses of action alternatives in the Draft EIR/EIS included assumptions for restoration areas. Please note that the new preferred alternative is now Alternative 4A (California WaterFix) and does not involve an HCP component. However, the lead agencies maintain that the new preferred alternative continues to meet the co-equal goals of a reliable water supply and a restored Delta ecosystem to benefit all water users.
2602	4	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the DEIS/DEIR's failure to include as a stated goal the maintenance or improvement of water deliveries to wildlife refuges, which will suffer direct and indirect impacts arising from the project.	The Existing Conditions, No Action Alternative, proposed project, and other action alternatives include deliveries of Level 2 Refuge Water Supplies in all water year types. Please note that the new preferred alternative is now Alternative 4A (California WaterFix) and does not involve an HCP component. However, the lead agencies maintain that the new preferred alternative continues to meet the co-equal goals of a reliable water supply and a restored Delta ecosystem to benefit all water users.
2602	5	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the overall failure to account for impacts of climate change on habitat restoration and protection activities and the failure to apply "climate-smart" principles in the planning effort.	Since the time of the Draft EIR/EIS the preferred CEQA/NEPA alternative has been identified as the California WaterFix (Alternative 4A) which does not include and HCP/NCCP. Under Alternative 4A a reduced level of habitat restoration and other actions are proposed to reduce the construction and operational impacts of the conveyance facilities. Implementation of these restoration and other actions would be subject to conditions ultimately provided in the biological opinion prepared under Section 7 of the ESA and as part of the incidental take permit issued for the CESA 2081 (b) process. The design for this restoration will be subject many considerations, including climate change sustainability, if appropriate for a specific restoration site.
2602	6	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the lack of monitoring for shorebirds, waterfowl, and riparian songbirds, which, if remedied, would provide for an effective monitoring tool for ongoing restoration and effects arising from the project.	The Proposed Action will include long-term monitoring for the state and federally listed bird species included in the federal Biological Opinion and state incidental take permit: Swainson's hawk and tricolored blackbird. The Final EIR/EIS also includes a required Mitigation Monitoring and Reporting Plan (MMRP), which includes descriptions of how DWR will monitor the implementation of each mitigation measure, including those designed to offset or minimize impacts to migratory birds. The Proposed Action is no longer a habitat conservation plan (HCP) or natural community conservation plan (NCCP), so therefore does not need to include a detailed monitoring plan for covered species, natural communities, or biological diversity. Monitoring will be conducted in restoration sites such as riparian woodland and tidal wetlands to ensure that the restoration projects meet their success criteria. Monitoring of shorebirds and riparian songbirds may occur as part of the monitoring for restoration success.
2602	7	The Migratory Bird Conservation Progress letter expressed concern about the many uncertainties in the DEIS/DEIR's assessment of impacts, planned conservation measures, and vaguely defined adaptive management measures. Specifically, we expressed concern and provided recommendations regarding the lack of an adequate adaptive management plan, informed by ongoing monitoring and reinforced by specific	Please refer to Master Response 33 (Adaptive Management) for information regarding adaptive management and monitoring. For more information regarding the Collaborative Science and Management Plan please see Chapter 3 of the FEIR/EIS.

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		benchmarks, triggers, and actions that would be taken if impacts or mitigation measures had unanticipated results.	
2602	8	<p>Federal law requires that water deliveries to the CVPIA Refuges be protected. Alternative 4A appears to anticipate reduced water deliveries and consequently some negative environmental impacts for certain Central Valley wildlife refuges. Water deliveries to these refuges are mandated under federal law under the Central Valley Project Improvement Act (CVPIA), yet federal agencies and the State of California have consistently failed to meet their obligations to the refuges. (footnote 1: A major environmental accomplishment of the Central Valley Project Improvement Act (CVPIA) was the commitment to deliver to refuges and wildlife areas in the Central Valley a firm (Level 2) yield of 422,252 acre-feet, 37% of the annual water needs for existing wetlands. In addition, CVPIA mandated that an additional 133,264 acre-feet of so-called Level 4 water be acquired over a ten-year period commencing in 1992, thus ensuring that roughly half of refuge water needs would be met by the project. Between 1992 and 2009, legally mandated water supplies for the refuges fell short by more than 40,000 acre-feet from mandated Level 4 quantities; the current and future droughts create the risk that even less water is likely to be delivered for refuges and wildlife.) Improvements to refuge water deliveries should be made by 1) taking advantage of the extended window for through-Delta transfers to enable CVPIA Level 4 supplies to be acquired north-of-Delta and transferred south-of-Delta; 2) providing assurances that pumping and conveyance capacity are available for refuge supplies; and 3) establishing refuges as a priority for delivery under system operations in any year type.</p> <p>Because the water system is intertwined, each water management decision that will arise from the project will have system-wide impacts. For example, if additional outflow is needed through the Delta and operations at Oroville are altered to address this issue, there are likely impacts to Shasta operations that could impact refuge water deliveries. We ask that any water operation decisions include assessment of system-wide impacts and explicitly identify (which refuges, when and how) and address impacts to refuge water supplies.</p> <p>The RDEIR/SDEIS does not adequately contemplate water supply impacts arising from the project operations on wildlife refuges. These operations will affect the timing and quantity of deliveries across water years. These impacts should be identified, including the specifics about which refuges are impacted, when and to what extent. Timing of impacts is especially important, since migratory bird habitat needs vary across months, weeks and water years. Impacts should consider the type of habitat impacted, as well as the species. Any detrimental impacts should be fully mitigated.</p>	<p>Level 2 refuge water supply deliveries would be similar under the proposed project, Alternative 4A, and other action alternatives as under the No Action Alternative, as shown in Appendix 5A, Section C, because action alternatives and the No Action Alternative include assumptions for climate change and sea level rise. Implementation of the proposed project and all other action alternatives would not affect Level 2 refuge water supplies as compared to the No Action Alternative. All of the action alternatives and the No Action Alternative would deliver approximately 1 percent less water to refuges under the Level 2 refuge water supplies due to climate change and sea level rise effects by 2030 and 3 percent less water by 2060. However, effects due to climate change are not due to implementation of the proposed action and are provided for informational purposes only and do not lead to mitigation. It should be noted that Level 2 refuge water supplies in the Sacramento Valley increase under the No Action Alternative as compared to the Existing Conditions due to completion of ongoing projects and policies for the Level 2 refuge water supplies.</p> <p>The Existing Conditions in the EIR/EIS which presents completed projects and ongoing policies as 2009 when the Notice of Intent and Notice of Preparation was published. The No Action Alternative in the Final EIR/EIS presents the projects and policies included in the Existing Conditions in addition to future projects that are certain to be implemented, including full implementation of the 2008 FWS and 2009 NMFS biological opinions, including increased frequency and duration of inundation of the Yolo Bypass (per the 2009 NMFS biological opinion) and implementation of Level 4 refuge water supply (per Central Valley Project Improvement Act [CVPIA]). The Existing Conditions, No Action Alternative, and all action alternatives include deliveries of Level 2 refuge water supplies from CVP water supplies at a higher priority than CVP water contract deliveries. In accordance with section 3406(d)(2) of the CVPIA, the increment of water between Level 2 and Level 4 water supplies are to be obtained by the Department of the Interior through measures that would not reduce CVP water contract deliveries. These measures could include water transfers based upon water conservation, purchase, lease, or donations, or providing additional water supplies such through conjunctive use, or a combination of these measures. As of 2009 (the basis for the No Action Alternative definition), long-term measures had not been implemented to provide long-term Level 4 refuge water supplies. Measures to provide Level 4 refuge water supplies would not change the CVP water deliveries simulated in the CALSIM II. Future water transfers for the refuges or other water users are not included in the No Action Alternative or action alternatives because it would be too speculative to project the volumes, patterns, or methods to convey the water between the sources and users. Separate engineering and environmental documents will be completed in the future and are not analyzed in the EIR/EIS.</p> <p>Please see Master Response 22 regarding Mitigation and Master Response 33 for Adaptive Management.</p>
2602	9	<p>The No Action Alternative underestimates water deliveries to the refuges and provides an inaccurate baseline. The No Action Alternative appears to assume that Reclamation will not deliver Level 4 water to the wildlife refuges, continuing Reclamation's ongoing violation of the Central Valley Project Improvement Act. The baseline assumption should be compliance with the law, not perpetual violation. In any event, by failing to assume Level 4 deliveries, the No Action Alternative sets an unreasonable baseline for impacts and results in an under-estimation of impacts from the Action Alternatives.</p> <p>Moreover, the RDEIR/SDEIS states under the No Action Alternative, circumstances would remain similar to existing conditions except that CVP and SWP operations would differ because, among several enumerated changes, "there is a shift in refuge demands</p>	<p>As described in Appendix 5A, Sections A and B, the Existing Conditions values for Level 2 water supplies represents average water deliveries prior to 2009 when the Notice of Preparation and Notice of Intent were published. The No Action Alternative values represent Level 2 water supply contract amounts based upon the most recent contracts between the individual refuges and Reclamation.</p> <p>Level 4 water supplies have historically been provided by Reclamation through water transfers. As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers would continue, including transfers for Level 4 refuge water supplies, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General</p>

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		<p>from south to north (24 TAF per year reduction in south of Delta and 32 TAF per year increase in north of Delta)." RDEIR/SDEIS at 4.2-3. The RDEIR/SDEIS should be revised to state the basis for this assumption, which is not the current understanding of groups actively working on refuge water supply issues.</p> <p>The RDEIR/SDEIS also states Under No Action Alternative (ELT), model results show a 18 TAF (1%) decrease in CVP Settlement Contract deliveries and a 8 TAF (2%) decrease in CVP Level 2 Refuge Water Supplies during dry and critical years compared to the Existing Conditions. . . . Results show no changes in deliveries to CVP Exchange Contractors. RDEIR/SDEIS at 4.2-10. The model appears to be in error because the wildlife refuges are entitled to the same priority as the Settlement Contractors and Exchange Contractors. Consequently, Level 2 water supply should decrease, if at all, by the same amount as it will decrease for Exchange and Settlement Contractors. This error appears to have been replicated elsewhere, including RDEIR/SDEIS at B-43.</p>	<p>Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the EIR/EIS.</p> <p>The CALSIM II model makes decisions under some hydrologic and precipitation conditions to provide a portion of water supplies from groundwater instead of CVP water supplies in areas located north of the Delta. Therefore, in some years, the CALSIM II model assume that portions of the water demands are met through increased precipitation for the Level 2 refuge water supplies, Sacramento River Settlement Contractors, and CVP and SWP water users. These decisions do not affect south of Delta Level 2 refuge water supplies, San Joaquin River Exchange contractors, or other south of the Delta water users. In Appendix 5A, Section C, of the Final EIR/EIS, values for north of Delta and south of Delta water supplies are provided separately.</p>
2602	10	<p>The RDEIR/SDEIS Inadequate Assesses Impacts from Alternatives to Refuge Water Supplies. The RDEIR/SDEIS states that certain Alternatives will have negative impacts on refuge water supplies, but fails to provide the necessary information to adequately assess these impacts. For example, the Water Supply Summary Tables in Appendix B of the RDEIR/SDEIS indicate that Level 2 water deliveries could be negatively affected by implementation of Alternative 4A. Table B.1-3 shows that, under Alternative 4 H3 (ELT), Level 2 refuge water supplies would decline compared to the No Action Alternative in dry and critical years. RDEIR/SDEIS at B-43. However, there is no discussion or analysis of this water supply impact. In contrast, the RDEIR/SDEIS includes a detailed discussion of the new alternatives' water supply impacts to CVP south of Delta agricultural deliveries, CVP Settlement and Exchange Contract deliveries, CVP north of Delta municipal and industrial deliveries, CVP south of Delta municipal and industrial deliveries, and several different SWP deliveries. See, e.g., RDEIR/SDEIS at 4.3.1-5 to 4.3.1-9. Changes in water supplies to the refuges may violate state and federal law and is likely to have significant negative impacts for several species, including listed species. At a minimum, the RDEIR/SDEIS must be revised to adequately assess these impacts, ensure that impacts are aligned with the refuges' priority water rights, and provide for both mitigation and adaptive management to offset those impacts to the greatest extent feasible.</p>	<p>Specific CALSIM II model runs were not conducted for the analyses presented in the RDEIR/SDEIS. Results for specific CALSIM II model runs for the proposed project, Alternative 4A, and action alternatives, Alternatives 2D and 5A, are presented in the Final EIR/EIS. The proposed project would result in similar deliveries to refuges under Level 2 water supplies as compared to conditions under the No Action Alternative, as shown in Appendix 5A, Section C. Both the proposed project and No Action Alternative include assumptions for climate change and sea level rise. The proposed project would deliver approximately 20 to 30 percent less water to refuges under the Level 2 water supplies due to climate change and sea level rise effects that would occur under the proposed project. However, effects due to climate change are not due to implementation of the proposed action and are provided for informational purposes only and do not lead to mitigation.</p>
2602	11	<p>The RDEIR/SDEIS fails to adequately assess and mitigate for impacts on waterfowl and shorebirds from loss of cultivated lands due to the Alternatives. The new alternatives will result in significant negative impacts to cultivated lands within the project areas and likely have much more far-reaching impacts on cultivated lands in the Central Valley. Given that the Central Valley has lost at least 95% of its historic wetlands, these cultivated lands are essential for the survival of shorebirds, waterfowl, and other birds.</p> <p>Alternative 4A will result in the loss of at least 3768 acres of cultivated wetlands and temporarily impacts another 1339 acres. RDEIR/SDEIS, at 4.3.8-342. An additional 2212 acres of cultivated lands will be permanently lost due to the implementation of the Environmental Commitments. RDEIR/SDEIS, at 4.3.8-343. Despite the loss of more than 7000 acres of wildlife-friendly cultivated lands, the RDEIR/SDEIS concludes that the loss will be less than significant because of additional measures. However, the RDEIR/SDEIS fails to provide any specific management measures that will offset these losses.</p> <p>The impacts to these cultivated lands may have more far-reaching consequences, given the likelihood of future transition of annual crops to less wildlife-friendly crops, such as</p>	<p>Alternative 4A will result in the protection and management of 11,870 acres of cultivated lands for wildlife species, which will be guided by the Resource and Protection Principles identified in Chapter 3 of the EIR/EIS and by the guidance provided in the Draft BDCP under Conservation Measure 3.</p> <p>Alternative 4A is compared to the No Action Alternative in the Early Long-Term. The No Action Alternative analysis takes into consideration Existing Conditions, programs already adopted during the early stages of development of the EIR/EIS, facilities that were permitted or under construction during the early stages of development of the EIR/EIS, and foreseeable changes in land and water management associated with existing plans, policies and legal mandates that would occur with or without the project (see Table 12-7 in Chapter 12 of the EIR/EIS). The analysis does not include predictions or assess trends in current or future crop selection that may or may not benefit wildlife. Crop selection is dynamic and predominantly influenced by economic forces and therefore does not meet the standard for a reasonably foreseeable change in existing conditions based on existing plans, policies and legal mandates.</p>

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		almonds or grapes, the increased demand for water transfers from annual crops to other agricultural practices or cities, and impacts from climate change. The RDEIR/SDEIS fails to assess any of these potential impacts or the cumulative impact of the project's consequent loss of cultivated land when assessed with losses in wildlife-friendly cultivated land outside the project area.	
2602	12	The RDEIR/SDEIS Fails to Adequately Assess Impacts Arising from Increased Cross-Delta Water Transfers. Cross-Delta water transfer will likely increase under all scenarios in the Delta, particularly under the new alternatives that will facilitate cross-delta water movement, which will minimize the current constraints created by endangered species and water quality concerns in the Delta. (footnote 2: The RDEIR/SDEIS inexplicable claims that Alternative 4A will actually decrease cross-Delta water transfers. See RDEIR/SDEIS, at 4.3.1-9. Audubon assumes this is in error and will be corrected in the final EIR/EIS.) Changes in south of Delta populations, groundwater regulation, agricultural practices (including increases in crops such as almonds), economic activities, and pressures from climate change and drought are also likely to increase demands for cross-Delta transfers over the life of the project. Water transfer decisions that reduce crops with high wildlife values, such as rice, in favor of less wildlife-friendly agricultural practices or urban usage will have significant negative impacts on birds and other species and affect groundwater recharge north of the Delta. Finally, it is likely that south of Delta water rights holders will argue for higher allocations during drought years as connections between the Delta ecosystems (i.e., needs for endangered fish and water quality benchmarks) and north of Delta diversions into the tunnels may be more tenuous.	All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The issue of crops and water use is beyond the scope of the Proposed Project. As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the Draft BDCP EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and this EIR/EIS does not constitute the CEQA/NEPA coverage required for any specific transaction. Rather, it provides an analysis of how transfers relate to the project facilities. As indicated in Appendix 5D, the analyses are conservative because it is not known if adequate water would be available from other water users for transfer. As shown in Table 5D-8, the maximum cross-Delta transfers under the action alternatives would be greatest under Alternative 8 because there would be the most available capacity. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.
2602	13	The RDEIR/SDEIS states that impacts from Alternative 4A would be significant if not for the environmental commitments. However, the RDEIR/SDEIS also acknowledges that the "environmental commitments have not been defined to the level of site-specific footprints," and accordingly that it is not possible to specifically delineate and quantify how the commitments "could alter the acreages and functions and values of wetlands and waters of the United States in the study area." RDEIR/SDEIS at 4.3.8-341. Therefore, the RDEIR/SDEIS cannot credibly make the claim that the environmental commitments adequately offset anticipated impacts. The RDEIR/SDEIS deflects this sticky problem by promising that the effectiveness of the Environmental Commitments will be assured through monitoring and adaptive management. See RDEIR/SDEIS, at 4.3.8-338. However, the RDEIR/SDEIS lacks an adequate adaptive management framework and is exceedingly vague on how it will monitor impacts and success of mitigation measures.	The RDEIR/SDEIS provides adequate analysis of the Environmental Commitments that are incorporated into Alternatives 4A, 2D and 5A. Table 4.1-3 presents the restoration acreages that would be used to offset effects of constructing and operating the conveyance facilities. Table 4.1-8 also presents the biological resource restoration and protection principles for implementing the Environmental Commitments that essentially serve as performance standards to be used to reduce effects on natural communities. In addition, Impact BIO-176 in Chapter 12, Terrestrial Biological Resources provides analysis of the potential construction related effects of the conveyance facilities on wetlands and other waters of the United States. Mitigation Measure BIO-176 provides for compensatory mitigation for any affects that cannot be avoided. Alternative 4A is also being addressed as part of the U.S. Army Corps of Engineers, Clean Water Act Section 404 permitting process to ensure that effects on wetlands and other waters of the United States are avoided and reduced to the extent possible or that compensation is provided to offset the effects. The California WaterFix Mitigation Monitoring and Reporting Program will help direct implementation of these measures.
2602	14	The RDEIR/SDEIS must be revised to include an improved adaptive management framework. Any project involves uncertainties related to impacts and mitigation measures, and the RDEIR/SDEIS correctly acknowledges that the proposed projects create considerable uncertainties. RDEIR/SDEIS, at § 4.1.2.4, 4.1-18. Moreover, the Delta Reform Act requires that Delta operations be informed and adjusted pursuant to adaptive management principles. Cal. Water Code § 85086(c)(2). In order to credibly acknowledge and address these uncertainties, the RDEIR/SDEIS must do more than refer generally to adaptive management.	The adaptive management and monitoring program will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, state 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and state 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act). Please see Master Response 33 for more information

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		<p>The RDEIR/SDEIS briefly discusses the principles of adaptive management and what constitutes an effective adaptive management plan. RDEIR/SDEIS, at 4-21. All agree that a clear adaptive management plan must include, at a minimum, the following: (1) a clear goal statement, (2) a conceptual model, and (3) a decision framework. See R.M. Thom. 2000. Adaptive management of coastal ecosystem restoration projects. Ecological Engineering 15 (2000) 365–372. What the RDEIR/SDEIS does not do is describe its adaptive management plan in any useful manner whatsoever.</p> <p>Audubon California believes that the RDEIR/SDEIS provides a sufficiently clear goal statement for adaptive management, at least as it relates to ecological impacts. (footnote 3: The RDEIR/SDEIS states: "the broad purposes of the program will be to: 1) undertake collaborative science, 2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and 3) apply new information and insights to management decisions and actions." RDEIR/SDEIS, at 4.1-18) More broadly, we also understand that the goals of the RDEIR/SDEIS that touch on wildlife and habitat issues, especially with regard to habitat restoration, are linked to the goals of EcoRestore. It is clear that the intent of any affirmative action in the Delta is to maintain or improve ecological function even as other non-ecological goals are advanced. Moreover, consideration of ecological factors for SWP and CVP operations is required by the Water Code.</p> <p>However, the RDEIR/SDEIS lacks both adequate conceptual models and a decision framework (or multiple frameworks, as multiple adaptive management plans may be necessary for different aspects of the project) to provide a sufficiently robust adaptive management plan. The RDEIR/SDEIS states, "Details of the collaborative science and adaptive management process, including adaptive management decision-making, an organizational structure for adaptive management decisions, and funding for collaborative science will be developed through the MOA, as needed." RDEIR/SDEIS, at 4-21. At a minimum, the RDEIS/SDEIS should provide a framework and, where possible, specific triggers and management measures that may be implemented. Much of that information is discernable now and can be adjusted, as necessary, though the MOA process. But as written now, the RDEIR/SDEIS fails to provide the reader with any certainty as to these processes and outcomes.</p>	<p>regarding adaptive management.</p>
2602	15	<p>Audubon is also concerned about the scope and duration of biological monitoring, especially for birds, in the Delta. The RDEIR/SDEIS section on adaptive management briefly discusses monitoring and emphasizes its importance, but it fails to provide any specificity as to the parameters to be monitored (e.g., water quality, bird populations, etc.), or the expected duration of monitoring efforts. The discussion of adaptive management invokes Collaborative Science and Adaptive Management Program and California Adaptive Management Team, but those processes focus on endangered species and would lack the necessary scope to include monitoring for non-listed species. Where more specific monitoring efforts are mentioned elsewhere in the document, the RDEIR/SDEIS again suffers from its overly-narrow focus on threatened and endangered species, such as the black rail, the monitoring of which will not necessarily provide helpful information for the management of other species, including waterfowl, shorebirds, passerines, and raptors.</p>	<p>As the comment states, the Proposed Action will include long-term monitoring for the state and federally listed bird species included in the federal Biological Opinion and state incidental take permit: Swainson's hawk and tricolored blackbird. These monitoring measures will be outlined in the federal Biological Opinion issued by the U.S. Fish and Wildlife Service and in the state 2081(b) incidental take permit issued by the California Department of Fish and Wildlife. To support these permits, the Proposed Action (Alternative 4A) includes an Adaptive Management and Monitoring Program (AMMP). The broad purposes of the program will be to: 1) undertake collaborative science, 2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and 3) apply new information and insights to management decisions and actions (RDEIR/SDEIS Page 4.1-18). The details of the AMMP will be developed during project implementation and may include monitoring of other special-status or non-special-status bird species as indicators of ecological health or restoration success.</p> <p>The Final EIR/EIS also includes a required Mitigation Monitoring and Reporting Plan (MMRP), which includes descriptions of how DWR will monitor the implementation of each mitigation measure, including those designed to offset or minimize impacts to non-listed special-status birds and to migratory birds. Note that the Proposed Action is no longer a habitat conservation plan (HCP) or natural community conservation plan (NCCP), so therefore does not need to include a detailed monitoring plan for covered species, natural</p>

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			<p>communities, non-special-status species, or biological diversity.</p> <p>Monitoring will also be conducted in restoration sites such as riparian woodland and tidal wetlands to ensure that the restoration projects meet their success criteria and the terms of permits likely needed from the U.S. Army Corps of Engineers and State Water Quality Control Board regarding impacts to waters of the U.S. and waters of the state. Monitoring of birds mentioned in the comment may occur as part of the monitoring for restoration success in wetlands.</p>
2602	16	<p>An effective adaptive management plan must include a monitoring program that is “long enough to provide reasonable assurances that the system has either met its performance criteria or that it will not likely to meet the criteria.” Thom, supra, at 36. Audubon believes that given the scale of the project and importance of the Delta, the DEIR/SDEIS should anticipate state- and federally-funded monitoring for the life of the project, and those costs should be incorporated into the overall budget for the project.</p> <p>Audubon concurs with the recommendations provided by the Delta Independent Science Board (DISB) and its recent report, Adaptive Management in the Sacramento-San Joaquin Delta: How Is It Used and How Can It Be Improved (August 2015). (footnote 4: Available at http://deltacouncil.ca.gov/sites/default/files/2015/08/Adaptive%20management%20report%20v.8.pdf) We recommend that the RDEIR/SDEIS be revised to include more specificity in the adaptive management plan and that a Delta Adaptive Management Team be convened. The plan should describe benchmarks and other parameters for success, propose monitoring that informs assessment of those parameters, and describe the feedback loop of how new information will affect management decisions. The RDEIR/SDEIS can be improved to include this information, even a summary fashion. For example, it would be extremely helpful if a summary table, such as the one provided below, were included: Source: Kingsford, R.T. and Biggs, H.C. (2012). Strategic adaptive management guidelines for effective conservation of freshwater ecosystems in and around protected areas of the world. IUCN WCPA Freshwater Taskforce, Australian Wetlands and Rivers Centre, Sydney.</p>	<p>The adaptive management and monitoring program will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, state 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and state 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act). Please see Master Response 33 for more information regarding adaptive management.</p>
2602	17	<p>The need to better define specific adaptive management measures that will be associated with the project is important not only because it addresses the inherent uncertainties of such a large, complex project, but because adaptive management measures themselves may result in significant negative environmental impacts (e.g., an action taken pursuant to an adaptive management plan that is intended to benefit some fish species may result in negative impacts to other fish and wildlife species). Defining the adaptive management measures early on provide a reviewer of the RDEIR/SDEIS to better assess the ripple effect of impacts the project is likely to initiate.</p>	<p>Please refer to Master Response 33 (Adaptive Management) for information regarding adaptive management. For more information regarding the Collaborative Science and Management Plan please see Chapter 3 of the FEIR/EIS.</p>
2602	18	<p>Sections discussing wetland restoration must be improved to (1) addresses uncertainties related to wetland restoration and (2) explain how Water Fix and EcoRestore will interact to ensure that the Delta’s ecological functions will be improved, rather than compromised, over time.</p> <p>Audubon understands that the scope of wetland restoration has been scaled back considerably because WaterFix focuses primarily on the problem of conveyance through the Delta and the goal of improving habitat conditions in the region has been</p>	<p>Adaptive management is not a required element of the proposed project or the EIR/EIS. However, DWR and Reclamation are providing a description of the proposed Adaptive Management and Monitoring program to provide a more complete picture of the proposed action. Monitoring is a requirement of the state 2081(b) incidental take permit. Adaptive management is a recommended component of any long-term mitigation program. DWR and Reclamation have included local agencies in the decision-making process through the extensive public outreach and involvement program of BDCP and California Water Fix. This has included numerous outreach meetings with local public agencies directly. DWR and Reclamation intend to continue this outreach to local agencies during the rest of the CEQA/NEPA process as well as during project</p>

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		<p>transferred to EcoRestore. For many, however, it's hard not to subscribe to the notion that the State has decided to focus on what it really wanted all along – improved conveyance of water from north to south – and done away with the messy bits of stabilizing and improving the Delta ecosystem or complying with the strictures of a Natural Communities Conservation Plan. Given the sluggish pace of restoration and water quality improvements in the Delta, there is understandable concern that once WaterFix is implemented, EcoRestore will further languish.</p> <p>In our comments regarding the BDCP, we expressed concern about the lack of specifics regarding habitat restoration, particularly the location, timing, and long term monitoring and management necessary for successful mitigation of impacts. Unfortunately, those concerns remain with the RDEIR/SDEIS. In many instances, the RDEIR/SDEIS concedes that it is currently impossible to assess impacts from planned activities. But rather than provide, at a minimum, a robust adaptive management plan to provide assurances that unanticipated impacts will be addressed, the RDEIR/SDEIS largely relies on vague promises of future mitigation.</p> <p>At a minimum, mitigation for wetland impacts should be provided on a 3:1 basis, not a 1:1 as proposed. First, wetlands created as mitigation do not necessarily, acre-for-acre, replace the ecological value of those impacted by a project. Second, wetlands created as mitigation will have a lag time before they begin to provide the ecosystem function value provided by extant wetlands. Third, the RDEIR/SDEIS lacks an assurance that new wetlands will be created, as opposed to converting or marginally improving lands that may already be serving at least some wetland functions. Fourth, because the RDEIR/SDEIS lacks an adequate adaptive management framework, it lacks assurances that wetland mitigation projects will provide long term replacement value, which cannot be assumed given the inherent limitations and limited success rate in wetland restoration projects.</p>	<p>implementation. As described on p. 4.1-20 of the RDEIR/SDEIS, collaborative science and adaptive management will be funded through a combination of mitigation funds from participating state and federal water contractors, and available supplemental state and federal funding.</p> <p>The adaptive management and monitoring program is designed to improve the effectiveness and efficiency of implementing key mitigation measures surrounding biological resources. The adaptive management and monitoring program will not be used to verify the conclusions in the RDEIR/SDEIS or final EIR/EIS (e.g., verify a lack of impacts to upstream areas). The proposed adaptive management and monitoring program will be developed and implemented collaboratively with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife through the development of the Biological Opinion, and state incidental take permit. Further development and refinements to this adaptive management and monitoring program are expected during the early years of project implementation. Such details are not required to be included in the regulatory permits, nor the EIR/EIS. Please see Master Response 33, as well as section 3.6.4.4 of the FEIR/EIS for more information regarding adaptive management in the preferred alternative.</p> <p>The adaptive management and monitoring program will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, state 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and state 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act).</p> <p>Please see Master Response 22 regarding mitigation and Environmental Commitments.</p>
2602	19	<p>The RDEIR/SDEIS states, "CBR1 - At the ecotone that will be created between restored tidal wetlands and transitional uplands (Environmental Commitment 4), provide for at least 22 acres of California black rail habitat (Schoenoplectus and Typha-dominated tidal and non-tidal freshwater emergent wetland in patches greater than 0.55 acres in the central Delta) consisting of shallowly inundated emergent vegetation at the upper edge of the marsh (within 50 meters of upland refugia habitat) with adjacent riparian or other shrubs that will provide upland refugia, and other moist soil perennial vegetation. If feasible, create the 22 acres of tidal habitat in a single patch in a location that is contiguous with occupied California black rail habitat." (RDEIR/SDEIS, at 4-40). California Black Rail, like many tidal marsh species, needs contiguous habitat and respond positively to large, core areas more than 50 meters from the marsh edge. (footnote 5: Spautz, H. and N. Nur. 2002. Distribution and Abundance in Relation to Habitat and Landscape Features and Nest Site Characteristics of California Black Rail (<i>Laterellus jamaicensis coturniculus</i>): Final Report to the US Fish & Wildlife Service. Point Reyes Bird Observatory (Point Blue Conservation Science). Available at http://www.prbo.org/cms/docs/wetlands/BLRA_PRBO_Mar2002.pdf. The report found</p> <p>At the landscape scale they responded positively to the amount of marsh in the surrounding 250 m, the size of the core area of the marsh (interior area of a marsh more than 50 m from a marsh edge), and negatively to the distance to the nearest large (100 ha) marsh and to distance to water. (Id., at 2). See also Spautz, H. et al. 2005. California Black Rail (<i>Laterellus jamaicensis coturniculus</i>) Distribution and Abundance in Relation to</p>	<p>The commenter states that the RDEIR/SDEIS should explain why the parcel will be limited to 22 acres. The acres of restoration are directly proportional to the impacted tidal wetlands that would be directly impacted by the project. The commenter correctly states that "California black rail rely on contiguous habitat and respond positively to large core areas" and provide references from work that has been conducted in the San Francisco Bay Area. Similar results have also been found in recent studies of the Sacramento-San Joaquin Delta (Tsao et al. 2015). The commenter further recommends that the entire 22 acres should be created in a single patch, or if that is not feasible multiple patches should be as closely connected as possible. This is consistent with the recommendation in Resource Restoration and Performance Principle CBR1. In addition, CBR1 has been further refined in the FEIR/FEIS to state that California black rail habitat restoration will occur at a location subject to CDFW approval.</p>

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		<p>Habitat and Landscape Features in the San Francisco Bay Estuary. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191. 2005. Available at http://www.fs.fed.us/psw/publications/documents/psw_gtr191/Asilomar/pdfs/465-468.pdf.) The RDEIR/SDEIS should explain why the parcel will be limited to 22 acres. In any event, Audubon strongly encourages that the 22-acre area be created as a single patch with as large a core areas and as much suitably dense vegetation as feasible. If a single patch is infeasible, then the subsequent patches be as large and closely connected as possible using the best available models for high-quality rail habitat (i.e., a model may demonstrate that a 20-acre patch and a 2-acre patch provides greater value than two 11-acre patches, or four 5-acre patches, etc.). Also, Audubon notes that "feasible" means "capable of being done, executed, affected, or accomplished. Reasonable assurance of success." Black's Law Dictionary, 6th ed., at 609. Therefore, to fulfill CBR1, the presumption is that the 22-acre tidal habitat will be a single patch, even if it presents some design challenges or is more expensive than a smaller habitat patch.</p>	
2602	20	<p>The Tricolored Blackbird is a California Species of Special Concern and is currently a candidate for protection under both the California and federal endangered species acts. (footnote 6: Information on the 90-day finding on the petition to list the Tricolored Blackbird under the federal ESA is available at http://www.regulations.gov/#!documentDetail;D=FWS-R8-ES-2015-0138-0001 and https://www.federalregister.gov/articles/2015/09/18/2015-23315/endangeredand-threatened-wildlife-and-plants-90-day-findings-on-25-petitions#h-91. The California Fish & Game Commission voted to accept a new petition to list the Tricolored Blackbird under CESA at its October 2015 meeting and will likely vote on whether the species "may be warranted" for listing (and therefore be given CESA protections during a 1-year evaluation process) at its December 2015 meeting.) Ongoing monitoring has demonstrated that the species has suffered a precipitous decline since 2008, with its population size decreasing by approximately 68% since that time. (footnote 7: Meese, R. J. 2014. Results of the 2014 Tricolored Blackbird Statewide Survey. U.C. Davis) The primary cause of the decline is habitat loss. (footnote 8: Once numbering in the millions, the Tricolored Blackbird population has declined to approximately 145,000 birds according to the 2014 statewide survey. Id.; see also Hamilton, W. J., III, L. Cook, and R. Grey. 1995. Tricolored blackbird project 1994. Report prepared for U. S. Fish and Wildlife Service, 69 pp + append; Neff, J. 1937. Nesting distribution of the tricolor-colored redwing. Condor 39(2):61-81. The triennial survey was developed and employed to track the Tricolored Blackbird population abundance and distribution. The most extensive and replicable surveys – conducted in 2008, 2011, and 2014 – show a steep decline in Tricolored Blackbird abundance. The Tricolored Blackbird population declined by 64 percent between 2008 and 2014, despite an increase in the number of sites surveyed (Meese 2014). Additionally, Graves et al. (2013) identified a 63 percent decline in mean breeding colony size from 1935 to 1975. Graves, E.E., M. Holyoak, R.T. Kelsey, and R.J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecology and Evolution 2013; 3(9): 2845-2858.)</p> <p>Audubon appreciates the measures included to protect Tricolored Blackbird populations in the RDEIR/SDEIS, but is concerned about how they will be implemented. First, how will Tricolored Blackbirds be monitored in the project area? Second, what will be the funding sources for both monitoring and restoration or protection measures? Third, how do these measures change if the species is listed under either the ESA or CESA? Fourth,</p>	<p>Regarding the commenter's question, "how will Tricolored Blackbirds be monitored in the project area?" The Proposed Action is no longer a habitat conservation plan (HCP) or natural community conservation plan (NCCP), so therefore does not need to include a detailed monitoring plan for covered species, natural communities, or biological diversity. Monitoring will be conducted in restoration sites such as for tidal and nontidal wetlands to ensure that the restoration projects meet their success criteria. The Environmental Commitments and Resource Restoration and Protection Principles under Alternative 4A were adapted from the BDCP Conservation Measures, which still retain the same guidance for natural community restoration that was established with the idea of providing habitat elements for covered species such as tricolored blackbird. So though Alternative 4A does not have specific measures for monitoring tricolored blackbird over the long-term, it does have requirements to monitor the success of restoration projects that provide suitable habitat for the species as well the implementation of AMM 21 Tricolored Blackbird, which calls for surveying for and monitoring tricolored blackbird colonies adjacent to project construction and restoration sites as well as during the implementation of operations and maintenance activities.</p> <p>Tricolored blackbird was listed by the California Fish and Game Commission on December 11, 2015 as a candidate for listing under the California Endangered Species Act (CESA). This candidate status gives the species the same protection under CESA as a threatened or endangered species during the 12-month period in which the California Department of Fish and Game will evaluate the status of the species and determine whether it warrants listing as threatened or endangered. DWR has included the tricolored blackbird in their 2081(b) permit application to CDFW for take authorization for the Proposed Action. As part of that permit application, DWR is developing a monitoring framework for the species based on the many established monitoring protocols available.</p> <p>Regarding the commenter's question, "What will be the funding sources for both monitoring and restoration or protection measures?" Monitoring, restoration, and protection measures for tricolored blackbird will be paid for by the participating state and federal water contractors as part of their mitigation obligation. All mitigation funding will come from the same funding source as the construction and operation of the proposed water conveyance facility—rate increases on water users of the participating state and federal water contractors.</p> <p>Regarding the commenter's question, "How do these measures change if the species is listed under either the ESA or CESA?" Because DWR anticipates that the species will ultimately be listed, it is including the tricolored blackbird in the state 2081(b) incidental take permit application. If the species is listed under CESA no additional measures will be needed because DWR will have already incorporated appropriate</p>

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		<p>what is the adaptive management framework if the species decline continues and/or impacts from the project are different than anticipated? Currently, Tricolored Blackbird breeding in the project site is limited. However, wetland restoration associated with EcoRestore and Environmental Commitments anticipated in the RDEIR/SDEIS will likely lead to the creation of suitable habitat for tricolor nesting.</p>	<p>avoidance, minimization, and mitigation measures.</p> <p>Regarding the commenter's question, "What is the adaptive management framework if the species decline continues and/or impacts from the project are different than anticipated?"</p> <p>The BDCP Alternatives being part of an HCP/NCCP do incorporate adaptive management strategies for species because one of the goals of such plans is the recovery of the species covered by the plan. For Alternatives 4A, 2D, and 5A in the EIR/EIS, there is no adaptive management framework proposed for addressing further declines or to deal with changes in project impacts. If the footprint for the water conveyance facility changes substantially enough following the issuance of the FEIR/FEIS that it would change the determinations made for any impacts, including impacts on tricolored blackbird, then a supplemental document would need to be prepared. Furthermore, the 2081 permit that is being prepared would also have to be amended to account for any unforeseen impacts on tricolored blackbird from the project. Additional mitigation would be proposed at that time.</p>
2602	21	<p>Audubon recommends that in devising and implementing the activities envisioned by TB1-4, the responsible agencies consult and coordinate with the Tricolored Blackbird Working Group. (footnote 9: For more information, see http://tricolor.ice.ucdavis.edu/.) The group is comprised of experts on the species from state and federal agencies, research and conservation organizations, and representatives of agricultural interests, working together cooperative to try to conserve the species while protecting private property rights and economic activity.</p>	<p>Resource Restoration and Protection Principles serve as general guidance for protecting habitat for tricolored blackbird. Specific details in protection plans will be developed using the most current information on the species and in consultation with CDFW.</p>
2602	22	<p>Swainson's Hawks continue to lose habitat in California due to land use conversion, particularly loss of grasslands and conversion of hawk-friendly agricultural lands to less hospitable uses, such as urbanization and renewable energy development. The RDEIR/SDEIS states that "Alternative 4A would result in the combined permanent and temporary loss of up to 6,843 acres of modeled habitat (38 acres of nesting habitat and 6,805 acres of foraging habitat) for Swainson's hawk (Table 12-4A-34)." RDEIR/SDEIS, at 4.3.8-171.</p> <p>Audubon is particularly concerned by the RDEIR/SDEIS's finding that Alternative 4A will have significant adverse impacts will occur to at least 12 known breeding territories/nesting sites and the loss of 883 of high-value foraging habitat. RDEIR/SDEIS, at 4.3.8-172; see also Table 12- 4A-35. Moreover, the impact of permanent and temporary transmission lines on Swainson's Hawks (and other raptors, including Golden Eagle) are not well described in the RDEIR/SDEIS and do not appear to be included in the proposed mitigation measures.</p> <p>SH1 should be modified to increase the mitigation ratio from 1:1 to 3:1. A 1:1 ratio assumes that the replacement habitat is necessarily equivalent to the habitat loss (an assumption that rarely proves true). Moreover, too often, the "conserved" habitat already provides Swainson's Hawk habitat, so the net effect is loss of extant habitat.</p> <p>Regarding SH2, Audubon is unclear what mechanisms will ensure that the high-quality habitat will be "protected" and what that "protection" will offer. See RDEIR/SDEIS, at 4-41. Will it maintain the property in its current status? Will it prevent additional risks from power lines, renewables, or rodenticide uses? Will fire management be an issue on those properties? Also, Audubon is unclear as to the -1 foot above mean sea level requirement. What is the reason for this parameter and does it expose the Swainson's Hawk habitat to greater vulnerability due to flooding and sea level rise?</p>	<p>The commenter states that the permanent and temporary impacts of transmission lines on Swainson's hawk, and other raptors, are not well described and do not appear to include the proposed mitigation measures. Under Impact BIO-83, the loss of habitat from permanent and temporary transmission lines is discussed, which includes the locations of where these lines will be. In addition to the restoration of 251 acres and protection of 103 acres of riparian habitat to replace permanent and temporarily impacted habitat, AMM18 includes specific measures to plant large mature trees with guidance how and where plantings should be done. The analysis also refers to protecting foraging habitat according to the guidance in RRPPs SH1 and SH2. Impact BIO-84 discusses the risk of injury and mortality of Swainson's hawk from new transmission lines. The analysis refers to AMM20, which calls for the installation of flight diverters on new transmission lines. All other raptor species addressed have similar analyses and rely on similar measures to offset the effects of transmission line construction.</p> <p>The commenter asks that the foraging habitat replacement ratio of 1 to 1 be replaced with a ratio of 3 to 1 and states their opinion that a 1 to 1 ratio "assumes that the replacement habitat is necessarily equivalent to the habitat loss (an assumption that rarely proves true)." Restoration Resource and Protection Principle SH1 calls for the conservation of 1 acre of foraging habitat for every acre lost in minimum patch sizes of 40 acres and SH2 calls for at least 50% of this protected habitat to be of very high value habitat. As shown in table 12-4A-35, only 25% of the habitat affected would be of very high value (alfalfa) and 48% consists of low to very low value habitat. Under the proposed protection and management at least 3,374 acres of alfalfa (very high value foraging habitat) will be in production and managed for Swainson's hawk and other wildlife, which is just more than twice as much of the 1,658 acres of alfalfa that would be affected. The protection and management of these lands would be under Environmental Commitments 3 and 11, which are guided by BDCP Conservation Measures 3 and 11. Conservation Measure 3 in the Draft BDCP states that cultivated lands for Swainson's hawk will be protected in proximity to active Swainson's hawk nesting territories and Conservation Measure 11 commits to maintaining crop types for the required habitat acreages for specific wildlife species and a commitment to retain and plant hedgerows to provide refugia for rodents as a means to increase prey populations for Swainson's hawk and white-tailed kite. Considering the commitment to managing these lands specifically for Swainson's hawk compared to the uncertainty of</p>

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			<p>future cropping patterns in the Delta, the overall net increase in very high value foraging habitat, and considering that the impacted foraging habitat represents only 1% of the total foraging habitat in the study area, the proposed 1 to 1 ratio would be sufficient in offsetting the impacts to Swainson’s hawk foraging habitat.</p> <p>As described in Conservation Measure 11, pesticides use on cultivated lands will be minimized or discontinued as needed to reduce negative effects on wildlife including direct, lethal toxicity, reproductive failures, and other adverse effects.</p> <p>The proposed project can’t influence or predict future power line construction not related to the project.</p> <p>There would not likely be any fire management on protected cultivated lands; however, fire management will be a component of each reserve unit management plan (see Draft BDCP Section 3.4.11.2.3).</p> <p>The requirement in SH2 of protection lands above -1 foot above mean sea level is to avoid the effects of sea level rise by restricting conservation to areas that have low risk of future inundation.</p>
2602	23	<p>Avoidance and minimization measures for birds are not based on sound science and fail to implement all reasonable, feasible measures to protect birds. Audubon is disappointed that the revision process did not result in the RDEIR/SDEIS improving upon the unsupported and inadequate avoidance and minimization measures to reduce impact to wildlife, particular birds. The RDEIR/SDEIS appears to rely almost entirely on the AMMs provided in Appendix 3.C of the BDCP DEIR/DEIS, which prior comments have noted are inadequate on multiple levels.</p> <p>First, the AMMs fail to adequately protect breeding birds. In several cases, the AMMs provide for so-called buffers around nest sites (e.g., 250-1300 feet for Tricolored Blackbirds, 250 feet for California Least Tern). See, e.g., BDCP at 3.C-43. The document does not provide any scientific reasoning for these buffers. In fact, many of these species are extremely sensitive to nest-site disturbance and can abandon active nests at the ranges provided. Moreover, disturbance from construction activities near a nest site may result in introduced predators or other disturbances. The AMMs completely fail to discuss or address these problems. The AMMs should be revised to address these deficiencies.</p> <p>Second, the AMM document fails to explain how monitoring will be organized, funded, and reported upon. Will monitoring be provided through an open contracting process or will it be conducted by state personnel? What state agency will ultimately be responsible for monitoring efforts? When decisions as to what will be monitored and what will go unmonitored inevitably occur, will there be a transparent decision-making process and will the public be provided an opportunity to comment on the decision? Will data gathered during the various anticipated monitoring efforts be publicly available?</p>	<p>The AMMs now appear as part of Appendix 3B of the EIR/EIS. The AMMs were originally developed for the BDCP to avoid and minimize effects on natural communities and covered species that could result from BDCP covered activities. These measures were developed to help satisfy regulatory requirements of the Endangered Species Act and the Natural Community Conservation Planning Act. The AMMs were developed in consultation with species experts, which included technical staff at USFWS, CDFW, and DWR, and relied on the best available information. The original AMMs evaluated by the Draft EIR/EIS were evaluated as part of the Plan’s efforts in species conservation. Where applicable, the EIR/EIS also refers to these AMMs where they would serve to avoid and minimize effects on other biological resources not covered by the Plan.</p> <p>The commenter states their opinion that the AMMs fail to adequately protect breeding birds and that no scientific reasoning is provided for the nesting bird buffers proposed. The nesting bird buffers were developed based on the professional judgement of species experts that helped develop and/or review the AMMs.</p> <p>The commenter states that construction may result in introduced predators or other disturbances. The EIR/EIS addresses all reasonably foreseeable disturbances from construction. AMM2 specifically includes a measure to avoid attracting predators by keeping the project area clean of food wastes and food containers.</p> <p>The AMMs under the preferred project will be implemented by DWR through the California WaterFix Mitigation Monitoring and Reporting Program (MMRP). The California Environmental Quality Act (CEQA) requires that agencies approving projects after certifying Final Environmental Impact Reports (EIRs) must take affirmative steps to determine that all approved mitigation measures are implemented subsequent to project approval. DWR will adopt the final version of this MMRP at the time it takes action on the Project or on one of the alternatives addressed in the Final EIR/EIS. Specifically, DWR would adopt the final MMRP at the time it adopts “CEQA Findings” pursuant to Public Resources Code section 210181[a] and CEQA Guidelines section 15091[a] (See Cal. Pub. Resources Code, § 21081.6[a]).</p> <p>Although neither Public Resources Code section 21081.6[a] nor CEQA Guidelines section 15097, which adds details to the statutory MMRP requirement, expressly requires that MMRPs include anything other than formal adopted “mitigation measures,” this MMRP includes more. Not only does this MMRP include all of the mitigation measures formulated for the California Water Fix through the above-mentioned Final EIR/EIS, but it also includes project features called “environmental commitments” (ECs) and “avoidance and minimization measures” (AMMs), which, like formal mitigation measures, have the effect of reducing the severity of environmental effects that otherwise might be significant. DWR has chosen to include the ECs and AMMs herein in order to provide to the public, through a transparent and legally enforceable</p>

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2602	24	<p>The RDEIR/SDEIS Fails to Adequately Assess and Mitigate for Cumulative Impacts Arising from Alternative 4A and the San Luis Transmission Project. Alternative 4A will result in myriad significant adverse environmental impacts to sensitive habitats and species in and around Clifton Court Forebay. The San Luis Transmission Project, which will include 95 miles of new transmission lines with easements from 125-250 feet wide through the foothills of the Diablo Range and western San Joaquin Valley, will likewise have impacts on the resources in and around the Clifton Court Forebay. (footnote 10: See the Draft EIS/EIR, available at: http://www.sltpcis-eir.com/draftEIS-EIRMainText.pdf. Audubon notes that the transmission project is of particular importance to birds because impacts from the project will not only result in adverse impacts on the ground, but create a permanent impact due to collision risks for birds, particularly for raptors and migratory birds moving through the project area.) Yet, the RDEIR/SDEIS fails to consider the transmission project in its cumulative effects analysis.</p> <p>Overall, Audubon does not see how the RDEIR/SDEIS adequately addresses and mitigate impacts from new transmission lines (within the project's scope or cumulatively). While 4.3.8- 140 acknowledges impacts to sandhill cranes from transmission lines, there is little consideration for such impacts to the wide range of species that suffer from transmission line and tower strikes, including golden eagles, red-tailed hawks, American kestrels, and Swainson's hawks. Moreover, new transmission line towers and lines may serve as perches for predators, resulting in higher depredation on species such as burrowing owls, California black rail, and several songbird species that rely on wetland and riparian habitat. For the most part, the RDEIR/SDEIS dismisses concerns about impacts and predation arising from transmission lines and powers without finding additional mitigation or measures are necessary.</p>	<p>mechanism, assurances that all such ECs and AMMs will be fully carried out.</p> <p>AMM20 has been updated and allows for a number of minimization and mitigation measures to meet the performance standard of no take of greater sandhill crane associated with new transmission lines. The performance standard will be accomplished by one or any combination of the following:</p> <ul style="list-style-type: none"> • Design the transmission line alignment to minimize risk. When locating powerlines, choose specific site locations that are in low risk zones or outside of the Greater Sandhill Crane Winter Use Area. • Remove, relocate or underground existing lines. Reduce the number of existing lines in risk zones to offset placement of new lines in risk zones. Prioritize elimination or reduction of existing lines and avoidance of new lines in the highest risk zones. • Underground new lines in high-risk zones of the greater sandhill crane winter use area. • Use natural gas generators in lieu of transmission lines in high-risk zones of the greater sandhill crane winter use area to provide power for the construction of the water conveyance facilities. • Install bird strike diverters on existing lines in high-risk zones. Bird diverters will be required on all new lines. The length of existing line to be fitted with bird strike diverters will be equal to the length of new transmission lines constructed as a result of the project, in an area with the same or higher greater sandhill crane strike risk to provide a net benefit to the species. Bird diverters will also be required on all new lines. For optimum results, the recommended spacing distance for bird flight diverters is 15 to 16.5 feet (4.5 to 5 meters) (Avian Power Line Interaction Committee 1994). Bird strike diverters will be installed on project and existing transmission lines in a configuration that research indicates will reduce bird strike risk by at least 60% or more. Bird strike diverters placed on new and existing lines will be periodically inspected and replaced as needed until or unless the project or existing line is removed, or are otherwise no longer a strike risk for greater sandhill cranes. The most effective and appropriate diverter for minimizing strikes with greater sandhill crane on the market according to best available science will be selected. • Manage habitat to shift cultivated land roost site locations away from risk zones created by new transmission lines. This can be accomplished by not flooding past or current roosting sites located in the vicinity of the new transmission line, thereby eliminating the sites' attractiveness as roosting habitat; and establishing new roost site equal or greater in size at new location in a lower risk zone but within 1 mile of the affected site. The relocated cultivated land roost site will be established prior to commencement of the wintering season that occurs prior to construction of new transmission lines. The existing cultivated land roost site will be flooded during the wintering season prior to construction; it will not be flooded during the wintering season that occurs during the year construction begins. A wildlife agency-approved, qualified biologist familiar with crane biology will design the new roost site and direct implementation of the roost site establishment. • Final transmission line design will be determined in coordination with the wildlife agencies and wildlife agency-approved, qualified biologist familiar with crane biology, to achieve the performance standard and ensure the measures described herein are incorporated. <p>All new transmission lines will be fit with bird diverters and other methods such as undergrounding transmission lines, using natural gas generators, and designing the final alignment will be evaluated throughout the project area, not only within the vicinity of Staten Island.</p> <p>A bird-strike analysis was conducted for multiple species as part of the BDCP which concluded that birdstrike potential was not significant for other species that were covered under the BDCP. The EIR/EIS addresses the impact of birdstrike for all avian species, analyzing factors such as flocking behavior, flight, wing shape, and</p>

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			movement patterns. The implementation of the measures proposed in AMM20 are expected to reduce the risk of birdstrike on avian species to a less-than-significant impact.
2603	1	<p>Porgans & Associates' (P/As) comments are presented in the following format:</p> <p>(1) It provides a synopsis of Porgans & Associates 40 year effort working with Delta landowners and reclamation district to require and/or compel government officials to provide the flood protection, water rights assurances, and a means to convey water through the Delta to the State Water Project (SWP) and federal Central Valley (CVP) pumping plants in the southern portion of the Sacramento-San Joaquin Delta. Delta facilities were approved by the State Legislature in 1959 (California Water Code section 934(d)), Master Levees, and approved and funded by the voters in November 1960. There is an old quotation which says, "Those who fail to learn from history are doomed to repeat it" ...Winston Churchill. The "fix" as described in the preferred Alternative 4A appears to follow the same agenda DWR officials and Governor Jerry Brown have been promoting since the mid-1970s. Therefore, any course of action that involves an isolated water conveyance system around or beneath the Delta, as proposed, will pave the way to the Delta's final demise and serve as a testament to Churchill's warning,</p> <p>(2) Its list verbatim quotations extrapolated from the RDEIR/SDEIS and other government documents, which references the source document and page number, and</p> <p>(3) It provides comments, concerns and suggestions, as they pertain to the quoted text and the preferred Alternative 4A, contained in the latest version of a myriad of failed plans and a plethora of government studies, spanning over five decades, purportedly to provide a fix for the Delta, which has already cost billions of dollars. Ironically, the Delta is not broken, that is a misnomer. For that matter the name change to the California Water Fix is also a misstatement of fact; the proposed Action should be properly entitled the SWP Fix, designed to bailout its agricultural water contractors and increase water supply reliability for urban contractors south of the Delta. Unfortunately, the success of adopting Alternative 4A will be at the expense and to the demise of the Sacramento-San Joaquin Delta.</p>	<p>This comment is an overview of the approach to commenting on the EIR/EIS and an opinion about the purpose of the California WaterFix and its success. The comment does not raise any issue related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 Draft EIR/EIS.</p>
2603	2	<p>Previous Input into the so-called BDCP/California Water Fix: FYI: Be advised, Porgans & Associates did comment on the BDCP initial DEIR, which, in unison with fisheries agencies and Delta farmers, found it to be grossly deficient, incomplete, myopic, and, most important, Alternative 4A is extremely beneficial to state and federal water project operators and their respective water contractors.</p> <p>Porgans & Associates voiced concerns regarding the DWR's ability to conduct an unbiased and objective study and perform an adequate environmental assessment and needs analysis, compliant with all of the CEQA, ESA, and CWA requirements, that would identify mutually viable alternatives to remedy many of the long-standing conflicts amongst different regions of the State and with those entities that have a "stake" in the use and distribution of the public's water resources.</p>	<p>Although a viable alternative, please note that the BDCP (EIR/EIS Alternative 4) is no longer the preferred alternative. Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred Alternative. Alternative 4A is also the NEPA Preferred Alternative, a designation that was not attached to any of the alternatives presented in the 2013 Public Draft EIR/EIS. Alternative 4 remains a potentially viable alternative and is being carried forward in this RDEIR/SDEIS because it represents the original habitat conservation plan/natural community conservation plan (HCP/NCCP) alternative approach, and because it provides an important reference point from which the Alternative 4A, 2D, and 5A descriptions and analyses were developed. If the Lead Agencies ultimately choose the alternative implementation strategy and select an alternative presented in the RDEIR/SDEIS after completing the CEQA and NEPA processes, elements of the conservation plan contained in the alternatives in the 2013 Public Draft EIR/EIS may be utilized by other programs for implementation of the long term conservation efforts.</p> <p>Unlike the BDCP, Alternative 4A would not serve as a HCP/NCCP under ESA Section 10 and the NCCPA, but rather would achieve incidental take authorization under ESA Section 7 and CESA Section 2081(b). See RDEIR/SDEIS, Section 4, New Alternatives: Alternatives 4A, 2D, and 5A, and Master Responses 4 (Alternatives) and 5 (BDCP) for additional information.</p> <p>The proposed project has been developed based on sound science, data gathered from various agencies and</p>

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			<p>experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder presentations/Q&As.</p> <p>The Final EIR/EIS, along with many other documents developed through the project planning (e.g., engineering, economic, and other technical studies) and other environmental compliance processes (e.g., Endangered Species Act, Clean Water Act, and water rights compliance), will serve as the basis for the Federal and State Lead Agencies' review and consideration of the proposed project. For additional information regarding the scoping process and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4.</p>
2603	3	<p>What assurance or confidence should the public and Delta interests place on the proposed fix; in light of the fact that the record indicates that SWP and federal CVP officials have yet to mitigate the ongoing cumulative impacts that has brought the Delta to the verge of ecological collapse; despite the fact that billions of dollars of publicly borrowed funds have been expended by DWR, and hundreds of millions of dollars by Congressional authorization, to restore and protect the Delta. As the public awaits a final decision that could cause the ultimate death of the Delta ecosystem and the sustainability of all those dependent on it as a means of survival. It is important not to lose sight of the fact, that, as mentioned in DWRs publication, this is the last largest remaining Delta on the West Coast of the Americas. Its predecessor, the Colorado River Delta, which once empties into the Sea of Cortez, was essentially destroy as a result of the construction and operation of the federal Bureau of Reclamation's dams and reservoirs within the Colorado River watershed.</p> <p>Comment: At the Sacramento meeting, DWR officials conceded that implementation and success of the proposed assurances and mitigation measures would be difficult to quantify at this stage; essential wait and see.</p>	<p>Under the stringent environmental statutes in place today, including the Endangered Species Act, operation of the proposed water delivery system could not drain the Delta rivers and channels dry, including the Sacramento River. The proposed project's facilities, including water intakes and pumping plants, would be operated in accordance with permits issued by, U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Department of Fish and Wildlife, and the State Water Resources Control Board, among other agencies. The proposed project would be permitted to operate with regulatory protections, including river water levels and flow, which would be determined based upon how much water is actually available in the system, the presence of threatened fish species, and water quality standards.</p> <p>Considerable scientific uncertainty exists regarding the Delta ecosystem, including the effects of CVP and SWP operations and the related operational criteria. To address this uncertainty, DWR, Reclamation, DFW, USFWS, NMFS, and the public water agencies will establish a robust program of collaborative science, monitoring, and adaptive management. For more information regarding adaptive management please see Master Response 33. See also Master Responses 6, 14, 22, 26, and 28 for more information on demand management, water quality, mitigation, area of origin, and operational criteria.</p>
2603	4	<p>DWR officials iterate on how the BDCP/California Water Fix will set the stage for water development for the next 100 years. It is important to note, that the source of California's half of century in the making water crisis can be traced to the 20 inherent financial and water contractual shortcomings of the SWP, which is administered and operated by DWR.</p> <p>Comment: DWR's failure to provide Delta flood and water rights protection authorized and funded to fulfill legislative and voter mandates, approved and funded, back in 1959 and 1960, which were never provided.</p>	<p>The comment does not raise any issue related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Please note that the proposed project is one component, among many, of the California Water Action Plan. The California Water Plan evaluates different combinations of regional and statewide resources management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. Follow the California Water Plan here: http://www.waterplan.water.ca.gov/.</p> <p>By establishing a point of water diversion in the north Delta the proposed project is designed to improve native fish migratory patterns while securing reliable water deliveries. Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1, EIR/EIS, describes the range of conveyance alternatives considered in the development of the EIR/EIS. Appendix 1B, Water Storage, EIR/EIS, describes the potential for additional water storage and Appendix 1C, Demand Management Measures, EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including desalination. While these elements are not proposed as part of the proposed project, the Lead Agencies recognize that they are important tools in managing California's water resources.</p> <p>The California Department of Water Resources' Levee Repairs and Floodplain Management Office is responsible for administering levee programs through evaluation and direct rehabilitation of structural deficiencies in California's levee system. Overall levee repairs and improvement programs administered by DWR will continue with available funding. For additional information on the relationship between the proposed project and Flood protections in the Delta, please see EIR/EIS Appendix 6A BDCP/California WaterFix Coordination with Flood Management Requirements.</p> <p>The proposed project does not increase the amount of water to which DWR holds water rights or for use as</p>

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			allowed under its contracts. Water deliveries from the federal and state water projects under a fully-implemented Alternative 4A are projected to be about the same as the average annual amount diverted in the last 20 years. Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline. Refer to Master Response 26 (Area of Origin).
2603	5	<p>To DWR's and the federal Bureau of Reclamation's credit, they have expended a fortune of publicly borrowed money and U.S. taxpayers money to fund fish-doubling projects, aquatic habitat restoration and studies failed. Their cumulative actions, associated with SWP/CVP operations are responsible for the collapse of the Delta's ecosystem; regarding the level of confidence the public is expected to exhibit, in light of DWRs dismal performance to fulfill its mandates to protect the Delta, ensure its sustainability and restore and double endangered fish populations.</p> <p>Comment: Porgans & Associates questioned government fisheries personnel, at the July 2015 meeting, about the SWP/CVP operators' historical failure to mitigate for the massive decline in Delta dependent species, already listed as threatened or endangered under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). The question was how do they expect the public to believe that they will make good on future assurances to improve fisheries and the Delta, when, government documents indicate that is in worse condition now, then ever before. They could not provide a definitive or logical statement or data to back up their assumptions.</p>	<p>The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts; as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>The preferred alternative, Alternative 4A, no longer includes an HCP/NCP under ESA Section 10 and the NCCPA, but rather would achieve incidental take authorization under ESA Section 7 and CESA Section 2081(b). See RDEIR/SDEIS, Section 4, New Alternatives: Alternatives 4A, 2D, and 5A, and Master Responses 4 (Alternatives) and 5 (BDCP) for additional information. The originally proposed habitat restoration measures and related Conservation Measures (CMs) (i.e., CM2 through CM21) would not be included as part of the Proposed Action, except to the extent required to mitigate significant environmental effects under CEQA and meet the regulatory standards of ESA Section 7 and California Endangered Species Act (CESA) Section 2081(b). However, restoration actions that are independent of Proposed Action will continue to be pursued as part of existing projects and programs. Examples of these include the 2008 and 2009 USFWS and NMFS BiOps (e.g., Yolo Bypass improvements and habitat enhancements, 8,000 acres of tidal habitat restoration), (2) California EcoRestore, and (3) the 2014 California Water Action Plan.</p> <p>For more information regarding purpose and need please see Master Response 3. For more information regarding impacts to aquatic species and its mitigation measures please see Chapter 11 of the Final EIR/EIS.</p>
2603	6	<p>The lead entity behind the 'fix', Department of Water Resources (DWR) personnel, failed to address Porgans & Associates' primary concerns; i.e., inadequate justification for the need for the BDCP twin-tunnel Delta conveyance alternative; lacking credible data to support the validity of the presumptions, legitimate doubts regarding the assurances and modified mitigation measures alluded to in the RDEIR/SDEIS as feasible or if they will ever come to fruition. If one examines DWRs historical track record in making good on its assurances, they would find that assurances made heretofore to provide the much needed protections for the imperil Sacramento-San Joaquin Delta have been rife with a litany of broken promises.</p>	<p>The comment does not raise any issue related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Comments indicated disagreement with justification of the need for the project (see Chapter 1 of the RDEIR/SEIS) and unspecified comments regarding validity of assumptions.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria, the proposed project is designed to establish a more natural east-west flow for migratory fish, improve habitat conditions, and allow for greater operational flexibility. Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project.</p> <p>The comment also questions the feasibility of unspecified mitigation measures. Where uncertainty in the feasibility of a mitigation measure or future condition is known (e.g., extent of effects associated with climate change), that uncertainty has been described. The issue of uncertainty of actions by agencies not under the control of the project proponents is also characterized. These are some of the driving forces behind the need for adaptive management. See also Master Response 33 for more information on adaptive management.</p>
2603	7	<p>Contrary to DWR and Reclamation's assertion that the RDEIR/SDEIS are CEQA and NEPA compliant, the record indicate that DWR officials failed to explore all of the feasible alternatives throughout the entire environmental review process. Porgans & Associates discussed an alternative with DWR personnel that would not require construction of the tunnels; eliminates the need for new off-stream storage facilities; utilize existing laws to provide the authorized Delta facilities, initially designed to provide flood, water rights and a viable conveyance route to move SWP/CVP through the Delta; stabilize declining</p>	<p>Please see Master Response 4 for discussion of the scope of the proposed project, development of alternatives, and discussion of alternatives that were not carried forward for analysis in this document due to the fact that required actions beyond the scope of the proposed project. The alternatives included in the EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1 of the Final EIR/EIS. Appendix 3A of the Final EIR/EIS thoroughly</p>

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		<p>aquatic species; reduce surface and groundwater contamination attributable to the water project operations; provide ample mitigation; increased water supply, promotes and funds land retirement, and up-to-date technology to better utilized and manage the Golden States precious surface and groundwater resources. Much, if not all of this can be accomplished with an existing source of funds and in conjunction with other water-related projects currently underway.</p>	<p>explains why various proposals were not analyzed in the EIR/EIS, including the NRDC Portfolio-Based Proposal, Congressman Garamendi's Water Plan, and other similar concepts that would require actions that are beyond the scope of the proposed project.</p>
2603	8	<p>The environmental documents, as presently composed, do not appear to be compliant with the implied intent and purpose of CEQA. Title 14. Natural Resources, Division 6. Resources Agency. Chapter 3. Guidelines for Implementation of the California Environmental Quality Act (CEQA).</p> <p>[Section] 15003. Policies.</p> <p>In addition to the policies declared by the Legislature concerning environmental protection and administration of CEQA in Sections 21000, 21001, 21002, and 21002.1 of the Public Resources Code, the courts of this state have declared the following policies to be implicit in CEQA:</p> <p>(a) The EIR requirement is the heart of CEQA. (County of Inyo v. Yorty, 32 Cal. App. 3d 795.)</p> <p>(b) The EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected. (County of Inyo v. Yorty, 32 Cal. App. 3d 795.)</p> <p>(c) The EIR is to inform other governmental agencies and the public generally of the environmental impact of a proposed project. (No Oil, Inc. v. City of Los Angeles, 13 C. 3d 68.)</p> <p>(d) The EIR is to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. (People ex rel. Department of Public Works v. Bosio, 47 Cal. App. 3d 495.)</p> <p>(e) The EIR process will enable the public to determine the environmental and economic values of their elected and appointed officials thus allowing for appropriate action come election day should a majority of the voters disagree. (People v. County of Kern, 39 Cal. App. 3d 830.)</p> <p>(f) CEQA was intended to be interpreted in such a manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language. (Friends of Mammoth v. Board of Supervisors, 8 Cal. 3d 247.)</p> <p>(g) The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind. (Bozung v. LAFCO(1975) 13 Cal.3d 263)</p> <p>(h) The lead agency must consider the whole of an action, not simply its constituent parts, when determining whether it will have a significant environmental effect. (Citizens Assoc. For Sensible Development of Bishop Area v. County of Inyo(1985) 172 Cal.App.3d 151)</p> <p>(i) CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the</p>	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached. This comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 Draft EIR/EIS.</p>

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		<p>correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document. (Kings County Farm Bureau v. City of Hanford(1990) 221 Cal.App.3d 692)</p> <p>(j) CEQA requires that decisions be informed and balanced. It must not be subverted into an instrument for the oppression and delay of social, economic, or recreational development or advancement. (Laurel Heights Improvement Assoc. v. Regents of U.C.(1993) 6 Cal.4th 1112 and Citizens of Goleta Valley v. Board of Supervisors(1990) 52 Cal.3d 553)</p> <p>Note: Authority cited: Section 21083, Public Resources Code. Reference: Sections 21000-21176, Public Resources Code.</p> <p>The California DWR's dismal historical track-record on environmental protection, and its inability to make good on past water right, flood protection, and fish and wildlife mitigation and enhancement assurances, mandated by law more than a half-a-century ago, are SWP impacts that have yet to be mitigated.</p>	
2603	9	<p>Porgans & Associates' initial comments clearly states that the Department of Water Resources (DWR), the lead agency preparing the CEQA document, and the federal Bureau of Reclamation (Reclamation) lead on the National Environmental Policy Act (NEPA) failed to identify a viable alternative to the proposed twin-tunnel conveyance system identified in the BDCP/California Water Fix as Alternative 4A; the preferred alternative. Porgans & Associates discussed an alternative that would not require tunnels or an isolated conveyance system to convey SWP/CVP water to their pumping plants in the southern portion of the Delta.</p>	See response to comment 2603-7.
2603	10	<p>DWR and Reclamation administrators are to be commended for their "response" to the 12,000 comment letters regarding public concerns as to the impacts attributable to the proposed action. It is apparent that DWR and Reclamation officials dug deep into the "tool box" to conjure up Alternative 4A, of the California Water fix; formerly referred to as the BDCP; Delta Vision, Bay-Delta Accord, Peripheral Canal, Delta Master Levees, and so on. Unfortunately, those familiar with "California's water world", view Alternative 4A as just another "monkey wrench" that would compound the irreparable harm and damage attributable to conveyance and export of state and federal water via the Delta. In the past 30 years, the SWP/CVP pumped and exported more than 200 million acre-feet of water through the Delta that is enough water to flood the State's entire 200 million acres of land two feet deep in water.</p> <p>The preferred alternative appears to have been weighted in favor of DWR, Reclamation and their State Water Project (SWP) and federal Central Valley Project (CVP) contractors, respectfully. In 1959, DWR officials were given a mandate by the state legislature and by voter mandate in 1960 to provide flood, and water right protection, for the Delta and serve as a conveyance system to transport SWP/CVP water across the Delta.</p>	See response to comment 2603-7.
2603	11	<p>If the measurement of DWR'S past-track record and "performance" and repeated failure to adhere to past legislative and voter mandates, than the question raise by Porgans & Associates at DWR's July 2015 "public affairs meeting" to DWR personnel and fisheries agencies, was what level of confidence should the public have in DWR and Reclamation, both have an inherent conflict as "Trustees/protectors of Public Trust Resources", which includes water, and as water purveyors beholdng to their respective contractors.</p>	The commenter expresses an opinion and does not raise any issues regarding the environmental analysis in the 2015 RDEIR/SDEIS or 2013 DEIR/EIS. Please refer to Master Response 42 regarding treatment of public comments.

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2603	12	Porgans & Associates made several attempts to obtain a copy of the comments it made at DWR's July meeting, however, DWR refuse to provide the transcript.	Please refer to Master Response 42 regarding treatment of public comments.
2604	1	<p>The Tulare Lake Basin Water Storage District (District) is an agricultural district that delivers surface waters from multiple sources to its landowners. The District contracted for State Water Project (SWP) water to provide a more dependable surface water supply for lands within the District and reduce groundwater pumping. The District appreciates the opportunity to comment on the Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement for the Bay Delta Conservation Plan/California WaterFix Project.</p> <p>The SWP is a critical part of our conjunctive use and groundwater management programs. The current trend of reduced and interrupted SWP supplies and increasing costs has had significant impacts on the District and surrounding area. SWP deliveries have been repeatedly interrupted and reduced due to operational conflicts with threatened and endangered species in the Delta. The reduced reliability of the SWP supplies, coupled with the increased costs of these supplies, has resulted in significant impacts to the District.</p> <p>The District has generally been supportive of the proposed BDCP/CA WaterFix project to address chronic reduced reliability of the SWP in a manner that protects the Delta's environment. The District remains concerned on costs and the affordability of the Project for its agricultural landowners.</p>	<p>Rates charged to water users by individual water agencies receiving SWP or CVP supplies are based on the independent rate-setting policies of those agencies. Implementation of the proposed project would not affect how agencies distribute water supply costs among their water customers.</p> <p>Please see Master Response 5 for more information on costs and funding.</p>
2605	1	<p>Since the Project was first proposed several years ago, the Project proponents have promised the Project will have no redirected impacts to water users upstream. Further, the Project proponents have stated that the Project will not rely on taking water from upstream water users. However, the EIR does not provide assurance or support for these positions. To the contrary, the EIR fails to identify, disclose or otherwise analyze the water supply for the Project.</p> <p>At the same time the Project fails to identify the source of water to support the Project, it also fails to address or analyze the impact of the State Water Resources Control Board's review and proposed amendment to the Water Quality Control Plan for the San Francisco-Sacramento/San Joaquin Delta Estuary (Bay Delta Plan). The proposed amendments to the Bay Delta Plan require upstream water users to meet significantly higher instream flow requirements. Thus, the Project fails to identify the water supply for the Project, but instead, appears to rely on the upcoming Bay Delta Plan amendments to supply water without analyzing any impacts of this reallocation of water. This approach is unlawful and intolerable. (Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182 [an EIR must analyze the environmental consequences associated with acquiring long-term water supply].)</p> <p>The EIR must be revised to identify the supply of water that will support the proposed Project. To the extent upstream water users can be assured the Project will not result in re-directed impacts to their water supply, the EIR should so state and provide supporting information and analysis. To the extent the Project intends to rely on additional water supply from future regulation, the EIR must analyze the impacts of this future regulation on upstream water users and mitigate for impacts incurred.</p>	In accordance with the Project Objectives and Purpose and Need (see Chapter 2 of the EIR/S), all of the action alternatives would continue the operation of the SWP and CVP in accordance with the existing water rights and regulatory criteria adopted by the State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife, as described in Chapter 5 and Appendix 5A, Section B, of the EIR/EIS. Under the Existing Conditions, No Action Alternative, and all of the alternatives evaluated in the EIR/EIS, the SWP and CVP would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation. It is recognized under all of the alternatives, that the amount of water available to SWP and CVP water contractors is determined following delivery of water in accordance with senior water rights, Area of Origin protections, and environmental flow and quality requirements. As shown in Appendix 5A, Section C, water rights issued to DWR and Reclamation are not fully available to provide water under the SWP and CVP water contracts in many years under Existing Conditions, No Action Alternative, and all of the alternatives. In addition, as shown in Appendix 5A, Section C, the north Delta intake tunnels would not be fully utilized except for a few months in wet years.
2605	2	The EIR fails to disclose how the Project will be operated. In its description of operations, the EIR only offers that the new intakes will be used jointly with the existing	Operational scenarios have been analyzed in the ESA Section 7 by USFWS and NMFS under the federal Endangered Species Act and by CDFW under the California Endangered Species Act. Additionally the State

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		<p>south of Delta facilities. However, the EIR provides no information that identifies the season, quantity, timing, and/or operation of how the two facilities will be co-operated. This failure to disclose and analyze the operational impacts is unlawful. (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185 [requiring an EIR that analyzed the components of the proposed project]; County of Inyo v. City of Los Angeles (1981) 124 Cal.App.3d 1, 6-7 [an EIR must consider the components necessary to achieve the goals of a proposed project].)</p> <p>From a practical standpoint, the failure to identify an operational plan (or several potential operational scenarios) leaves the reviewer with very little understanding of how the Project will impact the surrounding environment. It is unclear if any or all the water exported will be diverted through the new intake facilities, or whether the project will only divert a portion of the water at the new facilities. Thus, it is not clear whether the existing Delta environment will remain much the same, or whether the Delta will no longer be used to convey export water, resulting in hundreds of thousands of acre feet of water piped around the Delta, rather than through it.</p>	<p>Water Resources Control Board is currently reviewing all the pertinent information in the Change Petition Hearing and will make decisions accordingly. These agency determinations will set the range of operational scenarios for the BDCP/CWF.</p> <p>See Section 3.6.4.2, North Delta and South Delta Water Conveyance Operational Criteria of this Final EIR/EIS, for an updated discussion on the preferred alternative's operational aspects. Also, see Chapter 5 and associated appendices for information on north vs. south Delta exports, in addition to reservoir storage, river flow, CVP and SWF delivery, and outflow estimates under the various project alternatives.</p>
2605	3	<p>The failure to identify potential operational scenarios makes the Project legally deficient. CEQA requires the Project proponent describe, disclose, and analyze the Project impacts sufficiently to allow "those who did not participate in its preparation to understand and consider meaningfully the issues raised by the proposed project." (Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376, 404.) Without disclosing a proposed operations plan, it is impossible to evaluate the impact of the Project.</p>	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the BDCP as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>The Lead Agencies will make the final decisions regarding the selection of an alternative (and therefore, an operational scenario) for the purposes of CEQA and NEPA. USFWS and NMFS have authority under the federal Endangered Species Act to determine whether the Proposed Project meets the regulatory standard of ESA Section 7, and CDFW, a CEQA responsible agency, has authority to determine if the Proposed Project meets the regulatory standards of CESA. Please see Section 3.5.2.1 of the FEIR/EIS for information on Proposed Project operational scenarios.</p> <p>Refer Master Response 28 regarding adequacy of the proposed project's operational criteria.</p>
2605	4	<p>The EIR fails to separate the impacts from the Project from impacts resulting from climate change and sea level rise. Because the future projected impact from climate change and sea level rise are significant, it is not possible to identify or evaluate the impacts from just the proposed Project. This failure to identify Project impacts violates CEQA.</p> <p>CEQA requires that an EIR consider cumulative impacts. (CEQA Guidelines, § 15064.) This analysis requires the Project proponent identify the cumulative impacts of all future projects and identify the proposed Project's incremental effect with respect to the cumulative impacts. (Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98, 120.) Thus, the impacts from the Project must be identified separately from the larger cumulative impacts. The EIR does not comply with this requirement. To the contrary, in much of the environmental analysis, the EIR co-mingles Project impacts together with the projected climate change and sea level rise impacts to make a single conclusion about future impacts, without separately analyzing Project impacts.</p>	<p>Please see Master Response 1 regarding environmental baselines. The CEQA analysis compares the project to Existing Conditions, which evaluates the impacts of the project alone, without climate change or sea level rise. The NEPA analysis compares to the project to a future condition (Early Long Term or Late Long Term depending on the alternative), which evaluates the project with sea level rise and climate change effects.</p>

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2605	5	<p>The EIR relies on outdated information and fails to take into account reasonably foreseeable projects. Specifically, the EIR analyzes Project impacts based on the existing water quality requirements contained in D-1641. The EIR fails to consider changes to the Bay Delta Plan that have already been proposed by the State Water Board.</p> <p>Under CEQA, a proposed Project is required to identify past, present, and reasonably foreseeable projects and analyze Project impacts as they relate and add to the impacts of such projects. (CEQA Guidelines, § 15130.) The State Water Board’s review and amendment of the Bay Delta Plan is not only a reasonably foreseeable project, it is already underway. The State Water Board has released a substitute environmental document outlining its proposed amendments in Phase 1 of the Bay Delta Plan review. (http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/2012_sed/.) The State Water Board has solicited comments and held a hearing on the Phase 1 proposal. (Id.) In addition, the State Water Board has also initiated Phase 2 of the review, by holding several workshops and commissioning several reports. (http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml.) For these reasons, the on-going review of the Bay Delta Plan and amendment to water quality requirements is underway and certainly reasonably foreseeable. The EIR must be revised to take into consideration the water quality amendments and how the Project will affect the environment, considering the proposed amendments.</p>	<p>The comment suggests that changes in water quality requirements that would result from the ongoing Bay-Delta Water Quality Control Plan Update should be considered to be reasonably foreseeable and be considered in the cumulative impacts analysis. The EIR/S does include assessments of the future, no action and a cumulative assessment. The analysis is provided in the details commiserate with the level of detail of the project description.</p> <p>Table 5.2.2.2-1 of the RDEIR/SDEIS lists the ongoing Bay-Delta Water Quality Control Plan Update as a program or project whose effects are considered in the cumulative impacts analysis. That plan is presently in Phases 1 and 2 of a four-phase update (http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/). For information on the Cumulative Impact Analysis, please see Master Response 74.</p> <p>It should be recognized that programs that are not defined and have proposed elements cannot be analyzed quantitatively due to the often speculative conclusions. Effects can be qualitatively described based upon the uncertainty of how those programs/projects are going to be implemented. The EIR/S has characterized those assumptions and uncertainties in the separate sections of the document and the modeling appendices.</p>
2605	6	<p>The California Code of Regulations Title 14 section 15125(a) requires the EIR include a description of the existing baseline environment and conditions. The purpose of this requirement is to facilitate the analysis of Project impacts and determine which impacts are significant. The EIR includes Appendix 3D, which discloses existing conditions. However, this section only lists ongoing projects; it does not describe the existing or baseline physical condition of the Project area. Without such a description it is difficult, if not impossible, to understand the impact of the proposed Project. For these reasons, the EIR should be amended to include a description of the baseline physical condition of the Delta and other affected areas.</p>	<p>The CEQA baseline assumes that the proposed project is not implemented, and reviews two scenarios: 1) consideration of existing conditions without the project, a “no build scenario” (State CEQA Guidelines Section 15125[a]) and is called Existing Conditions in this EIR/EIS; and 2) consideration of “reasonably foreseeable” future conditions without the project which is called the No Project Alternative in this EIR/EIS. This second scenario is equivalent to the No Action Alternative, identified below, and throughout this EIR/EIS, will be examined under that heading. The No Project Alternative allows decision makers to use the EIR to compare the impacts of approving the Proposed Project with the future conditions of not approving the Proposed Project in the year 2060. Under CEQA generally, the No Project Alternative may not be used as the sole baseline for assessing the significance of impacts unless the No Project Alternative is identical to existing conditions. (CEQA Guidelines § 15126.6(e)(1).)</p> <p>As the NEPA baseline, the No Action Alternative, sometimes referred to as the future no action condition, considers no action conditions to include continuation of operations of the SWP and CVP as described in the 2008 USFWS and 2009 NMFS BiOps and other relevant plans and projects that would likely occur in the absence of the proposed project and which are well-defined enough to allow for meaningful analysis.</p> <p>The EIR/EIS has both NEPA and CEQA analysis with comparisons made against each respective baseline, with each separate require analysis clearly marked within each resource chapter. Where appropriate and where changes had occurred since the release of the Draft EIR/EIS that would result in a change in impact, baseline discussions were updated. For additional detail about how the baseline was chosen, please see Master Response 1.</p> <p>Please note that Alternatives 4A, 2D and 5A utilize a new NEPA baseline (No Action Alternative ELT) which examines baseline conditions approximately 15 years in the future.</p>
2605	7	<p>The Code of Regulations Title 14 section 15125(d) requires the EIR identify any inconsistencies with the Project and land use plans. The EIR does not identify such inconsistencies. Most egregiously, the Project conflicts with several land use planning</p>	<p>The flows in the San Joaquin River at Vernalis would be the same under the No Action Alternative and the proposed project, as shown in Appendix 5A, Section C. Average annual flows in the San Joaquin River at Vernalis would be approximately 110,000 acre-feet/year lower both under the No Action Alternative and the</p>

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		documents for areas in the Delta. However, there are also land use plans upstream of the Delta which rely on continued water availability to support development and projected growth. The Project estimates that it will reduce water supply upstream on the San Joaquin River by approximately 100,000 acre feet. However, the EIR fails to identify this inconsistency and/or analyze the environmental impact therefrom. The EIR should be revised to identify and analyze the Project's inconsistencies with land use planning documents consistent with section 15125(d).	proposed project due to climate change assumptions for the upstream watershed. This change is due to climate change that would occur with or without the project, and is not subject to mitigation measures for this project. The EIR/EIS assumes that climate change would not change land use projections currently adopted by counties and cities in the study area.
2605	8	The EIR concludes that the Project is expected to have little impact on salinity in the Delta. (EIR, Chapter 8.) However, one of the Project proponents, the State Water Project Contractors, recently submitted a complaint to the State Water Board. (http://www.swc.org/images/stories/swc_complaint_june16.pdf .) This complaint was premised on the idea that without Project water being conveyed through the Delta, the water quality in the Delta would be so salty it would be unable to be used beneficially. The complaint was supported by technical data and modeling. Despite the fact that the Project proponents appeared to have developed this technical data, it was not considered by the EIR. The EIR should review this data and be revised to explain how it can be consistent with the EIR's position that the Project will not impact salinity levels in the Delta.	Please see Master Response 14, Water Quality. Also see Master Response 22, Mitigation. For information on the project's purpose and need, please see Master Response 3.
2606	1	The RDEIR/SDEIS does not use the best available science in modelling of water supply and water quality, and there are some significant omissions in the analysis.	This comment is a general opinion about the adequacy of the water supply and water quality modeling. The modeling for water supply and water quality have been determined to be adequate for the purposes of disclosing environmental impacts of the action alternatives. No specific deficiency is identified.
2606	2	There have been significant advances in the understanding of climate change since the initial modelling for the BDCP / California Water Fix conveyance project from 2010-2012. These advances have been driven by data collected during recent, dramatic phenomenon, including the accelerated melting of ice sheets in the west Antarctic and Greenland and severe, prolonged droughts in the Southwest, Midwest, and California. Recent temperature deviations also make the lower sensitivity Global Climate Models, which predict less than 3 degrees of warming with a doubling of CO2, appear increasingly unlikely. There has been an accumulation of recent data and recent studies which points towards a much hotter, drier future, with potentially much greater increases in sea level rise. The most recent scientific literature and modelling points toward major risks to water supply and water quality in the Delta, which the proposed project will only partly address. The RDEIR/SDEIS could have used this new information to get better understanding of the potential climate change impacts to hydrology in the Delta and its tributaries, and to sea levels in the Delta and San Francisco Bay. Incorporating this new information is essential to evaluating how the proposed project would be effective or fail in mitigating the effects of climate change. Instead, DWR has continued to use flawed estimates from the Draft EIR/EIS that show little change in either mean runoff or sea levels. The RDEIR/SDEIS continues to assert that the new conveyance project will mitigate risks to water supply from climate change, but without defining the expected lifetime of the project. In the case of a \$17 billion water supply project, the expected design lifetime is at least 50-100 years. The simple fact is that the project could easily fail to meet the objective of mitigating sea level rise within 50 years, and in the near term, of increasing water supply reliability. The limitations to the proposed project should have been more clearly analyzed and disclosed in the RDEIR/SDEIS.	The action alternatives evaluated in the Draft EIR/EIS were analyzed with assumptions for climate change and sea level rise for Year 2060, including less snowpack, increased rainfall, increased water temperature, and increased sea level rise, as described in Appendix 5A, Section 5A of the Draft EIR/EIS. The Year 2060 conditions were selected to represent the end of proposed Habitat Conservation Plan permit period. The proposed project and action alternatives evaluated in the Recirculated Draft EIR/Supplemental Draft EIS were analyzed with assumptions for climate change and sea level rise for Year 2030, including less snowpack, increased rainfall, increased water temperature, and increased sea level rise, as described in Appendix 5A, Section 5A of the Draft EIR/EIS. The Year 2030 conditions were selected to represent conditions related to initial operations of the proposed conveyance facilities. As described in Chapter 3 in the EIR/EIS, the facilities would be designed to consider flood control protection for 200-year flood events, including climate change and sea level rise that could occur in the future. Also, as described in Chapter 3, the conveyance facilities would require Clean Water Act Section 408 permit from the USACE; and therefore, would need to be designed to incorporate climate change and sea level rise assumptions as adopted or recommended by the USACE at the time of issuance of the permits. It should be recognized that the project is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies. The project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change with continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures). Refer also to Master Response 6 (Demand Management) and Master Response 19 (Climate Change).

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2606	3	<p>In the 2009 Delta Reform Act, the legislature mandated that the Bay Delta Conservation Plan "...shall not be considered for incorporation into the Delta Plan, unless it does all of the following... including a comprehensive review and analysis of...(C) The potential effects of climate change, possible sea level rise up to 55 inches, and possible changes in total precipitation and runoff patterns on the conveyance alternatives and habitat restoration activities considered in the environmental impact report." The analysis in the RDEIR fails to meet the plain meaning of the statute with respect to the conveyance alternatives, in that it fails to provide a comprehensive review and analysis of potential effects of sea level rise up to 55 inches (1.4 meters) on the proposed conveyance. Instead, it uses values of 15 cm (6 inches) in the "Early Long Term" and 45 cm (18 inches) in the "Late Long Term" as input to all of the modelling. This input value was selected by DWR in previous modelling as the "most likely" values for these periods.</p>	<p>Please see Appendix 3I and 3J regarding the BDCP and Alternative 4A compliance with the Delta Reform Act. Please see Appendix 5A regarding modeling assumptions that were made for climate change. Refer also to Master Response 31 (Compliance with Delta Reform Act).</p>
2606	4	<p>Estimates of sea level rise were an area of significant scientific uncertainty when DWR first did sensitivity studies for BDCP. At that time, there was significant uncertainty about potential contributions from melting of the polar ice sheets. But recent observations have shown that the rate of mass loss in the ice sheets in the west Antarctica and Greenland has been accelerating significantly. In December 2014, the American Geophysical Union accepted a paper by Tyler Sutterly and colleagues at UC Irvine and NASA Jet Propulsion Laboratory which found that the melt rate of glaciers in the Amundsen Sea Embayment in West Antarctica had tripled in the last decade. (footnote 1: Sutterly, T. C., I. Velicogna, E. Rignot, J. Mouginot, T. Flament, M. R. van den Broeke, J. M. van Wessem, and C. H. Reijmer (2014), Mass loss of the Amundsen Sea Embayment of West Antarctica from four independent techniques, <i>Geophys. Res. Lett.</i>, 41, 8421-8428, doi:10.1002/2014GL061940. Available at http://dx.doi.org/10.1002/2014GL061940. Accessed on October 29, 2015. Incorporated by reference.) The analysis was comprehensive and authoritative, evaluating and reconciling data from 4 different measurement techniques over 21 years.</p> <p>For the National Climate Assessment in 2012, the Climate Change Program Office of the National Oceanic and Atmospheric Association (NOAA) used empirical estimates of the rate of acceleration of ice sheet melting to derive potential values of sea level rise as high as 2 meters (6.6 feet or 79 inches) by 2100. (footnote 2: NOAA Climate Program Office, <i>Global Sea Level Rise Scenarios for the United States National Climate Assessment</i>, December 2012. Available at http://cpo.noaa.gov/sites/cpo/Reports/2012/NOAA_SLR_r3.pdf. Accessed on October 29, 2015. Incorporated by reference.) NOAA recommended that the highest levels be used where there is little tolerance for risk, such as in a new infrastructure process. Unfortunately, the highest estimate of sea level rise estimated by DWR's modelling for the Draft EIR/EIS was about 94 cm (3.1 feet or 37 inches) by 2100, about 50% of NOAA's 2012 empirical estimate. DWR's 95% confidence projection of 3.9 feet or 46 inches by 2100 was about 60% of NOAA's empirical estimate. These values were used to derive the estimate of 15 cm (0.5 feet or 6 inches) of sea level rise by 2025, and 45 cm (1.5 feet or 18 inches) by 2060 used in the RDEIR/SDEIS.</p> <p>Unfortunately, NOAA's empirical estimate of 2 meters of sea level rise by 2100 is consistent not only with recent observations, but also with a recent study by James Hansen and 16 colleagues, published in 2015. (footnote 3: J. Hansen, M. Sato, P. Hearty, R. Ruedy, M. Kelley, V. Masson-Delmotte, G. Russell, G. Tselioudis, J. Cao, E. Rignot, I. Velicogna, E. Kandiano, K. von Schuckmann, P. Kharecha, A. N. Legrande, M. Bauer, and K.-W. Lo, "Ice melt, sea level rise and superstorms: evidence from paleoclimate data,</p>	<p>As described in response 2606-2 and in Chapter 3 in the EIR/EIS, the facilities would be designed to consider flood control protection for 200-year flood events, including climate change and sea level rise that could occur in the future. Also, as described in Chapter 3, the conveyance facilities would require Clean Water Act Section 408 permit from the USACE; and therefore, would need to be designed to incorporate climate change and sea level rise assumptions as adopted or recommended by the USACE at the time of issuance of the permits.</p> <p>The modeling results presented in the EIR/EIS related to climate change and sea level rise are presented in a manner to understand changes in conditions under the action alternatives as compared to the Existing Conditions (without climate change and sea level rise changed conditions) and to the No Action Alternative (with the same climate change and sea level rise assumptions as under the action alternatives). It is understood in the EIR/EIS that the climate change and sea level rise assumptions used in the impact analyses may be different than future real-time conditions. However, the purpose of the impact analyses with climate change and sea level rise was to understand changes that could occur between the action alternatives and the No Action Alternative. If different climate change and sea level rise assumptions were considered, those assumptions would be included in the action alternatives and the No Action Alternative. Based upon the comparison of Alternative 1 to No Action Alternative with different climate change assumptions, as presented in Appendix 5A, Section D.3, the incremental differences between the action alternatives and No Action Alternative would not change with different climate change and sea level rise assumptions. Because the EIR/EIS only evaluates the incremental differences, and not absolute values, between the Existing Conditions and the No Action Alternative and Alternatives 1 through 9, the incremental changes appear to be similar under a range of climate change scenarios.</p>

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		<p>climate modeling, and modern observations that 2 °C global warming is highly dangerous,' Atmos. Chem. Phys. Discuss., 15, 20059-20179, 2015. Available at www.atmos-chem-phys-discuss.net/15/20059/2015/. Incorporated by reference.) The authors looked at melting in the last interglacial period warmer than the current period, when temperatures were less than one degree C greater than the current period, and sea levels rose an estimated 3-5 meters. They used inferences from this period to construct models of nonlinear disintegration of the polar ice sheets in the Antarctic and Greenland. The models imply that the rate of ice sheet melting could double every 10, 20, or 40 years, with a corresponding rise in sea level of several meters within 50, 100, or 200 years. The authors conclude that recent ice sheet melt rates have a doubling time near the lower end of the range, meaning that we could see sea level rise of several meters within 50-100 years.</p>	
2606	5	ATT1: Global Mean Sea Level Rise Senarios, NOAA graph	<p>This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comments for this letter, including 2606-2, or the Final EIR/EIS.</p>
2606	6	<p>Sea level has a major effect on electrical conductivity in the Delta, and on associated levels of chloride and bromide. Sea level significantly affects water quality, both at the export pumps and in the Delta. The UNTRIM analysis in the Draft BDCP EIR/DEIS showing that EC rose linearly with sea level rise was relatively uninformative, since it did not indicate when levels of concern to agricultural users and urban water treatment plants would be reached. There was a better analysis in a 2008 study by Lund and Hanak et. al., who evaluated the effects of 1 foot and 3 feet of sea level rise on electrical conductivity in the Delta. (footnote 4: Lund, J., Hanak, E., Fleenor, W. Bennett, W., Howitt, R., Mount, J., and Moyle, P., Comparing Futures for the Sacramento-San Joaquin Delta, Public Policy Institute of California, July 2012. Available at http://www.ppic.org/content/pubs/report/R_708EHR.pdf. Accessed on October 29, 2015. Incorporated by reference.) The graphs show electrical conductivity rising above current limits at both Clifton Court and Contra Costa Water District from 60 to 80% of the time from October through December. The RDEIR/SDEIS modelling shows that the proposed tunnels work well at providing continued high levels of exports without increased electrical conductivity or bromides at levels of sea rise of 45 cm (18 inches), which is expected to be reached by 2060. However, increasing outflows would be necessary to repel salinity as sea levels increase, reducing exports. However, the NOAA highest sea level rise scenario estimated that sea level rise by 2060 would be about 84 cm (33 inches.) The above EC graphs show that the "dual conveyance" option of switching between the North Delta and South Delta intakes would become increasingly infeasible at 3 feet of sea level rise.</p>	<p>The anticipated hydrologic changes due to climate change (increased temperatures and more years of critical dryness, increased water temperatures, changes in precipitation and runoff patterns, sea level rise, and tidal variations) will constrain and challenge future water management practices across the state, with or without the proposed project. The state is addressing climate change through strategies and a decision-making framework as outlined in the California Climate Adaptation Strategy and Adaptation Planning Guide. However, no single project and indeed none of the project alternatives would be able to completely counteract all of the impacts of climate change.</p> <p>The State of California has acknowledged that sea level rise threatens coastal and near coastal resources (such as the Delta and Delta water supplies) and that adaptation and resiliency planning to protect these resources from expected levels of sea level rise is appropriate. (OPC, 2013) http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/</p> <p>(CCC, 2013) http://www.coastal.ca.gov/climate/SLRguidance.html</p> <p>EO S-3-05. http://gov.ca.gov/news.php?id=1861</p> <p>EO S-13-08 http://gov.ca.gov/news.php?id=11036</p> <p>AB 32 also mentions SLR as a threat to California.</p> <p>California Waterfix would help to address the resilience and adaptability of the Delta to climate change through water delivery facilities combined with a range of operational scenarios, measures focused on the protection, restoration, and enhancement of the Delta ecosystem and measures to reduce other stressors (Environmental Commitments 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, and 16.) In addition to the added water management flexibility created by new water diversions and operational scenarios, California Waterfix would improve habitat, increase food supplies and reduce the effects of other stressors on the Delta ecosystem. By improving and expanding available habitat, the proposed project would increase resilience and adaptability to climate change by making alternative habitat available during periods of high stress, such as very high or low freshwater inflow or very high salinity intrusion.</p> <p>Multiple analyses were performed in the proposed project to test the robustness of the alternatives to a range of potential future conditions. Water supply, aquatic and terrestrial resources were all analyzed with projected future conditions. The proposed project will likely remain in place and functional far into the future when salinity intrusion may require less frequent use of the south Delta pumps. Far from being</p>

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			<p>stranded assets, the tunnels will be part of the state’s strategy in adapting to climate change.</p> <p>More information on ways in which the BDCP/California WaterFix proposes to improve resiliency and adaptability of the Delta to climate change can be found in Chapter 29, Climate Change, EIR/EIS and Appendix A RDEIR/SDEIS and Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, EIR/EIS and RDEIR/SDEIS (in appendix A). For additional information regarding GHG and Climate change, please see Master Response 19.</p>
2606	7	<p>ATT 2: Changes in electrical conductivity related to sea level rise.</p> <p>Changes in Electrical Conductivity with 1 and 3 feet of sea level rise, Lund and Hanak.</p>	<p>This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-6 referencing the attachment or the Final EIR/EIS.</p>
2606	8	<p>The RDEIR does not provide modelling of the yield of the North Delta intakes when used as an isolated conveyance, which would become necessary during the latter half of the century under the highest sea level rise scenarios. It is likely that water exports would be reduced significantly if the South Delta intakes were severely impacted by salinity. At some point, salinity intrusion would be such that even the North Delta intakes would be affected during droughts and high tides. Modelling of salinity intrusion by the Army Corps of Engineers at 1.68 meters (5.5 feet) gives some idea of the maximum extent of salinity intrusion. (footnote 5: Lu, S., P. Craig, C. Wallen, Z. Liu, A. Stoddard, W. McAnnally and E. Maak. "An Extended-Delta Hydrodynamic Model Framework for Sea Level Rise Analysis to Support Resource Management Planning for the Sacramento-San Joaquin River Delta." 2012 Presentation to California Water and Environmental Modeling Forum (CWEMF 2012). Folsom, CA. Incorporated by reference.) The intrusion would be greater if there were significant diversions of the Sacramento River during times of low flow and high tide.</p> <p>The RDEIR/SDEIS does significant disservice to water agencies in not evaluating or discussing the finite lifetime of the proposed conveyance project as a solution to sea level rise. In particular, there may be significant risks to urban water agencies in relying on the project as water supply for new housing and industrial infrastructure. The RDEIR should have included modelling so that water agencies could evaluate and compare the \$17 billion project with alternatives which are not as vulnerable to continuing effects of sea level rise. Agricultural users that would be planting salt-sensitive permanent crops such as almonds, based on the projected water supply would also be affected.</p>	<p>The study period analyzed in the EIR/EIS for the action alternatives, as presented in the Draft EIR/EIS, was for 50 years to coincide with the completion the proposed Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP). Comments on the Draft EIR/EIS expressed concern about the potential impacts of large-scale habitat restoration and the level of scientific uncertainty about future conditions over a 50-year permit, as described in the Executive Summary of the RDEIR/SDEIS. Therefore, the proposed project, Alternative 4A, did not include the HCP/NCCP and the study period was reduced through the 2025/2030 conditions which would evaluate conditions that would occur when the proposed conveyance facilities would be initially operated. It is anticipated that subsequent CEQA and/or NEPA documentation may need to be completed following construction of the conveyance facilities to confirm that conditions have not changed to address long-term operations. However, it also recognized that future CEQA and/or NEPA documentation could be completed by DWR and/or Reclamation to analyze potential changes in operational conditions. At the time of completion of future environmental documentation, the then-current climate change and sea level rise projections would be considered in the environmental documentation.</p> <p>It should be noted that the citations of projected sea level rise in the San Francisco Bay Area from all sources are related to changes at the Golden Gate. The EIR/EIS analysis translated that sea level rise to locations within the Delta which would experience lower sea level rise values than would be experienced at the Golden Gate due to the hydrodynamics in the Delta (please see Appendix 5A, Section D, Attachment 3 of the EIR/EIS).</p> <p>Please see the response to 2606-2 related to assumptions for climate change and sea level rise for operations and conveyance facility design criteria.</p> <p>It should be noted that the project objectives and purpose and need (see Chapter 2 of the EIR/EIS) do not address modification of water operations of the SWP, CVP, or other water users specifically to mitigate for future climate change and sea level rise.</p> <p>It should be recognized that the project is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies. The project is just one element of the state’s long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change with continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).</p>
2606	9	<p>ATT 3: Changes in electrical conductivity in the Delta with 1.68 meter sea level rise.</p>	<p>This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in multiple comments for this letter including response #2606-6, or the Final EIR/EIS.</p>

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2606	10	ATT 4: Maximum Salinity Difference Map, 100-year High Sea Level Rise	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in multiple comments for this letter including response #2606-6, or the Final EIR/EIS.
2606	11	The RDEIR/SDEIS states that the proposed conveyance will help protect the export water supply against levee failure. However, there is no modelling of the operation of the conveyance in the event of levee failure. Previous modelling for the Delta Risk Management Study and by Lund and Hanak et. al. showed that there would be significant salinity intrusion in the event of failure of western levees, or failure of multiple islands in the Central Delta, even without sea level rise. The graphs of changes in electrical conductivity from Lund and Hanak et. al. are shown on the next page. It is clear that levee failure would significantly change hydrodynamics in the Delta, providing deeper channels and greater transport of salt water deep into the estuary. In the case of levee failure due to high sea level rise, the effects would be additive with the effects of sea level rise. In the event of major and irreversible salinity intrusion, the South Delta intakes could be permanently affected, and the yield of the conveyance could be significantly reduced. Yet this possibility is not even discussed in the RDEIR. One of the original justifications for habitat restoration in the Delta was the planned acquisition and flooding of the most vulnerable islands as sea levels rose. This plan has clearly been abandoned, and there remains insufficient funding to repair and upgrade levees in the Delta. In the highest sea level rise scenario, this essentially assures a sequence of unplanned levee failures, as the weakest levees fail and put stress on adjacent islands. The failure of the RDEIR/SDEIS to do any modelling of the effects of high sea level rise and multiple levee failure on operations of the conveyance and on water supply is a major and serious flaw in the analysis of a \$17 billion project. Since one of the core purposes of the project is mitigation of risk to water supply from these two scenarios, the RDEIR / SDEIS fails severely in this respect.	Please refer to Master Response 16 for information on potential operations under a levee failure situation. Please see Appendix 6A of the FEIR/EIS, for the BDCP/CWF purpose and need, and Sections 2 and 3 for discussion on existing levee improvement programs and funding mechanisms, which would not be affected by the BDCP/CWF.
2606	12	ATT5: Effects of Island Flooding on Delta Salinity	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-6 referencing the attachment or the Final EIR/EIS.
2606	13	The modelling for the RDEIR/DEIS uses the Q5, or Central Tendency runoff projections for inputs to all hydrological modelling. The Central Tendency scenario considers the ensemble of all 112 Global Climate Models / Greenhouse Gas Emissions Scenarios as equally likely, and computes the Central Tendency estimate after pruning. The problem is that the recent research shows that the Global climate Change Models (GCMs) with lower sensitivity, that is, reduced temperature increases for a given increase in CO2 emissions, are increasingly unlikely. A recent study by Sherwood, Bony, and Dufresne (footnote 6: S.C. Sherwood, S. Bony, and J. Dufresne, "Spread in model climate sensitivity traced to atmospheric convective mixing", Nature, vol. 505, pp. 37-42, 2014. http://dx.doi.org/10.1038/nature12829 . Incorporated by reference.) found that "The mixing inferred from observations appears to be sufficiently strong to imply a climate sensitivity of more than 3 degrees for a doubling of carbon dioxide. This is significantly higher than the currently accepted lower bound of 1.5 degrees, thereby constraining model projections towards relatively severe future warming." Similar results were found in a 2012 study by Fausilio and Treberth, which compared current observations of May through August relative humidity with model projections. (footnote 7: 7 J.T. Fasullo, and K.E. Trenberth, "A Less Cloudy Future: The Role of Subtropical Subsidence in Climate Sensitivity", Science, vol. 338, pp. 792-794, 2012. http://dx.doi.org/10.1126/science.1227465 . Incorporated by reference.) This means	The Draft EIR/EIS analysis is based upon comparison of conditions under the proposed project and action alternatives and conditions under the Existing Conditions and the No Action Alternative. The basis of the hydrologic and water quality model is the CALSIM II model is a monthly model that incorporates assumptions about daily operational changes. These types of models are the most appropriate to analyze potential changes due to different operational assumptions for the SWP and CVP. However, as described in Appendix 5A of the Draft EIR/EIS, these models cannot be used in a predictive manner to define absolute values. Rather, they must be used in a comparative manner to indicate basic changes between alternatives or scenarios and understand the sensitivity of changes that could occur from the Existing Conditions and the No Action Alternative. The EIR/EIS climate change analysis is not required to, nor would it be possible to analyze all potential future conditions that are possible as the climate changes. The EIR/EIS lead agencies have used an ensemble approach to modeling future conditions that considers over 30 different climate models and 3 different possible future emissions scenarios. From this ensemble of 112 projections of possible future conditions, the EIR/EIS uses a central tendency projection that is considered a reasonably foreseeable future condition as described in EIR/EIS Appendix 5A, Section A. The No Action Alternative and the action alternatives were compared to the Existing Conditions which included a "0 percent reduction" Delta outflow condition. Also, during the preparation of the EIR/EIS, a sensitivity analysis was completed, as presented in Appendix 5A, Section D.3, Climate Change Modeling, to simulate conditions under the No Action Alternative and

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		<p>that a significant number of the GCMs in the 112 model ensemble used by DWR in formulating the Q5 runoff projections have likely been shown to be incorrect by recent research. Furthermore, as shown in an analysis by Daniel Cayan et. al. for the California Climate Change Assessment, most of the models which predicted increasing precipitation with increasing greenhouse gas levels were low sensitivity models. The graph on the next page, from that analysis, shows the differences in projected precipitation change over California, between the B1 (low greenhouse gas emissions) and A2 (High greenhouse gas emissions) scenarios, for 25 models. Of the low sensitivity models, 55% project increases in precipitation with increasing greenhouse gas emissions levels. (footnote 8: Cayan, D. et. al., California Climate Scenario Assessment Team, Model Page. Incorporated by reference. Available at http://meteora.ucsd.edu/cap/cccc_model_prelim.html#contents) These low sensitivity models are looking increasingly unlikely. Recent research shows that the fundamental assumption that wetter and drier futures were equally likely should have been re-examined.</p> <p>The problem with the Q5 Central Tendency projection was exacerbated further by the pruning that was done on the ensemble of Global Climate Models prior to computing the Central Tendency. The pruning throws out the 25% driest models, which projected the greatest decrease in precipitation, and the 75% warmest models, which projected the greatest increase in evapotranspiration.</p>	<p>Alternative 1 under five climate change scenarios, including the central tendency. The operations results from these simulations were analyzed to understand the range of uncertainty in the incremental changes that would occur with a range of climate change scenarios. The sensitivity analysis indicated that Alternative 1 results would change with climate change scenarios; however, the incremental differences between the No Action Alternative under a specific climate change scenario and Alternative 1 under the same specific climate change scenario were consistent. Because the EIR/EIS only evaluates the incremental differences, and not absolute values, between the Existing Conditions and the No Action Alternative and the action alternatives, the incremental changes appear to be similar under a range of climate change scenarios.</p>
2606	14	ATT 6: Global Climate Model Sensitivity vs. Precipitation Change.	<p>This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to multiple comments for this letter, including 2606-2 and 2606-13, referencing the attachment or the Final EIR/EIS.</p>
2606	15	<p>The graph on the next page, from the BDCP Draft EIR Appendix 5A-2, shows the extent of the model pruning for runoff in the Feather River Basin, and how the pruning eliminates models which predict drying greater than about 5%. Unfortunately, the models which predict drying greater than 5% in the current period were likely the same models which predicted the recent severe droughts in the Southwest and California. The Q1-Q4 projections were used in prior modelling for BDCP. As I indicated in previous comments, these projections should have been used in the RDEIR/SDEIS to estimate the worst case decrease in runoff and the absolute risk to water supply.</p>	<p>As described in 2606-13, the EIR/EIS uses a central tendency climate projection that is considered a reasonably foreseeable future condition as described in this comment. During the preparation of the EIR/EIS, a sensitivity analysis was completed, as presented in Final EIR/EIS Appendix 5A, Section D.3, Climate Change Modeling, to simulate conditions under the No Action Alternative and Alternative 1 under five climate change scenarios, including the central tendency. The operations results from these simulations were analyzed to understand the range of uncertainty in the incremental changes that would occur with a range of climate change scenarios. The sensitivity analysis indicated that Alternative 1 results would change with climate change scenarios; however, the incremental differences between the No Action Alternative under a specific climate change scenario and Alternative 1 under the same specific climate change scenario were consistent. Because the EIR/EIS only evaluates the incremental differences, and not absolute values, between the Existing Conditions and the No Action Alternative and the action alternatives, the incremental changes appear to be similar under a range of climate change scenarios.</p>
2606	16	ATT 7: Example of Downscaled Climate Projections	<p>This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-15 referencing the attachment or the Final EIR/EIS.</p>
2606	17	<p>In prior BDCP modelling, the set of 112 Global Climate Model/Greenhouse Gas scenario projections were broken four different quartiles, based on the mean projected change in temperature and mean projected change in precipitation for the ensemble.</p> <p>Drier, less warming [Q1, orange]</p> <p>Drier, more warming [Q2, red]</p>	<p>Refer to response 2606-15.</p> <p>It should be noted that the Draft EIR/EIS analysis is based upon comparison of conditions under the proposed project and action alternatives and conditions under the Existing Conditions and the No Action Alternative. The basis of the hydrologic and water quality model is the CALSIM II model is a monthly model that incorporates assumptions about daily operational changes. These types of models are the most appropriate to analyze potential changes due to different operational assumptions for the SWP and CVP.</p>

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		<p>Wetter, more warming [Q3, green]</p> <p>Wetter, less warming [Q4, dark blue]</p> <p>Each quartile was used to produce an ensemble model, after pruning off the 10% driest and 10% wettest models. These models projected potentially much greater changes in runoff. The graph below shows the estimated changes in runoff for the four quartiles for different reservoirs on the Sacramento and San Joaquin Rivers, going from Trinity in the north to Millerton and Kings in the San Joaquin Valley. (footnote 9: Jamie Anderson, presentation on Climate Change Approaches, Department of Water Resources, March 2012. Available at http://www.water.ca.gov/climatechange/docs/CCTAG_climate_change_approaches%20final_3-28-12_Jamie%20Anderson_with%20extra%20slides.pdf. Incorporated by reference.)</p> <p>The Q1-Q4 estimates from the prior BDCP modelling showed significant reductions in runoff, even by 2025, worse in the San Joaquin Valley and the Trinity basin. The warmest, driest quartile (Q2) has the greatest reduction in both precipitation and evapotranspiration, and thus the greatest reduction in runoff. The Q1 and Q2 models showed reductions in average runoff to the major reservoirs on the Sacramento River - Shasta, Oroville and Folsom, of over 10% by 2025, and almost 20% to Trinity. As recent experience has shown, because of senior water rights on the Sacramento and Feather Rivers, even a 10%-20% reduction in flow in the Sacramento watershed can result in much greater reductions in exports, with a huge impact on water supply. The RDEIR / SDEIS asserts that the proposed conveyance project increases water supply reliability, but without doing any analysis of the potential for a major and absolute decrease in water yield over current conditions. This information is essential for water agencies in planning and in evaluation of the proposed project. It could and should have been provided using model runs with inputs from Q2.</p>	<p>However, as described in Appendix 5A of the Draft EIR/EIS, these models cannot be used in a predictive manner to define absolute values. Rather, they must be used in a comparative manner to indicate basic changes between alternatives or scenarios and understand the sensitivity of changes that could occur from the Existing Conditions and the No Action Alternative.</p>
2606	18	ATT 8: Change in Annual Runoff	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-17 referencing the attachment or the Final EIR/EIS.
2606	19	<p>The RDEIR/SDEIS attempts to show that the proposed conveyance project improves water supply reliability by comparing the project with a "No Action Alternative," which is worse in water supply variability and reservoir drawdown. However, previous modelling, funded by PIER, shows that these conclusions may be largely dependent on operating rules for the system, coded into the CALSIM II models used in the RDEIR/SDEIS and the BDCP Draft EIR/EIS. In 2009, Aris Georgakakos built a model of the current reservoir and conveyance system. He showed that adaptive management of the system, using stochastic forecasts of runoff, could greatly improve water reliability, both in reducing shortages and meeting environmental targets. (footnote 10: Reducing Vulnerability with Probabilistic Hydrological Forecasts and Modern Decision Support Systems, Aris Georgakakos. Presented at the Sixth Annual California Climate Change Research Symposium, 2009. Incorporated by reference.) Some of the graphs from the presentation are shown below. The fundamental shift in Georgakakos proposed operations is using forecasts to take less risk with reservoirs in meeting export targets. This results in much less variability in deliveries. The RDEIR/SDEIS shows significant reductions in End of September reservoir storage in the planned future operations of the project, from 340 to 540 thousand acre feet in Shasta, and from 340 to 580</p>	<p>As described in Chapter 5, Water Supply, the EIR/EIS analyses assume continued implementation of existing regulatory reservoir operations requirements and existing operational criteria. It is anticipated that due to climate change and sea level rise, changes in the regulatory requirements would occur in the future. However, these changes would only occur following detailed analyses, including project-specific CEQA and NEPA analyses and ESA and CESA analyses. Following adoption of changes to the regulatory requirements by the State and federal governments, DWR and Reclamation would need to determine if changes in the SWP and CVP would be necessary. These changes are considered to be speculative and are not included in the No Action Alternative or in the Cumulative Impact Analysis.</p> <p>The CALSIM II model includes assumptions for long-term conditions of the SWP and CVP over an 82-year long hydrologic period with extended wet periods and dry/critical dry periods. The evaluation is a comparative analysis to determine the incremental differences between conditions under the action alternatives and conditions under the Existing Conditions and the No Action Alternative. The analyses were not conducted to identify specific values or to respond to short-term emergency situations, such as the ongoing drought. Separate engineering and environmental studies have been and will continue to be prepared when water quality criteria and other regulations are modified in emergencies. The No Action Alternative and all of the action alternatives include climate change and sea level rise assumptions. These</p>

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		thousand acre feet in Oroville. This produces a drawdown in End of September storage in the system of over a million acre feet. There were multiple protest letters submitted from Northern California Water agencies about the highly inaccurate assumptions about reservoir operations in both the proposed operations of the conveyance and the "No Action Alternative." These objections should have been addressed in the RDEIR/SDEIS.	changes would result in SWP and CVP operational conditions that generally would not occur because operators of the projects would make real-time decisions. For example, the "dead pool" conditions presented in the CALSIM II model results in the EIR/EIS are developed from calculated monthly average reservoir volumes. Because the model only calculates and reports SWP and CVP water operations at an average monthly basis, the model cannot simulate changes that occur on a weekly basis by water users and SWP and CVP operations. In addition, the model cannot make decisions that occur in real-time, such as drought operations during the ongoing drought. Instead the model includes average operating criteria for all dry periods, and does not reflect specific changes. The dead pool conditions occur in the No Action Alternative as compared to the Existing Conditions because the model includes changes in precipitation without making changes in water diversion patterns.
2606	20	ATT 9: Water Deliveries: Current vs. Adaptive Policies; Historical and Future	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-19 referencing the attachment or the Final EIR/EIS.
2606	21	ATT 10: Performance Differences of Future to Historical Scenario.	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in response to comment 2606-19 referencing the attachment or the Final EIR/EIS.
2607	1	Given the scope and cost associated with the proposed project, it is a major failure of the RDEIR/SDEIS to exclude water, economic, and ecological connections in the southern Cascades, the upper Sacramento Valley, the Sierra Nevada, the coastal mountains, and the San Joaquin Valley.	The Cascades, the upper Sacramento Valley, the Sierra Nevada, and the coastal mountains are outside of the plan area. Figure 1-9 in Chapter 1 of the DEIR/S shows the plan area. Impacts in the San Joaquin Valley are analyzed in all resource chapters of the DEIR/S.
2607	2	Focusing on "the Delta" and its immediate vicinity leads to a study that is non comprehensive in its geographical scope and scientifically superficial for counties of origins in terms of economics, communities, and ecology. While non Delta areas and water sources are mentioned and charted in the RDEIR / SDEIS, they are not included in a comprehensive manner and only tangentially referred to at various places in the RDEIR / SDEIS: they are never comprehensively detailed, discussed, or analyzed in terms of "impacts".	The study area includes much more than the legal Delta. The impact analyses evaluate effects in upstream reservoirs and rivers, downstream bays and wetlands, and the entire Yolo Bypass, and areas along the SWP/CVP route downstream of the export facilities, such as San Luis Reservoir.
2607	3	The RDEIR/SDEIS, the so called "stakeholders", powerful water institutions, State and Federal agencies, and "specialists/experts" reveal callous indifference to those that live and work in upstream (trans-Delta) regions. The RDEIR/SDEIS includes an chapter on "Environmental Justice", but fails to specify how "Environmental Justice" will work in trans-Delta regions and whether "Adaptive Management" programs will include "environmental justice".	Low income and meaningfully greater minority populations in the study area are described in Section 28.2 of Chapter 28. Applicable mitigation is described under each impact in Section 28.5, but no adaptive management programs are included with regards to environmental justice.
2607	4	The RDEIR/SDEIS contains "Adaptive Management" dimensions, but there is no "Adaptive Management" possibilities if there are determinatal impacts in the non	Operation of the new north Delta facilities would be guided by strict regulations that are set by the SWRCB. Adaptive management and collaborative science will aid operators in managing the pumping schedule in the presence of sensitive species. Appendix B of the RDEIR/SDEIS shows supplemental modeling results for the new alternatives. In particular Section B.2.1 Alternative 4A the modeling demonstrates that under the preferred alternative (4A) reservoir levels (e.g., Trinity Lake, Shasta Lake, Folsom Lake, and Lake Oroville)

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		Delta areas. If the RDEIR/SDEIS projections for "End of Storage for 4a" are wrong for Trinity Lake, Shasta Lake, or Lake Oroville, then what are the "Adaptive Management" possibilities contained in the RDEIR/SDEIS? Answer: None.	would be similar to the No Action Alternative (ELT). For more information regarding adaptive management please see Master Response 33.
2607	5	There are no "Adaptive Management" strategies that address the ecological and economic impacts of groundwater extraction. The RDEIR/SDEIS notes that "Rivers draining the Coast Ranges and the Sierra Nevada convey water into the Central Valley 8 and Suisun Marsh, interconnect with the underlying groundwater basins, and eventually flow 9 into San Francisco Bay." The 7-3 map showing "Groundwater Basins in the Central Valley" is deceptive as it does not show the connections of these basins to volcanic or mountain environments.	The action alternatives would only export water allocated to the SWP and CVP under existing water rights issued by the State Water Resources Control Board. The action alternatives do not provide for conveyance of groundwater to SWP and CVP water users. Changes in Sacramento watershed groundwater use is anticipated to remain similar or decrease under the action alternatives as compared to the No Action Alternative because there would be no changes related senior water rights users and possibly increased CVP water use in the Sacramento Valley. Therefore, groundwater modeling analyses were only conducted for the San Joaquin and Tulare groundwater basins where groundwater elevations could decline under the action alternatives as compared to the No Action Alternative. It is noted that groundwater recharge patterns and volumes could change in the future due to climate change under the action alternatives and No Action Alternative. This would occur with or without the Proposed Project, and does not lead to mitigation.
2607	6	The BDCP must scientifically analyze and discuss the impacts of groundwater extraction on volcanic and mountain environments and communities.	The analysis in the EIR/EIS assumes that groundwater extractions in the Sacramento Valley would be the same under the No Action Alternative and the action alternatives, including the Proposed Project, because these alternatives would not include conveyance of extracted groundwater, including groundwater from the volcanic and mountain environments and communities. The groundwater in the volcanic and mountain environments and communities also would not be affected by construction of the proposed project facilities.
2607	7	Why does the RDEIR/SDEIS ignore the water flows from the Cascades bordering the northern and eastern Sacramento Valley? If it was not for the volcanic-water-storage capacity in this area of California, there would be virtually no water available for extraction from the Delta.	The EIR/EIS focuses on potential effects of each alternative on environmental resource topic. There is no impact mechanism by which the project could affect water flowing from the Cascades. Reservoir operations in tributaries operated by CVP and SWP are the only mechanism identified by which the project could affect tributaries upstream of the Delta.
2607	8	While the RDEIR/SDEIS recognizes the "interconnect with the underlying groundwater basins", why is there no "Adaptive Management" possibilities if there are adverse impacts of non sustainable groundwater extraction?	The analysis in the EIR/EIS assumes that groundwater extractions in the Sacramento Valley would be the same under the No Action Alternative and the action alternatives, including the Proposed Project, because these alternatives would not include conveyance of extracted groundwater. The action alternatives would only export water allocated to the SWP and CVP under existing water rights issued by the State Water Resources Control Board. The action alternatives do not provide for conveyance of groundwater to SWP and CVP water users. Changes in Sacramento watershed groundwater use is anticipated to remain similar or decrease under the action alternatives as compared to the No Action Alternative because there would be no changes related senior water rights users and possibly increased CVP water use in the Sacramento Valley. It is possible that groundwater use could increase in the Sacramento Valley under cumulative impacts. However, these changes would occur with or without the Project and would be considered under the Cumulative Impact Analysis with No Action Alternative and all action alternatives. Because the model runs are used in a comparative manner, and not a predictive manner to develop absolute values, and because Sacramento Valley groundwater operations are not modified in any of the action alternatives as compared

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			to the No Action Alternative, the effects of these two sets of operations would not affect evaluation of the changes in Delta conditions due to implementation of any of the action alternatives.
2607	9	Do BDCP agricultural and urban water users in central and southern California agree to pay for the costs of "Adaptive Management" programs?	The commenter does not raise an issue on the adequacy of the EIR/EIS or related analyses. Please see Chapter 3 in the FEIR/EIS for an updated discussion on the Collaborative Science and Adaptive Management Program (CSAMP) under the proposed project. Please also refer to Master Response 33 on Adaptive Management for CA WaterFix.
2607	10	<p>If groundwater extraction associated with the direct or indirect impacts of the BDCP becomes unsustainable and/or generates costly economic and ecological consequences either in the Delta or for upstream regions and communities, how will the BDCP be terminated?</p> <p>The RDEIR / SDEIS requires a "living will" that will specify the steps and procedures to terminated the BDCP.</p> <p>The "living will" must specify who will pay the stranded costs of the projects when the BDCP is terminated.</p> <p>The "living will" must specify how all the BDCP facilities will be removed, including a projected estimated in current dollars for facilities removal.</p> <p>One of the problems of dam removals in the US stems from the fact that there was no "living will" governing their removal when they were proposed. This problem - and solution - must be addressed in the BDCP with the inclusion of a "living will."</p> <p>Do agricultural and urban water users in central and southern California agree to pay for all future stranded costs and, if necessary, the removal of BDCP facilities if the conditions of the "living will" dictate the termination of the BDCP?</p>	<p>The proposed project would not significantly impact local water supplies. While groundwater levels could be temporarily lowered in localized areas during the dewatering phases of construction, groundwater would return to pre-pumping levels over the course of several months following the dewatering phase. Mitigation has been proposed to maintain water supplies in areas affected by construction dewatering. Additionally, the project proponents would relocate and/or replace wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses and would be adversely affected by project construction or operation. For additional information regarding proposed agricultural mitigation, please see Master Response 18.</p> <p>Construction of the proposed project's facilities will occur in a manner specifically designed to avoid adverse effects on groundwater. As described in Appendix 3C, Table 3C-7, of the 2013 Public Draft EIR/EIS, ponds to store reusable tunnel materials and spoils material would be designed with the invert at least 5 feet above seasonally high groundwater and impervious liners along the invert and interior slopes of the ponds to avoid contamination. The tunneling operation would use biodegradable polymers that would be combined with the excavated soil to allow conveyance of the soil slurry, or reusable tunnel material. The polymers would decompose over time.</p> <p>In some locations within the State, groundwater is regulated through judicial review related to adjudication proceedings in the court system. Many counties and regional agencies, or groups of agencies, have adopted groundwater management plans and/or ordinances. Governor Brown recently signed into law three bills that address groundwater management in California. These bills direct local agencies to develop groundwater management plans and allow the state to monitor and intervene if local agencies fail to do so.</p> <p>For more information regarding groundwater impacts and their associated mitigation of the proposed project please see Section 4.3.3 Groundwater of Section 4 in the RDEIR/SDIES. Updated information on groundwater effects of water conveyance alternatives can be found in Appendix A Chapter 7 of the RDEIR/SDIES.</p> <p>The proposed project is designed to increase water supply reliability in the SWP/CVP export service area. Failure of the proposed project's water conveyance system is speculative. However, should the proposed project's water system fail temporarily, water contractors would still need to fund their ongoing project repayment obligations.</p> <p>For information on Adaptive Management please see Master Response 33.</p>
2607	11	<p>The RDEIR/SDEIS must include an appendix listing every water institution, corporation, water district, and/or municipality purchasing water from the BDCP and list how much each water user will contribute to the construction and maintenance cost of the BDCP.</p> <p>The RDEIR/SDEIS must specify who will pay for any and all cost overruns</p>	<p>The construction of the water delivery facilities is estimated to cost \$14.9 billion, an amount that would be paid for by the state and federal water contractors who rely on Delta exports. The range of costs for water vary widely among contractors south of the Delta. Costs depend on the source of water, transport facilities, energy requirements, among other factors. For the agricultural customers of the CVP, prices range from \$100 per acre-foot to more than \$400 per acre-foot. The Metropolitan Water District of Southern California, which buys water from the SWP, estimates that the cost of the proposed project would translate into about \$5.00 extra per household, per month in its service area. The final cost of water from the new conveyance facilities would be determined by numerous factors. A number of these significant factors, such as the project yield and allocation of costs, have yet to be determined. Please see Master Response 5 for</p>

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		associated with the BDCP.	information regarding funding of the proposed project.
2607	12	The RDEIR/SDEIS must include and appendix listing how water institutions, corporations, water districts, and municipalities purchasing water from the BDCP will contribute to paying for future stranded and/or termination costs of the BDCP.	Funding for the BDCP/California WaterFix is outside the scope of this EIR/EIS. In general public water agencies will fund construction and maintenance of water conveyance facilities.
2607	13	Taxpayers must be informed whether they will share any profits from commercial beneficiaries of the BDCP and taxpayers must be informed whether they will be liable for cost overruns, termination costs, and/or stranded costs. Will commercial beneficiaries of the BDCP privatize the profits and socialize the costs of the BDCP?	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. Please refer to Master Response 5 for additional details on the costs of project implementation.
2608	1	After reviewing various sections of the Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft EIR/EIS, there still remains insufficient information to offer a complete evaluation of impacts from construction and operations of the water facilities within the Sacramento San Joaquin Delta. The CEQA/NEPA environmental review process is still premature. No specific project design details are provided beyond a general footprint and overall component sizes in shown in the Mapbook and Chapter 3: Description of Alternatives. A separate EIR/EIS should be done for Conservation Measures (CM) 2 through 21 provided they are no longer incorporated in several alternatives, including the preferred Alternative 4 and have no specified locations. The potential for adverse impacts from these various CMs will be significant but cannot be evaluated here due to lack of detail.	The lead agencies respectfully disagree with the commenter's statement that the RDEIR/SDEIS is inadequate. The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS. As stated in the 2013 Draft EIR/EIS, Conservation Measures were evaluated at a Program Level and were anticipated to require additional environmental review in many cases. Please refer to Master Response 2, Project Level v. Program Level.
2608	2	It was difficult to ascertain if previous comments were responded to due to a complete re-format from the Draft BDCP EIR/EIS to the RDEIR/RDEIS. Maintaining the same format as well as providing all of the previous information from the 2013 document with the track changes would be easier to follow than simply providing the modified excerpts and placing all of the resource sections (the bulk of the report) in the Appendix. In the event of another revision, please maintain the same format of the EIR/EIS so comment responses can be tracked. The change in format appears to be a tactic to obfuscate a comprehensive review by affected stakeholders. The sheer mass of the document and ubiquitous references to other sections that reference other sections already successfully performs that task.	For more information regarding the document's length and complexity please see Master Response 38.
2608	3	The initial statement in Section 3.4 Components of the Alternative: Overview, "The following is a comprehensive list of possible water diversion and conveyance facilities that could be included in one or more of the action alternatives" summarizes the ambiguous nature of this document. This type is repeated throughout the document and is further proof that an EIR/EIS is premature. Without providing clearly defined features and detailed descriptions/exhibits it is hard for affected stakeholders and State and Federal agencies to get a clear enough picture of the project to successfully assess impacts. Rather we are forced to speak in generalities. For example, the Mapbook and Chapter 3: Description of Alternatives include basic descriptions and extremely simplified site plans of the intermediate forebay, related spillway and RTM [Reusable Tunnel Material] areas on Reclamation District 1002, Glanville. These are a large part of	Chapter 7, Groundwater, of the EIR/EIS addresses potential seepage impacts related to the implementation of the proposed project. Chapter 19, Transportation, discusses potential impacts to transportation and Chapter 14, Agricultural Resources, discusses potential impacts to agriculture. Each chapter also includes proposed mitigation measures to avoid or offset impacts. The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.

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		<p>the project and will have significant effects on crop production, transportation, and levee management on this district. Some of these areas are directly adjacent to sensitive areas such as Snodgrass Slough and the levees. Through the project's discussion it appears these areas will be filled with water and be surrounded by dikes. Given the potential for seepage, descriptions on whether or not these features are lined or require excavation would be helpful but are missing from the document. Due to a lack of information and detail in the environmental analysis, reclamation districts, agricultural users and many other stakeholders will essentially be left to deal and pay for unanticipated and unmitigated impacts.</p>	
2608	4	<p>This section was reviewed to determine how construction and operations of the water facilities would change surface waters of channels in the Delta and in turn how that impacts islands downstream. Still no discussion was provided on the effect of dropping channel elevations on the operation of downstream siphons. This impact needs to be addressed and mitigated so that all intake functions will be maintained if downstream water levels become too low or if water quality is too degraded for irrigation or on-island wetland management. When looking for impacts from changing water levels on levees and public safety the reader is directed to Chapter 25: Public Health. Chapter 25 then directs the reader to Chapter 10: Soils. The impacts, although repeated within the document should be summarized here along with a note saying more detail can be found in Chapter "X". Similarly in Section 6.3.2: Determination of Effects, changes in water surface elevations and stream flows at within the Delta are referenced to the 2013 BDCP Appendix 5A. Results from that data should be summarized, tabulated and included in this document especially since this is the only document we are allowed to comment on in this comment period.</p>	<p>Changes to maximum and minimum surface water elevations Steamboat Slough downstream of Sutter Slough, Old River at Tracy Boulevard, Mokelumne River at Terminous, Sacramento River at Freeport, Sacramento River downstream at North Delta Diversions, Sacramento River at Georgiana Slough, and Sacramento River at Rio Vista are provided in Appendix 5A, Section C, of the Final EIR/EIS.</p>
2608	5	<p>According to Section 6.3.1.2: Methods for Analysis of Flood Management along Major Rivers, storm water management on the landside of levees is discussed in Chapter 20: Public Services and Utilities but within Chapter 20 there is no such discussion beyond following NPDES [National Pollutant Discharge Elimination System] requirements.</p>	<p>During the design phase, DWR would conduct site-specific analysis to determine the extent of the potential conflicts related to conveyance facility construction, including locations of water supply and drainage facilities. DWR would consult with local reclamation districts and land owners to ensure that construction activities would not conflict with existing facilities. During the design phase, site-specific surveys of geotechnical, topographic, and other conditions (e.g., pavement conditions) will be conducted. That information will be used to develop construction plans and specifications and permit applications that will be submitted to federal, state, and local agencies, including county and school districts for construction near schools, as appropriate. As described in Section 3.B.2 of Appendix 3B of the EIR/EIS, DWR will follow all appropriate local agency requirements and obtain related permits or approvals. Many of the plans, such as the Geotechnical Exploration Plan, will be developed and finalized during the design phase and provided to the local agencies for review as appropriate.</p> <p>It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions by implementing activities such as siting project footprints; relocating or replacing infrastructure; engaging counties, owners/operators, and other stakeholders in developing optional approaches.</p>
2608	6	<p>Section 6.3.1.2 includes a new section of "Analysis of Potential Changes in Conditions that Could Affect Flood Management along Major Rivers" but it is followed by no text or reference to another section. This analysis needs to be included due to the lack of discussion on impacts to levees that are not directly impacted by the construction and operation of conveyance facilities. These impacts to levees within the Sacramento-San Joaquin Delta and State Plan of Flood Control due to changes in water operations as a result of the BDCP will be significant. For example in Section 6.3.2: Determination of</p>	<p>The text in the EIR/EIS referenced in this comment refers to the definition of "significance" and not to the change in conditions under the action alternatives as compared to the No Action Alternative or Existing Conditions. As presented in Appendix 5A, Section C, of the Final EIR/EIS flows in the Sacramento River at Freeport would be similar or less under the proposed project as compared to the No Action Alternative except in June when flows would be 20 to 30 percent higher, but substantially less than flows during winter and spring months. Flows in the Sacramento River downstream of the North Delta intakes would be similar or less at all times under the proposed action as compared to the No Action Alternative. Therefore, the</p>

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		<p>Effects, says the highest monthly flows within channels when flood potential is already high would increase under the Alternatives. Also the channels are expected to carry dewatering flows which would create an unanticipated high water condition at areas downstream possibly outside of the flood season. Mitigation Measure SW-4: Implement Measures to Reduce Runoff and Sedimentation, requires hydraulic analysis to be completed on the existing channels to determine their capacity to carry dewatering flows. This analysis should be completed and included in this environmental analysis to effectively analyze impacts on channels from dewatering flows which will most likely be significant. Further hydraulic analysis will be required to determine changes in conveyance capacity and upstream/downstream flows in existing channels from the installation of the in-water facilities. Channel blockage was included in previous comments but is still overlooked in this document.</p>	<p>conditions of the levees would not be disturbed by implementation of the project (see Appendix 1F for additional information regarding US Army Core of Engineers permitting requirements).As described in Chapter 7, Groundwater, and Chapter 14, Agricultural Resources, in the Final EIR/EIS, during the design phase, DWR would conduct site-specific groundwater analysis to determine the extent of the dewatering activities along the conveyance route, including locations of discharge of the dewatering water. DWR would consult with local reclamation districts to ensure that construction activities would not conflict with reclamation district flood protection measures. Results from groundwater modeling for Delta are presented in Chapter 7 and Appendix 7A in the EIR/EIS for construction of intakes, tunnel shafts, and forebay levees without installation of slurry walls. These results indicated that groundwater in the Clarksburg area could be affected during construction due to dewatering activities if slurry walls were not installed. In the Final EIR/EIS the description of the proposed project, Alternative 4A, was modified to include slurry wall installation to protect local groundwater conditions under construction. Slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. Dewatering wells also would be installed at construction sites associated with levees without the use of slurry walls. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p>
2608	7	<p>Impact SW-7: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding due to the Construction of New Conveyance Facilities, discusses exposure of people and structures to flooding due to construction of new conveyance facilities and notes that facilities would be designed to be protected from flooding. Yet, features such as sedimentation basins, which do not have a specified location in the mapbooks, are described to be excavated 30 feet. Excavation of that magnitude could cause flooding if they are adjacent to a levee. The sedimentation basins depending on location could increase hydrostatic pressures due to a lower landside depth if located too close to levees. Also the statement "Some project facilities could require rerouting of access roads and waterways that could be used during times of evacuation or emergency response" has no context and needs to be defined further and include potential locations. Reclamation Districts have emergency response plans that must be coordinated with construction activities. It is advised that BDCP proponents and contractors work with levee districts to minimize risks in emergency situations.</p>	<p>In the Final EIR/EIS the description of the proposed project, Alternative 4A, was modified to include slurry wall installation around the entire intake sites, including the sedimentation basins to protect local groundwater conditions under construction and to become part of the overall structure. The sedimentation basins would be designed to prevent groundwater from entering the basins, and to prevent water from leaving the basins into the groundwater, as described in the Conceptual Engineering Report.</p> <p>Section 4 of the RDEIR/SDEIS describes how construction of a single intake site (Intake 2) would preclude the need for ancillary facilities and features associated with Intakes 3 and 5, including box conduits under widened and raised levee sections, relocated segments of SR 160, sedimentation basins, drying lagoons, outlet shafts, and elevated pads hosting an electrical substation, an electrical building, and other storage buildings.</p>
2608	8	<p>The "construction perimeter" needs to be clearly labeled within the mapbooks. Figure 7_27: Forecasted Groundwater Level Lowering From Construction Dewatering for Alternative4, helps define the basic areas where dewatering is set to occur but the areas where dewatering will occur are substantial. A more detailed view of these dewatering areas is needed to determine what effects it will have on adjacent properties and levee systems.</p>	<p>The extent of construction disturbance is represented by features in the shown on the mapbooks for the intakes. These features are in the legend under the headings named: "Conveyance Construction Footprint", "Temporary Surface Impact", "Permanent Surface Impact", and "Proposed Power". Additional information about the construction methods is provided in the Conceptual Engineering Report. As described in Chapter 7, Groundwater, and Chapter 14, Agricultural Resources, in the EIR/EIS, during the design phase, DWR would conduct site-specific groundwater analysis to determine the extent of the dewatering activities along the conveyance route, including locations of discharge of the dewatering water. DWR would consult with local reclamation districts to ensure that construction activities would not conflict with reclamation district flood</p>

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			<p>protection measures. In the Final EIR/EIS the description of the proposed project, Alternative 4A, was modified to include slurry wall installation to protect local groundwater conditions under construction. Slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. No dewatering would be required along the tunnel alignment.</p>
2608	9	<p>Mitigation Measure GW-1: Maintain Water Supplies in Areas Affected by Construction Dewatering should include a condition that properties that lose access to ground water due to dewatering should be supplied water to match previous use, unless the property owner agrees to compensation from lost production . Previous use should be determined by both project proponents and affected stakeholders prior to any dewatering activities. In this same measure, BDCP proponents will determine the area of influence of dewatering, this should be done within this environmental review of this project rather than after the fact ensure all properties affected by dewatering are covered. A mitigation measure should be included to grant property owners/stakeholders within a certain radius (i.e. 1 mile) to provide documentation of any unanticipated groundwater issues due to dewatering to DWR/BDCP proponents to receive compensation or assistance to remedy the issue.</p>	<p>As described in Chapter 7, Groundwater, and Chapter 14, Agricultural Resources, in the EIR/EIS, during the design phase, DWR would conduct site-specific groundwater analysis to determine the extent of the dewatering activities along the conveyance route, including locations of discharge of the dewatering water. DWR would consult with local reclamation districts to ensure that construction activities would not conflict with reclamation district flood protection measures. Results from groundwater modeling for Delta are presented in Chapter 7 and Appendix 7A in the EIR/EIS for construction of intakes, tunnel shafts, and forebay levees without installation of slurry walls. These results indicated that groundwater in the Clarksburg area could be affected during construction due to dewatering activities if slurry walls were not installed. In the Final EIR/EIS the description of the proposed project, Alternative 4A, was modified to include slurry wall installation to protect local groundwater conditions under construction. Slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. Dewatering wells also would be installed at construction sites associated with levees without the use of slurry walls. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p>
2608	10	<p>Well monitoring data prior to and during project construction should be publicly accessible so affected stakeholders can manage their irrigation systems and water supplies. Strategies and assurances must be put in place in the event that water deliveries from dewatering impacts are inadequate.</p>	<p>As described in the EIR/EIS, during construction, slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. Dewatering wells also would be installed at construction sites associated with levees without the use of slurry walls. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p> <p>DWR will work with impacted land owners on an individual basis to develop a strategy for information sharing as appropriate.</p>

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2608	11	In Mitigation Measure GW5: During Operations of New Facilities, Interfere with Agricultural Drainage in the Delta, the area where baseline groundwater conditions will be determined and monitored during construction must be defined. Monitoring and visual surveys should take place not only at the restoration and water conveyance sites but in a predetermined radius of influence where construction activities are expected to produce an impact. Monitoring activities should obtain land surface elevation data in addition to groundwater surface elevations and salinity. In addition, reports on ground water conditions shall be furnished to levee district managers and agricultural users for their own planning purposes. For example, dewatering activities from the construction of the intermediate forebay could lower interior surface elevations on Glanville. Impacts from land subsidence/settlement could weaken levees or their foundations or create higher hydrostatic pressures that could compromise the levees structural integrity. For a complete environmental analysis are more detailed study on groundwater levels including the determination of an area of influence as a result of dewatering is needed to successfully evaluate dewatering impacts.	As described in the response to comments 2608-7 through 2608-10, slurry walls would be constructed around the entire intake locations and the entire forebay locations to reduce the extent of dewatering and to become part of the structures. The slurry walls would be constructed to integrate with the levee cores that prevent water from the river from seeping into adjacent lands.
2608	12	Impacts and mitigation from construction on levees and land surfaces within the Delta is heavily reliant on geotechnical analysis prior that will be performed prior to construction. Geotechnical analysis must be included within this environmental analysis so the significance of the construction impacts can adequately be reviewed and vetted. The environmental commitments in place to minimize potential risks need to be summarized here provided those commitments are found in the 2013 BDCP documents and not reviewable here. As a result of an incomplete geotechnical analysis and the speculative nature by which impacts are assessed, it is premature to claim that construction impacts are less than significant and do not require mitigation. Even a statement along the lines of, "Upon review of geotechnical analysis, impacts will be assessed and mitigation applied as necessary to reduce the likelihood of loss of property, personal injury or death due to construction of Alternative 4" would be more sufficient to protect those at risk of negative impacts from construction within the Delta.	The potential environmental effects resulting from conducting geotechnical investigations are described in Chapter 31, Other CEQA/NEPA Required Sections, Section 31.5.1.1, of the Draft EIR/EIS.
2608	13	Impact GEO 4: Loss of Property, Personal Injury, or Death from Slope Failure during Construction of Water Conveyance Facilities states that the new perimeter levees/building pads adjacent to the Sacramento River will provide the same level of flood protection as the existing levee system, PL84-99 standards at minimum. However, Impact GEO 1: Loss of Property, Personal Injury, or Death from Structural Failure Resulting from Strong Seismic Shaking of Water Conveyance Features during Construction says water conveyance features will be designed based on USACE Earthquake Design and Evaluation for Civil Works Projects (ER1110-3-1806). This discrepancy needs to be cleared to determine what standard the perimeter levees will be built to and how these levees will be incorporated into existing flood control system. Also, there is no discussion on impacts to flood protection for Snodgrass Slough near the intermediate forebay. This too will require flood protection measures to ensure the levee system isn't compromised or weakened due to construction or left vulnerable from a seismic event during construction.	Please see Section 6A.6 in Appendix 6A, FEIR/EIS, for a discussion on DWR consistency with the State Plan of Flood Control (SPFC), and for information on project consistency with USACE, CVFPB, and DWR flood standards and regulations. Overall, construction and operations of the Proposed Project will not increase flood risk to people or structures in the Delta because the project will be designed and operated to ensure flood neutrality in the Delta and surrounding communities in accordance with applicable regulatory and design requirements.
2608	14	In Impact SOILS-5: Accelerated Bank Erosion from Increased Channel Flow Rates as a Result of Operations, accelerated bank erosion from increased channel flows due to operations is said to occur in "some Delta channels." These channels must be specified here given they are subject to increased flows and related impacts from BDCP operations. This section also notes conservation measures (no reference to what CM) include dredging these major channels to create a larger cross section. Provided that	The specific channels/channel banks that could experience accelerated erosion as a result increased told flows have not been identified. The impact conclusion that there could be an increase in was based on the professional judgment of the EIR/EIS authors and in recognition of known interactions between tidal flows and channel cross-sections. In greater San Francisco Bay restoration designs, the main channels are designed to maintain existing

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		dredging has effectively shut down in the Delta for over 40 years, this idea has to be analyzed further and impacts need to be assessed. These changes would be significant to the existing flood control system and reclamation districts need to be informed. Based on the discussion under this impact, the CEQA determination that impacts would be less than significant and requiring no mitigation is not supported by any concrete data provided here. The channels need to be specify and flow data must be provided in order to make an informed determination on impacts.	<p>maximum flow velocities (approximately 2-3 ft/sec). Although the BDCP restoration designs would include this consideration, any discrepancies in the initial design would be modified by natural channel erosion and deposition patterns, which would establish a new tidal balance of velocity and channel cross-section.</p> <p>Dredging downstream of any ROA levee breach would be part of the tidal habitat restoration work. However, the amount of dredging required is likely to be very limited, because the main tidal channels in Suisun Marsh and in other ROAs are quite large, where the tidal velocities are moderate and the changes in velocity or scour forces are relatively small.</p> <p>For example, from 2-dimensional modeling conducted by Resource Management Associates in support of the Suisun Marsh Management Plan Draft EIS/EIR (2010) (see Appendix A in http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=781), increased scour potential was found in only a few channels near the assumed levee breaches at representative restoration areas.</p> <p>Similar modeling would be completed as part of the BDCP tidal habitat restoration planning, using various breach locations and openings (i.e., widths and depths). The final design would provide channel dimensions that will minimize any additional scouring at the edges of the breaches or in the connecting downstream channels.</p>
2608	15	<p>Thank you for responding to previous comments about removing the RTM [Reusable Tunnel Material] areas from the southern end of Staten Island to protect wetlands management operations for Greater Sandhill crane habitat. However two tunnel shafts and a safe haven work area as well as tunnel boring operations still exist on Staten Island. Construction of these features will still have an adverse effect on species, including Greater Sandhill crane, that use Staten Island for nesting, roosting and forage areas.</p> <p>Under Impact BIO-69: Loss or Conversion of Habitat for and Direct Mortality of Greater Sandhill Crane, construction activities are not anticipated to result in direct mortality in the study area because the cranes would avoid contact with construction. Based on past permitting experience, this is an unacceptable response in developing an effect determination. This is a common flaw referred to as the "Displacement Approach" in the USACE Section 7 Consultation Template. Thus, throughout this document this type of analysis is unsuitable in the determination of construction impacts on species.</p>	<p>The commenter objects to the following statement under impact BIO-69 for greater sandhill crane: "Construction-related activities would not be expected to result in take of greater sandhill crane if they were present in the study area, because cranes would be expected to avoid contact with construction and other equipment". The commenter further states that this is an unacceptable response in developing an effects determination. This statement is the author's professional opinion on how cranes respond to human disturbance and is not the sole basis for making the effects determination. The effects determination also considers the amount of permanent and temporary impacts to species habitats and the proposed Resource Restoration and Performance Principles, Environmental Commitments, and Avoidance and Minimization Measures that have been proposed to offset these effects in order to make NEPA and CEQA determinations.</p>
2608	16	In order for reclamation districts and agricultural users to assess the total effects of land being taken out of production, the values of permanent acreage loss and associated loss in economic productivity should be tabulated per island. The same should be done for temporary acreage loss. This will create a reference point for BDCP proponents and stakeholders to determine lost property taxes and assessments for each individual island. For example, within the body of the text, "approximately 240 acres" will be converted to non-agricultural use for the intermediate forebay and associated spillway on Glanville. It seems these values do not account for RTM [Reusable Tunnel Material] areas also located on Glanville so it is unclear how many acres are actually taken out of production permanently or temporarily. A table would provide clarity so impacts to operations for reclamation districts and agricultural uses can properly be assessed.	Effect on local governments' fiscal condition from land acquired to construct conveyance facilities is addressed in Chapter 16, Socioeconomics. The total fiscal effect is estimated to be approximately \$6.7 million over the construction period. Effects on reclamation districts and other smaller districts would be addressed by making arrangements to compensate local governments for the loss of property tax or assessment revenue for land used for constructing, locating, operating, or mitigating for new Delta water conveyance facilities. Estimates of the total agricultural land converted for construction is presented in Chapter 14, Agricultural Resources. The estimate of agricultural land conversion is based on GIS analysis that accounts for all of the conveyance facility effects on agricultural land in construction areas. Additional analysis for the purposes of CEQA and NEPA are not required.
2608	17	Impact AG-2: Other Effects on Agriculture as a Result of Constructing and Operating the Proposed Water Conveyance Facility says 5 miles of irrigation canals and drainage ditches will be interrupted on Staten Island. The locations of these disruptions need to be provided in this report or given to the District Supervisor for the reclamation district prior to construction. Ensuring the island drains properly is an important flood control	Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging

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		function on Staten Island and other reclamation districts especially in the south Delta. These impacts must be identified and mitigated for.	counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.
2608	18	The recognition of lost assessments to reclamation districts is appreciated. But assurances need to be made within mitigation measures that for each district assessments must be covered by BDCP proponents for the entire acreage on that has permanently taken out of production for the lifetime of the conveyance facility construction and operation until physical removal.	Please see Chapter 16, Socioeconomics, Impact ECON-1 for more discussion on this issue. Mitigation Measure AG-1, described in Chapter 14, Agricultural Resources, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural productivity and compensating off-site.
2609	1	The Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft EIR/EIS is still programmatic in nature and contains insufficient information to offer even an adequate evaluation impacts from construction and operations of the conveyance facilities within the Sacramento-San Joaquin Delta. The reformatting of the document and the constant deflection of important subjects from chapter to chapter clearly exhibits a lack of respect for stakeholders attempting to review the proposed projects. I have over a decade of experience in permitting and constructing projects in the Delta and the conveyance project as proposed is grossly insufficient. Is this a joke? Other than one simplified exhibit set showing the proposed facility locations and basic size descriptions of the features in Chapter 3: Description of Alternatives, there are no detailed exhibits and no detailed descriptions of any elements proposed from intake facilities to the tunnel shafts to the barge loading facilities.	Additional construction details are included in the Conceptual Engineering Report—Dual Conveyance Facility Modified Pipeline/Tunnel Option —Clifton Court Forebay Pumping Plant (MPTO/CCO). (California Department of Water Resources 2015) which is a referenced document to the FEIR/FEIS. Volume 1 of the CER is posted on the project website. Detailed assumptions about the construction timeline and construction activity are located in Appendix 3C, Construction Assumptions for Water Conveyance Facilities, and Appendix 22B, Air Quality Assumptions, of the FEIR/FEIS. Appendix 3F of the FEIR/EIS provides details on the development of intakes and fish screening technology.
2609	2	Most of the CEQA/NEPA determinations are wholly reliant on geotechnical and hydraulic analysis that will significantly inform project design and they have yet to be done. Based on my experience, Federal or State agencies will deem a project application incomplete without such analysis or detail. The following statement in Section 3.4 Components of the Alternative: Overview, "The following is a comprehensive list of possible water diversion and conveyance facilities that could be included in one or more of the action alternatives" effectively sums up the general and ambiguous nature of this environmental document.	The lead agencies respectfully disagree with the commenter's statement that the RDEIR/SDEIS is incomplete. The lead agencies believe that 2013 Draft EIR/EIS and the 2015 RDEIR/SDEIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS. For more information regarding adaptive management please see Master Response 33.
2609	3	Chapter 3: Description of Alternatives This section would be much improved if it were accompanied by a detailed set of exhibits of at least the preferred Alternative 4 as well as detailed descriptions of each project component. I have numerous questions about the design of the facilities and construction operations that would aid in the review of project impacts. The following is exemplary of questions that arise due to the lack of information on the project on Temporary Barge Unloading Facilities. Temporary Barge Unloading Facilities are described as being 0.7 acres up to 5.7 acres. That is an immense size with major impacts on the waterway but is hard to relate to and easy to miss because it is in acres. So for example, the smallest barge facility would be possibly 30 feet by 1000 feet and considering 30 feet would be as wide as you could go within a channel, the largest barge loading facility could be 30 feet by 1.5 miles. Is that accurate? What warrants these extreme sizes? What would the access roads look and how would they impact the levees? Excessive pile driving in the water way can cause significant noise impacts [and] negative impacts to aquatic species, and could pose threats to levee stability depending on their proximity to the critical levee section.	Please note the BDCP (Alternative 4) is no longer the preferred alternative. The preferred alternative is now Alternative 4A. Alternative 4A has been developed in response to public and agency input. The Final EIR/EIS (FEIR/EIS) analyzes all alternatives, including Alternative 4A. The EIR/EIS provides detailed information regarding the components, characteristics, impacts, and mitigation for a range of alternatives. The type and format of information provided is consistent with the requirements of CEQA and NEPA to provide sufficient information regarding the relative merits of the proposed project and alternatives to permit a reasoned choice. For additional information regarding the level of detail in the environmental analysis, please see Master Response 2. Refer also to section 23.3 of the 2013 Conceptual Engineering Report regarding barges and barge landing sites. Refer also to the relevant resource chapter in the FEIR/EIS regarding impacts of pile driving to noise (Chapter 23), aquatic species (Chapter 11), etc.

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2609	4	The project cites an existing dock in Hood (Section 3.6.1.8 Temporary Access and Work Areas for Intake, Canal, and Pipeline/Tunnel Construction). There exists no dock of significant size that could support these construction activities. There is a building located on the waterside of the levee, however.	The text regarding the existing dock in Hood has been removed for the FEIR/S.
2609	5	Chapter 6: Surface Water This chapter should discuss impacts to surface water from project operations and construction activities. It is difficult to determine, however, if the projects will increase flows in the rivers or decrease flows or do both. Clearly dewatering activities have the chance to increase channel stages during any time of the year. This could be problematic for annual levee maintenance work if reclamation districts are not notified of dewatering releases. Maintenance work occurs during the summer when water levels are low to avoid any issues with seepage and erosion due to high flows during levee repair. No levee work is allowed during the flood season, November 1 to April 15. Although hydraulic analysis is needed it seems there may be concerns of the channels' carrying capacity for such flows. These could essentially create flood conditions and impact maintenance activities of reclamation districts. This impact needs to be noted and evaluated in this document.	Please see Appendix 6A, Section 6A.6, FEIR/EIS, for potential impacts to river flows and surface water from construction, including dewatering activities, and operations of the proposed project. Section 6A.6 also includes a discussion on levees modified by construction of the California WaterFix (CWF/Alternative 4A), including responsibilities of the project proponents. Before and/or during construction of the CWF water conveyance facilities, project proponents will explore opportunities with local reclamation districts and the Central Valley Flood Protection Board (CVFPB) to address potential conflicts regarding levee maintenance, inspection, and flood fighting activities on project and non-project levees. DWR will look to enter into agreements with local reclamation districts with jurisdiction in the Delta to ensure levee management activities by both government and local agencies are not interrupted during construction of the water conveyance facilities. In addition, DWR will comply with all applicable flood protection requirements and regulations to ensure flood neutrality during construction and operations of the CWF.
2609	6	Section 6.3.2: Determination of Effects discusses that instances in highest monthly flows will occur in the Sacramento River and most likely tributaries. This is unclear: is the increased flow from greater releases from the reservoirs to supply water to the tunnels? Other areas in the document explain drops in water levels of up to 3 feet or a 40% reduction (Figures 6-14 and 6-15 from the 2013 BDCP). A map showing expected river stages due to various operations must be provided help clear up these issues and allow residents, farmer, and reclamation districts anticipate impacts from changes in surface water beforehand.	As presented in Appendix 5A, Section C, of the Final EIR/EIS, flows in the Sacramento River at Freeport would be similar or less under the proposed project as compared to the No Action Alternative except in June when flows would be 20 to 30 percent higher to allow reductions in exports in the summer following summer months (this analysis does not consider the effects of climate change or sea level rise). Flows in the Sacramento River downstream of the North Delta intakes would be similar or less at all times under the proposed action as compared to the No Action Alternative.
2609	7	Impact SOILS-5: Accelerated Bank Erosion from Increased Channel Flow Rates as a Result of Operations should be included in this chapter, surface water, because it is an impact from surface water. I'm sure this was an oversight and was not intentional. However, accelerated bank erosion from increased channel flows due to operations said to occur in "some Delta channels" would be incredibly significant and cannot be just an offhand comment in the Soils chapter. These channels must be specified here with anticipated increases in flows due operations.	As presented in Appendix 5A, Section C, of the Final EIR/EIS flows in the Sacramento River at Freeport would be similar or less under the proposed project as compared to the No Action Alternative except in June when flows would be 20 to 30 percent higher, but substantially less than flows during winter and spring months. Flows in the Sacramento River downstream of the North Delta intakes would be similar or less at all times under the proposed action as compared to the No Action Alternative. Therefore, the conditions of the levees would not be disturbed by implementation of the project.
2609	8	This section [Impact SOILS-5: Accelerated Bank Erosion from Increased Channel Flow Rates as a Result of Operations] also notes conservation measures (no reference to what CM) include dredging these major channels to create a larger cross section. I applaud you on your spirit. Dredging practices are not at all encouraged in the Delta due to significant environmental impacts from potentially re-suspending harmful constituents from the mining era back into the water column and harming fish. Dredging also is desperately needed since there have not been extremely scouring flows in the Delta since 1997 to reduce channel sedimentation. These changes would be significant to the existing flood control system and reclamation districts need to be informed. Based on the discussion under this impact, the CEQA determination that impacts would be less than significant and requiring no mitigation is not supported by any concrete data provided here. The channels need to be specify and flow data must be provided in order to make an informed determination on impacts. This environmental analysis cannot be	Please note that the preferred alternative, Alternative 4A, includes a much smaller acreage of restoration, as it no longer includes an HCP component. Fewer than 300 acres of tidal restoration would be carried out under Alternative 4A. As noted in Chapter 1, Introduction, of the Final EIR/EIS, USACE has regulatory authority over activities within certain waters within the project area. Depending on the activity and the location of that activity in relation to particular resources, USACE may be required to issue an authorization for that activity under: ☐ Section 404 of the CWA (discharge of dredged or fill material into waters of the United States). ☐ Section 10 of the Rivers and Harbors Act (activities in, under, or over navigable waters of the United States). ☐ Section 14 of the Rivers and Harbors Act (activities that have the potential to affect USACE civil

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		considered even close to complete without data and project specifics.	works projects, including project levees). Please see Appendix 1F, Supplemental Information for USACE Permitting Requirements, for additional information on potential impacts from Alternative 4A. Additionally, during the design phase, DWR would conduct site-specific channel analysis to determine the extent of the dredging activities. DWR would consult with local reclamation districts to ensure that construction activities would not conflict with reclamation district flood protection measures.
2609	9	Mitigation measure GW-1: Maintain Water Supplies in Areas Affected by Construction Dewatering mentions these areas will be determined by the BDCP Proponents. Many residents and agricultural users within the Delta rely on groundwater so this impact will be significant. Not enough data is provided in this report to suggest a true area of influence of dewatering activities thus if some wells are affected that were not identified beforehand by the proponents, this should not preclude them from being mitigated. Figure 7_27: Forecasted Groundwater Level Lowering From Construction Dewatering for Alternative 4 helps define the basic areas where dewatering is set to occur but this is considered 50,000-foot view. This figure needs to be closer to a 100-foot view [to] get detailed information to assess dewatering areas and impacts.	As described in the EIR/EIS, during construction, slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. Dewatering wells also would be installed at construction sites associated with levees without the use of slurry walls. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.
2609	10	Impact LU-2: Conflicts with Existing Land Use as a Result of Constructing the Proposed Water Conveyance Facility (CM1) Any facility associated with the conveyance facility including the conveyance facility will be incompatible with all land uses and will be a significant and adverse impact to surrounding properties: this is not included in the CEQA Conclusion and it should be. That said, "where applicable" should not be included when discussing compensation to property owners who lose their homes or any parts of their property as a result of this project. The BDCP proponents will compensate property owners for losses and these losses should be discussed between the proponents and the property owner to determine a fair value. Not only is the property lost but the value it held either as a home or livelihood. Also in this section the removal of a structure itself is not an environmental impact but it is an impact. If a house is removed from a residential property, nobody can use the property to as a residence; its use is effectively removed. This should be clarified. A person or family lost their home or their business -- is that less significant than accidentally killing a Delta smelt? If the home was the location or the business was dependent on that location there is no monetary compensation to bring that back. For example, I live on a resort on Steamboat Slough. The value in the home is not the structure but the location. The resort also operates as a private boat club (not mapped in the documents public/private marinas map), Steamboat Resort as a business is also dependent on the location. If the structure or dock was removed for any element of this project there would be no way to replace this through monetary compensation, it is location dependent as are many homes and businesses in the Delta. Also, even if money was provided to rebuild elsewhere, many structures are no longer compatible with new zoning codes so they could never be replaced but they add to the character of this community. This discussion might fit better in the Cultural or Socioeconomics	Generally state and federal agencies, as well as some local or regional agencies involved with the location or construction of facilities for the production, generation, storage, treatment, or transmission of water are not subject to local land use regulations and inconsistency with a specific local land use regulation is not by itself an adverse effect on the environment. However, this EIR/EIS, in assessing whether particular categories of environmental effects are adverse (NEPA) or significant (CEQA), considers relevant local land use regulations that are adopted for the purpose of avoiding or mitigating an environmental impact. As discussed in Section 13.3.2, Determination of Effects, to the extent that alternatives are incompatible with such land use designations, goals, and policies, any related environmental effects are discussed in other chapters. The preferred alternative, 4A, would remove 17 residential structures, as discussed in Impact LU-2. The removal of a substantial number of existing permanent structures as a result of constructing the water conveyance facility would be considered a direct, adverse socioeconomic effect of this alternative under NEPA. The language used regarding compensation does not specify loss of homes or parts of property. The report states "When required, the project proponents would provide compensation to property owners for losses due to implementation of the alternative, which would reduce the severity of economic effects related to this physical impact, but would not reduce the severity of the physical impact itself." Under CEQA, the removal of existing structures would be considered an environmental impact, and might also entail economic impacts. Environmental impacts would only be considered significant if the structures qualified as "historical resources" or the removal of structures led to physical effects on certain other resources. Impacts related to population and housing are discussed in Chapter 16, Socioeconomics, under Impacts ECON-2, 8, and 14. Steamboat Slough would be located more than six miles away from the preferred alternative, 4A. No impacts are expected in this area as a result of Alternative 4A.

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		chapter. Either way, impacts from removal of structures should be highlighted as a significant adverse and unavoidable impact.	
2609	11	Impact LU-3 discusses the placement of permanent structures around the town of Hood. Hood is a struggling community mostly made up of low-income residents. Locating a significant amount of facilities around the town, tunneling under it, restricting traffic, and 15 years of construction noise will effectively destroy this town. This is an environmental justice issue as most residents in Hood do not have the means to sue in the event of unanticipated adverse impacts, nor do they have the means to relocate. The community is trying to grow with a new restaurant being constructed and potential wineries along the River Road; however, these ventures will fail as a result of this project. The construction and operation of the conveyance facilities would put a disadvantaged community at an even greater disadvantage. This is not included in the Environmental Justice chapter or in this chapter. The impacts of this would be adverse and significant and need to be included in this analysis.	Mitigation Measures TRANS-1a and 1b would be implemented to reduce impacts related to traffic and roadways. However, Impact LU-3 would still remain adverse/significant and unavoidable. Impacts LU-2 and LU-3 are included in Chapter 28, Environmental Justice. A disproportionate effect on minority populations would occur because construction of Intakes 2, 3, and 5 would result in the displacement of residential structures and permanent structures within census blocks where the minority population is greater than 50%.
2609	12	Impact REC-2 states that six recreation areas are within indirect impact areas of construction. It would be more beneficial to see this, as well as recreational areas that will be removed temporarily and permanently due to the conveyance facilities, in the form of a map. This impact also notes noise from construction activities will be an impact. This needs to be further discussed and isn't really touched on in the Noise chapter either. People come to the Delta to relax and take vacations. Constant construction noise could deter visitors to the Delta. Steamboat Resort is one such place close enough to construction activities that excessive noise and barge activity could result in people who have moored boats at the resort for over 20 years to leave. Furthermore there are many wedding venues and wineries in close vicinity of the construction areas like Scribner Bend that would be negatively affected. No bride will want to hear an impact hammer driving piles throughout her wedding. Venues like these are opportunities for farmers to offset losses from lost agriculture productivity due to conveyance facilities. They may not be able to survive the 15-year construction period to survive. Discussion on wedding venues, farm stands, and wineries are recreational activities and need to be included and evaluated in this chapter for negative impacts. In effect, there are likely far more than six recreational areas affected by construction activities.	The Modified Pipeline Tunnel Alignment and recreation sites in its vicinity are depicted in Mapbook 15-4. The analysis assumes a 1,400-foot noise and visual buffer, so any recreation sites within 1,400 feet of the construction footprint would be anticipated to experience noise and visual disturbances. Steamboat Resort is more than 3 miles away from the preferred alternative, 4A, so it would not experience noise and visual disturbances. Tourism and businesses are discussed in Chapter 16, Socioeconomics, rather than in Chapter 15. Please refer to Chapter 16, Socioeconomics, Impacts ECON-1, 3, and 5 regarding impacts to regional economics, changes in community character, and effects on recreational economics. When required, DWR would provide compensation to property owners for economic losses due to implementation of the proposed project.
2609	13	Impact REC 3: The speed restriction zone must be clearly defined instead of upstream and downstream. These speed zones can only be in the exact location of the actual facility. Boat traffic on the Sacramento River in these areas is high during weekends in the summer, especially during the drought when other recreational areas such as Folsom Lake can't support this type of activity. Encroachments into the waterway from intake and barge unloading facilities can pose a hazard to boaters by reducing the navigable area of the channel. They also need to provide lights in the water so they are not hit by passing boats at night. Impacts on recreational boating from these facilities for the amount of time is significant. This impact also notes that eight barges are expected per day; what is the timing on the barges? The barges will also create dangerous conditions for boaters by adding to congestion, and [will] reduce the quality of recreation. A barge schedule should be provided to the marinas so boaters can avoid being on the river during peak barge traffic. The following mitigation measure should be included to reduce impacts on boat recreation. During the weekdays, barges should only be allowed to travel on the Sacramento River between the hours of 8am to 5pm when there is light and no chance of collision due to lack of visibility. They also should not be	Waterways will still be navigable during construction and operation of the proposed project. The proposed project would result in temporary impacts to boaters and on-water recreationists. The specific lengths and distances of project features have been included in Impact REC-3. The project includes plans to reduce those impacts as much as possible with implementation of environmental commitments to prepare and implement a water navigation plan and provide notification of construction and maintenance activities in waterways (Appendix 3B, Environmental Commitments). Additionally, Mitigation Measure TRANS-1a would reduce impacts on marine navigation by development and implementation of site-specific construction traffic management plans, including specific measures related to management of barges and stipulations to notify the commercial and leisure boating communities of proposed barge operations in the waterways. Please refer to Chapter 19, Transportation, for more details. Environmental Commitment 3B.2.8, Develop and Implement a Barge Operations Plan, would be implemented (refer to Appendix 3B for more information). Barge routes and landing sites will be selected by the construction contractor and will be expected to comply with the following criteria:

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		on the river on weekends from May 1 to September 30. If this measure were included impact on boating recreation would be insignificant. Otherwise per the CEQA conclusion, eliminating waterskiing, wakeboarding, and tubing during construction would be very significant but based on my suggestions it is avoidable.	<ul style="list-style-type: none"> • Maximize continuous waterway access between departure port and shaft site • Maintain minimum waterway width greater than 100 feet (assuming maximum barge width of 50 feet) • Use of existing barge landings where possible • Minimum water depth of 6 feet
2609	14	The statement in Impact REC-7 that "the areas around the proposed intake locations are not usually used for waterskiing, wakeboarding, or tubing" is false. I personally use the areas around the intake locations frequently for wakeboarding. They are also heavily used on the weekends in the summer. Impacts on any in-water maintenance work of the facilities will be significant to these activities. While there are other miles of the Sacramento River to recreate this is where people live, this is where their boats are, [and] they are not willing to travel outside of the area. That is a negative impact.	That statement has been removed from the document. That particular impact (REC-7), discusses a long-term reduction in water-based recreation opportunities as a result of maintenance of the proposed water conveyance facilities. Because the significance threshold for long term is more than two years, and maintenance would be occasional, any effects would remain short-term and intermittent. Therefore, this impact would be not adverse/less than significant.
2609	15	Section 15.3.3: Effects and Mitigation Approaches states that traffic modeling indicates increases in noise from truck hauling and worker commutes would not be substantial. However, the Transportation chapter has tables that show traffic noise increasing 20 dB [decibels] from existing conditions. The chapter also states that an increase in 5 dB is significant so 20 dB is extremely significant. This area needs revision.	<p>The statement in Chapter 15 has been revised to be consistent with the findings in Chapter 23, which indicate project related traffic would result in a substantial increase to noise levels at residences, parks and recreational uses. This increase would exceed the project threshold for traffic noise along project roadway segments identified in Chapter 23. Implementation of Mitigation Measures NOI-1A and 1B would reduce impacts, but not necessarily to a less than significant level, and therefore these impacts are considered to be significant and unavoidable.</p> <p>Note that the impact analysis in Chapter 23 assesses impacts at a 100 foot distance from project road segments. Effects on specific recreational receptors would depend on distance of frequent use areas relative to roadways. Noise impacts are considered in the recreation analysis for each alternative, and are described by recreation location in Table 15-15 for the proposed alternative.</p>
2609	16	The Delta community will not benefit from this project whatsoever; it will only benefit agricultural interests in the southern part of the state. This project would only result in negative impacts to this community, mostly in the form of its economy. When agricultural lands are removed for conveyance facilities, compensation for the cost of the land is only part of the economic impact. Agricultural productivity over the lifetime of the lost land and the other businesses that productivity would have supported would be lost as well (ECON-7). How will that impact be mitigated? It can't and the impact would be significant and adverse because agriculture supports most of the businesses in the Delta. Some businesses in the Delta operate on a shoestring and could not survive the loss of income associated with loss of agricultural productivity. This element must be discussed in this section.	Please refer to Chapter 16, Socioeconomics, Impacts ECON-6, 12, and 18 for Alternative 4A regarding agricultural economics. Additionally, the chapter discusses regional economics and changes in community character.
2609	17	Continuously in chapter [16] the CEQA Conclusion says because the impacts are social in nature, rather than physical, they are not considered impacts under CEQA. Please clarify where in the CEQA this is explicitly stated. Are social impacts covered under NEPA? Removal of highly productive agricultural land that supports a ton of other businesses in the Delta is significant to the existence of Delta as place which is covered under the Sacramento-San Joaquin Delta Reform Act of 2009 and needs to be stated here.	Please refer to Master Response 24 regarding Delta as Place. Under CEQA, social or economic effects alone shall not be treated as significant effects (State CEQA Guidelines §§ 15064(f), 15131). As described in Impact ECON-6 under Alternative 4A in Chapter 16, Socioeconomics, construction of conveyance facilities would convert land from existing agricultural uses to project-related construction uses, and agricultural land could also be affected by changes in water quality and other conditions that would affect crop productivity. These direct effects on agricultural land are described under Impacts AG-1 and AG-2 in Chapter 14, Agricultural Resources. Total value of irrigated crop production in the Delta would decline on average by \$5.3 million per year during the construction period, with total irrigated crop acreage declining by about 4,700 acres. Other effects related to production costs, travel time, and loss of investments in production facilities and standing orchards and vineyards would also occur as a result of facilities construction. When required, DWR would provide compensation to property owners for economic losses due to implementation of the alternative.

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2609	18	Beyond the Delta community, it is a spectacular region with beautiful views that are the subjects of many famous artists like Wayne Thiebaud and Gregory Kondos, which isn't mentioned in Chapter 17: Aesthetics and Visual Resources.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2609	19	Conservation Measures 2 through 22 also present significant impacts to the Delta region. Given there are no specific project locations, they should be removed from this analysis and put into a separate EIR/EIS process when those project details exist. As stated within this report there is absolutely no way to evaluate impacts other than through speculation.	For more information regarding project versus program level analysis please see Master Response 2. The originally proposed habitat restoration measures and related Conservation Measures (CMs) (i.e., CM2 through CM21) would not be included as part of the Proposed Action, except to the extent required to mitigate significant environmental effects under CEQA and meet the regulatory standards of ESA Section 7 and California Endangered Species Act (CESA) Section 2081(b). However, restoration actions that are independent of Proposed Action will continue to be pursued as part of existing projects and programs. Examples of these include the 2008 and 2009 USFWS and NMFS BiOps (e.g., Yolo Bypass improvements and habitat enhancements, 8,000 acres of tidal habitat restoration), (2) California EcoRestore, and (3) the 2014 California Water Action Plan.
2610	1	Any EIR of the BDCP must include an ongoing re-analysis of up-to-the-minute scientific literature on the subjects of global warming and gross mean sea level rise. Significant current studies and findings have been effectively hidden by the use of data cut-off dates for data to be analyzed by staff. This has allowed the BDCP to continue unabated. More significantly, it has created a significant diversion of public attention and resources from the much larger looming threat of fiscal and environmental disasters from inundation of large parts of the Central Valley, including during the lifetime of the anticipated initial operating permit for the BDCP, due to gross mean sea level rise due to global warming, as already being shown by contemporary scientific studies.	The anticipated hydrologic changes due to climate change (increased temperatures and more years of critical dryness, increased water temperatures, changes in precipitation and runoff patterns, sea level rise, and tidal variations) will constrain and challenge future water management practices across the state, with or without the proposed project. The state is addressing climate change through strategies and a decision-making framework as outlined in the California Climate Adaptation Strategy and Adaptation Planning Guide. However, no single project and indeed none of the project alternatives would be able to completely counteract all of the impacts of climate change. The State of California has acknowledged that sea level rise threatens coastal and near coastal resources (such as the Delta and Delta water supplies) and that adaptation and resiliency planning to protect these resources from expected levels of sea level rise is appropriate. (OPC, 2013) http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/ (CCC, 2013) http://www.coastal.ca.gov/climate/SLRguidance.html EO S-3-05. http://gov.ca.gov/news.php?id=1861 EO S-13-08 http://gov.ca.gov/news.php?id=11036 AB 32 also mentions SLR as a threat to California. California Waterfix would help to address the resilience and adaptability of the Delta to climate change through water delivery facilities combined with a range of operational scenarios, measures focused on the protection, restoration, and enhancement of the Delta ecosystem and measures to reduce other stressors (Environmental Commitments 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16. In addition to the added water management flexibility created by new water diversions and operational scenarios, California Waterfix would improve habitat, increase food supplies and reduce the effects of other stressors on the Delta ecosystem. By improving and expanding available habitat, the proposed project would increase resilience and adaptability to climate change by making alternative habitat available during periods of high stress, such as very high or low freshwater inflow or very high salinity intrusion. Multiple analyses were performed in the proposed project to test the robustness of the alternatives to a range of potential future conditions. Water supply, aquatic and terrestrial resources were all analyzed with projected future conditions. The proposed project will likely remain in place and functional far into the future when salinity intrusion may require less frequent use of the south Delta pumps. Far from being stranded assets, the tunnels will be part of the state's strategy in adapting to climate change.

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			More information on ways in which the BDCP/California WaterFix proposes to improve resiliency and adaptability of the Delta to climate change can be found in Chapter 29, Climate Change, EIR/EIS and Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, EIR/EIS.
2610	2	Any taking of fresh water that would otherwise go to the Delta will significantly degrade and destroy flora and fauna habitat, particularly given climate change predictions, including long-term droughts during this century, particularly in the latter half. For example some salmon runs have already been and/or are already being lost due to lack of flow volume and/or higher temperatures. (Although [Fish and Wildlife Service] have not recognized runs as separate sub-species, the science shows each is genetically variant, adapted to particular tributaries, such that salmon cannot optimally survive in a different run than they are evolved for.)	<p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights that were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. DWR and Reclamation operate with water rights issued by the State Water Resources Control Board that are junior in priority to many senior water rights holders in the Delta watershed. Under the action alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative. Conveyance facilities under the action alternatives could only deliver the amount of water diverted under the existing SWP and CVP water rights and in accordance with the existing and future related regulatory requirements based upon river water levels and flow, water available in the system, the presence of threatened and endangered fish species, and water quality standards.</p> <p>As a plan prepared to meet the rigorous standards of the federal and state Endangered Species Acts, the proposed project is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p>
2610	3	The low flows and increase in overall mean ocean level rise will significantly increase brackish water in the Delta, until the Delta is effectively inundated during the lifetime of any anticipated BDCP initial operating permit.	The EIR/EIS modeling results for the No Action Alternative indicate that, with or without the project, rising sea levels will bring saline tidal water further into the Delta than occurs at present. The action alternatives also include the same climate change and sea level rise assumptions as under the No Action Alternative, as described in Chapter 5, Water Supply, EIR/EIS.
2610	4	<p>The voters overwhelmingly voted down the Southern California water grab by the voter ballot initiative process. The current attempt to create an "end run" around that Constitutional bar, by appointing "experts", is unconstitutional. The experts must follow the Constitutional directive of that prior Voter Ballot Initiative, in any evaluation of redirecting water. Certainly, state water law clearly provides that the state has the inherent and constitutional police power to require far greater conservation measures by all water interests, including agricultural and city planning departments. However, the state is not exercising that police power, at least not in any coherent and rational fashion. Experts can help in some of those contexts (for example, by balancing stricter agricultural water use regulations based on the science of whether agricultural runoff water absorption either increases ground salinity in some areas, or instead promotes percolation that recharges groundwater in others). However, such experts only have the constitutional power to recommend that the voters change the Constitutional bar of the past voter ballot initiative; they cannot on their own, avoid its mandates.</p> <p>However, given the actions to date, it appears the "experts" will make recommendations to take direct action to pursue the BDCP, actions which directly violate the Constitutional bar of the past voter ballot initiative, given the significance of campaign "contributions" from Southern Californian developer interests seeking to enrich themselves by further overdeveloping Southern California, and to shift the water costs into an externality for Northern California.</p>	<p>The California WaterFix, or any of the BDCP alternatives, have not and will not be considered in a voter ballot. Section 1, Introduction, of the RDEIR/SDEIS describes the path for implementation of the project.</p> <p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>The project proposes to stabilize water supplies, and exports could only increase under certain circumstances. Water deliveries from the federal and state water projects under a fully-implemented Alternative 4A are projected to be about the same to the average annual amount diverted in the last 20 years. Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline.</p> <p>Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project.</p> <p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>

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2610	5	<p>The BDCP proposal directly contradicts the state's official recognition of the science and reality of human-caused global warming and, hence, of the gross mean sea level rise that will result. Such impacts have, repeatedly, been effectively "hidden" by the use of artificial data cut-off dates, beyond which staff analysts have been unable to examine current scientific findings on gross mean sea level rise, because such will form the death knell of the BDCP.</p> <p>Antarctica: Current scientific studies on climate change regarding Antarctica establish now irreversible glacial melting in significant areas, which, alone, will move ocean beach front to Sacramento with 10 feet of sea level rise, and show other areas of Antarctica are rapidly melting and will soon be at the same irreversible position to contribute another 10 feet gross mean sea level rise over time.</p> <p>Greenland: However, for the remainder of this century, the greatest threat is yet another gross mean sea level rise of over 10 feet from Greenland. Historical geological studies indicate that when the Greenland glacial ice sheets melt, they tend [to] produce very rapid sea level rise. The historical mechanism is water from melting surface pools flowing through crevices down to surface, where water pools and creates larger ponds and lakes between the glacial overlay and the ground surface. In the past, this mechanism produced an aqueous lubrication of the otherwise gravity-bound glacial movement, creating a very rapid and irreversible glacial slide-off into the Atlantic, creating very sudden and very significant (indeed, inundating) historical gross mean sea level rise of in excess of 10 feet.</p> <p>Contemporary studies being led by NASA and others are currently finding exactly such high levels of surface and subsurface glacial melt water pooling and lake formation already occurring, and already leading to significantly greater sub-glacial fresh water runoff into the Atlantic in a substantial portion of areas around Greenland, for example the greater South Western Greenland coast. These processes have already resulted in significantly greater volumes and speed in glacial calving in that area. Scientific studies have also shown that once a significant portion of Greenland starts shedding its glacial overlay, the loss of weight [of] the glacial ice overlay will cause a collateral crustal rebound/rise in the Greenland land mass, increasing the gravity and aqueous lubricant glacial shedding processes in any remainder of Greenland still retaining a glacial overlay.</p> <p>BDCP Intake Area Inundation during Permit Life: The net result is that within this century, and within the current lifetime of the anticipated initial operating lifetime of the BDCP infrastructure, if and when built, the Earth will undergo a gross mean sea level rise of in excess of 10 feet. If unabated by manmade structures, such increase will move the Pacific Ocean front into the Sacramento area, for example, bisecting Elk Grove. This will render the BDCP unable to operate as currently envisioned, as it would simply be transporting a range of brackish to pure ocean salt water to Southern California, which would then require desalinization. Such desalinization can be more cost-effectively achieved closer to the Southern California end users.</p>	<p>Commenter has provided no references or citations for the information provided and therefore no way for the lead agency to investigate and determine the validity of the claims made. The lead agency has done an exhaustive search of peer reviewed journal articles and scientific literature and has found no evidence that sea levels in the project area are likely to rise to the degree suggested by the commenter. Sea level increases of 15 cm and 45 cm have been systematically investigated throughout the EIR/S and the effects these increases in sea level have been disclosed. See also Climate Change Master Response 19.</p>
2610	6	<p>Inundation from Greenland glacial sources of gross mean sea level rise of over 10 feet, coupled with already irreversible Antarctic based gross mean sea level rise of another 10 feet, plus gross mean sea level rise from other Antarctic sources, all by the next century, will require drastic responses to avoid the historical re-inundation of the Central Valley. (As a gauge marker, Stockton currently sits approximately 20 feet above sea level, and so will be largely inundated without intervention.) Such interventions will certainly</p>	<p>Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP.</p> <p>The project proponents recognize the challenges that climate change and seal level may present to CVP and SWP operations and the environment in the future. Modeling analyses conducted in the EIR/EIS incorporate future climate change and sea level rise scenarios. For example, effects of sea level rise were incorporated in the DSM2 modeling for salinity and in the CALSIM modeling of required Delta outflows for salinity control.</p>

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		<p>include massive concrete levees to strengthen/replace current earthen levies in the Delta which are not designed/constructed to withstand 10 feet of gross mean sea level rise, much less substantially in excess of 20 feet rise. The resulting air, water, and other pollution sources from that response alone will more than dwarf the very substantial environmental impacts of the BDCP. The combination of such gross mean sea level rise, plus the responses thereto, will produce a massive environmental disaster.</p> <p>Moreover, geology professors in the state's higher education system are privately discussing such possibilities as a massive (Chinese Three Gorges-type) dam spanning, for example, the Carquinez Straight area, to prevent massive sea level intrusion into the Central Valley. =Such would also produce an equally massive set of environmental impacts.</p> <p>In short, while the BDCP project can itself lead to very significant negative environmental impacts, it will be quickly rendered obsolete (resulting in a huge waste of fiscal resources) by gross mean sea level rise currently in progress. And such will be dwarfed by the intermediate- to longer-term implications of the responses to such gross mean sea level rise, in order to try to avoid the historical re-inundation of the greater Central Valley.</p>	<p>Please see Chapter 29 (Climate Change), FEIR/EIS, for more information. Also, see Chapter 2, FEIR/EIS, for the purpose and need of the proposed project, and Section 6A.5 of Appendix 6A, FEIR/EIS, for information on potential risks to the Delta from climate change, sea level rise, and seismic events.</p>
2610	7	<p>The BDCP comments cut-off period is October 30, 2015. The EIR analysis of the BDCP has been dogged from the beginning with artificial cutoff dates for data, which has hamstrung staff's analysis to the point of rendering it grossly out of date before it's even published. This artificial cutoff has barred staff consideration of not just comments' information, but of any other published scientific data relevant to their analysis. Literally, staff have to close their eyes and ignore the results of current, ongoing, groundbreaking, research which could, and would, dramatically change the outcome of that analysis, including by questioning fundamental assumptions. (One such basic assumption is that the Central Valley generally, including the BDCP system, will remain dry ground with river flow fed by occasional rainfall and snow melt, instead of the Central Valley becoming [once again] a large inland sea.)</p>	<p>The public review period for the RDEIR/SDEIS began on July 10, 2015 and ended on October 30, 2015, roughly 2.5 months. The review period is intended for review of the contents of the RDEIR/SDEIS as presented and there are no restrictions on the kinds of comments, research or other information used by reviewers to formulate comments. The analyses in the EIR/EIS assume baseline conditions, which for CEQA in this document is existing conditions at the time the notice of preparation was published (2009). The point of comparison for the NEPA analyses in the this EIR/EIS is the No Action Alternative, which is identified as No Action Alternative Late-Long Term (2060) for BDCP alternatives and No Action Alternative Early-Long Term (2025) for Alternatives 4A, 2D and 5A. These baseline conditions are used to judge the changes that could result by implementing an action alternative. Potential future conditions that may or may not occur such as the Central Valley becoming a large lake in future years would only be considered if substantial evidence existed to suggest those conditions would be likely and not speculative.</p>
2610	8	<p>Accelerating Greenland ice cap melting could drive accelerating increases in gross mean sea levels, in excess of 5 feet, and ultimately by up to 20 feet, before the end date of the expected initial permit for the BDCP. This will certainly cause far more ocean saltwater and/or brackish water intrusion into the BDCP infrastructure, and into the ecological area between San Francisco and the BDCP infrastructure, than are anticipated by the EIR for the BDCP, effectively eviscerating the net findings of the EIR process.</p>	<p>Commenter has provided no references or citations for the information provided and therefore no way for the lead agency to investigate and determine the validity of the claims made. The lead agency has done an exhaustive search of peer reviewed journal articles and scientific literature and has found no evidence that sea levels in the project area are likely to rise to the degree suggested by the commenter. Sea level increases of 15 cm and 45 cm have been systematically investigated throughout the EIR/S and the effects these increases in sea level have been disclosed. See also Climate Change Master Response 19.</p>
2610	9	<p>Given the research trends of underestimating global warming and gross mean sea level rise, the risks from the accelerating Greenland ice sheet melt, and the geological record research of the impact of past such events, the very basic assumptions of the BDCP are called into play.</p> <p>The state will find it has wasted billions on a BDCP boondoggle, with drastic environmental results, e.g., the massive salinization of the Delta (not only its waterways, but its, at least for now, arable land, instead of focusing its resources on planning to mitigate an even greater disaster, of not only dramatic environmental, but also fiscal, and other, impacts.</p>	<p>The proposed project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. The proposed project is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies, and the recovery and conservation of threatened and endangered species that depend on the Delta.</p> <p>The anticipated hydrologic changes due to climate change (increased temperatures and more years of critical dryness, increased water temperatures, changes in precipitation and runoff patterns, sea level rise, and tidal variations) will constrain and challenge future water management practices across the state, with or without the proposed project. The state is addressing climate change through strategies and a decision-making framework as outlined in the California Climate Adaptation Strategy and Adaptation</p>

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			<p>Planning Guide. However, no single project and indeed none of the project alternatives would be able to completely counteract all of the impacts of climate change.</p> <p>More information on ways in which the California WaterFix proposes to improve resiliency and adaptability of the Delta to climate change can be found in Chapter 29, Climate Change, EIR/EIS and Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, EIR/EIS.</p>
2610	10	[ATT1: NPR transcript of interview with Peter Ward.]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	11	[ATT2: Excerpt from Scientific American article "Rising seas pose growing flood threat."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	12	[ATT3: Excerpt from Slate article "5 Trillion Tons of Ice Lost Since 2002."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	13	[ATT4: Excerpt from UCI article "Measuring Earth's Meltdown."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	14	[ATT5: Abstract from article "Grounding line retreat of Totten Glacier, East Antarctica, 1996 to 2013."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	15	[ATT6: Washington Post article "Scientists confirm that East Antarctica's biggest glacier is melting from below."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	16	[ATT7: Washington Post article "Why NASA's so worried that Greenland's melting could speed up."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	17	[ATT8: New York Times article "Greenland is melting away."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	18	[ATT9: Excerpts from UCI article " Measuring Earth's meltdown."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	19	[ATT9: ATT1: Map of Greenland with demographic inset.]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	20	[ATT10: Abstract of article "Undercutting of marine-terminating glaciers in West Greenland."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.

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2610	21	[ATT11: Boston Globe article "The very weird physics of sea-level changes."]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2610	22	[ATT12: BDCP comment letter 1752]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2611	1	The building of the TTP [Twin Tunnels Project] would devastate an already failing San Francisco Bay-Delta by critically decreasing the freshwater flow necessary to the health of the Delta and the San Francisco Bay. The California WaterFix contends that it is a sustainable water project that will improve the water supply reliability of the state and federal water export system. However, the TTP will accomplish this by taking more water from the Delta and from Sacramento Valley water users and ecosystems, and replacing this fresher water with more polluted and saline flows from the San Joaquin River. The California WaterFix also contends that it will improve flows through the Delta to reflect a more natural east-to-west flow rather than the current north-to-south flow due to the south Delta export pumps. However, to achieve this the TTP will decrease Sacramento River flows by 20 to 24 percent, which will result in permanent drought-like conditions throughout the San Francisco Bay-Delta Estuary. Delta waters will stagnate and harmful pollutants and toxins will accumulate in them; salinity levels will rise due to the decreased Sacramento River flow.	<p>In accordance with the Project Objectives and Purpose and Need (see Chapter 2 of the EIR/S), all of the action alternatives would continue the operation of the SWP and CVP in accordance with the existing water rights and regulatory criteria adopted by the State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The amount of water that DWR and Reclamation can divert from the new north Delta facilities is set by Federal regulating agencies, ESA compliance and project design, and not by the water contractors. Operations for the Proposed Project would still be consistent with the criteria set by the U.S. Fish and Wildlife Service and National Marine Fisheries Service biological opinions and State Water Resources Control Board Water Right Decision 1641 (D-1641), subject to adjustments made pursuant to the project and the adaptive management process, as described in Chapter 5, Water Supply of the EIR/EIS.</p> <p>Please see Master Response 14 related to potential changes in conditions in San Francisco Bay with implementation of the action alternatives as compared to the Existing Conditions and the No Action Alternative.</p>
2611	2	The RDEIR/SDEIS violates the California Environmental Quality Act and the National Environmental Policy Act by failing to fully disclose environmental impacts and evaluate a reasonable range of alternatives. The RDEIR/SDEIS does not fully consider the impacts of the TTP, such as impacts on public health, water quality, fishing, land use, and flood risk. It fails to provide a clear, understandable and accurate assessment of the likely environmental impacts of the alternatives proposed. Nor does the RDEIR/SDEIS evaluate a reasonable range of alternatives to address whether there is even a need for the TTP. (See also the Comment Letter of Dr. Jeffrey Michael dated October 30, 2015.)	<p>The BDCP/ California WaterFix EIR/EIS evaluates 18 action alternatives. The action alternatives were selected through a rigorous three-step screening process and documented in Appendix 3A, Identification of Water Conveyance Alternatives- Conservation Measure 1, of the 2013 Draft EIR/EIS. The lead agencies believe that the EIR/EIS meets CEQA and NEPA requirements to evaluate a range of alternatives. For more information regarding alternatives to the proposed project please see Master Response 4.</p> <p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>The size and complexity of these drafts reflect an unprecedented effort to analyze a proposed project under both state and federal laws for endangered species along with 17 other action alternatives. For more information regarding the document's length and complexity please see Master Response 38.</p> <p>To review responses to comments submitted by Jeffery Michael during the 2013 and/or 2015 comment periods, please refer to the index of commenters to find the appropriate letter number(s).</p>
2612	1	The Bay Delta Conservation Plan began on a faulty premise. The damage that will be done and the potential mitigation/litigation costs will be astronomical. Assuming the proponents for the diversions were justified and not just [trying] to grab precious water from individuals posing as water districts, how should this project have been approached? First, why would you propose to do the diversion in the most expensive and damaging place possible -- the middle of the Delta? I am familiar with the area and the best places (least damaging, least expensive) would have been in more rural areas to	<p>DWR staff will continue seeking improvements and refinements to the current proposal in order to enhance species benefits and to avoid, reduce or mitigate for negative impacts to people, communities, sensitive species and habitats.</p> <p>Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1, EIR/EIS, describes the range of conveyance alternatives considered in the development of the EIR/EIS. Appendix 1B, Water Storage, EIR/EIS, describes the potential for additional water storage and Appendix 1C, Demand</p>

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		<p>the north (not affecting the Delta water and environmental dynamics) or to the south which would have avoided the Delta entirely. Instead you have spent millions and millions of dollars to justify putting the tunnels in the most sensitive (fish and game habitat, the best farmland in the country, levees, water source for millions of people in local communities) location possible. While I have heard that the southern divergence was unacceptable because they wanted higher-quality water, at what cost and for whose benefit? There is also the rumor that once that water is used in certain locations, the water will be tainted and unusable again.</p> <p>The water problem has never been one of transportation, but of capturing the water.</p> <p>Instead of spending millions of dollars to ruin the Delta and with an El Nino pending, the result will be one of the greatest failures of this agency's stewardship and is and will be near criminal in its negligence and malfeasance. I would not want my professional integrity associated with those responsible for this boondoggle. Considering that for reasons unknown, a northern divergence was not proposed or the costs even penciled out, I would like to show in comparison the inestimable mitigation costs which this group has totally underestimated or intentionally ignored.</p>	<p>Management Measures, EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including desalination. While these elements are not proposed as part of the proposed project, the Lead Agencies recognize that they are important tools in managing California's water resources.</p> <p>Please see Master Response 4 regarding the selection of alternatives analyzed, Master Response 7 regarding desalination, Master Response 6 regarding demand management and Master Response 37 regarding water storage.</p>
2612	2	<p>15.3.3 Mitigation: The more we understand the enormity of the construction of the traffic issues, the clearer it is that BDCP will be unable to "shut down" the Delta for the 9 to 15 years of its proposed construction. The residents are very familiar with the effects of trucking and related traffic. We experience near-shutdown conditions each year during the various harvests. What BDCP is proposing will dwarf the problems we have already seen. The bridges are often closed due to large trucks getting stuck trying to cross the narrow bridges with tight egress from the adjoining highways. And these are trucking firms familiar with navigating the bridges. The problems we see on a seasonal basis will be worse and an everyday experience. The plan is that nothing will occur during the winter months for fish, wildlife and potential flooding problems, which means that it will be closed for spring, summer, and fall months when all the recreation occurs. Boaters, visitors and tourists will not endure the traffic, the increased time travel, noise and truck traffic and related complications during the long period of construction. They come here to vacation and enjoy themselves. They will not venture anywhere in the Delta and deal with the headaches. It will affect every public and private marina and boating facility. The nightmare conditions will also affect residences and every business throughout the entire Delta, because the trucking and congestion problem will affect all the roads in and out of the Delta, because there are few access roads into the Delta.</p>	<p>Tourism and businesses are discussed in Chapter 16, Socioeconomics, rather than in Chapter 15. Please refer to Chapter 16, Socioeconomics, Impacts ECON-1, 3, and 5 regarding impacts to regional economics, changes in community character, and effects on recreational economics.</p> <p>Construction traffic is discussed in Impact REC-2, and also in Chapter 19, Transportation, Section 19.3.3.2. Several mitigation measures would be incorporated to reduce impacts as much as possible. Mitigation Measure TRANS-1a would involve preparation of site-specific construction traffic management plans that would address potential public access routes and provide construction information notification to local residents and recreation areas/businesses. Additionally, DWR would provide and publicize alternative modes of access to affected recreation areas as an environmental commitment. Where construction impedes access around or near existing recreation areas (e.g., Clifton Court forebay), the project proponents would provide clear pedestrian, bicycle, and vehicular routes around or across construction sites. These would be designed to be safe, pleasant and would integrate with opportunities to view the construction site as an additional area of interest. These physical facilities would be combined with public information, including sidewalk wayfinding information that would clearly indicate present and future opportunities for access. Mitigation Measure TRANS-1b would limit construction hours or activities and prohibit construction vehicle trips on congested roadway segments and Mitigation Measure TRANS-1c would implement measures to enhance capacity of congested roadway segments.</p>
2612	3	<p>Chapter 15 Recreation: The comments about the socioeconomics relating to tourism are a joke. There will be no tourism or recreation during the 15 years of the project. You will bankrupt all tourism and related industries in the region. No one is going to want to come here to smell diesel exhaust fumes and put up with stop-and-go traffic. No one is going to want to put up with traffic jams and truck noise for most of their time here. They will not come. There is discussion of alternatives? There are no alternatives. Are you prepared to mitigate for the loss of all the businesses in the Delta? What about the expectation of quiet enjoyment of your home? Will you compensate them for the 15-year loss of livable conditions?</p>	<p>Details related to changes in community character and recreation during the construction period are discussed in Impacts ECON-3 and 5 in Chapter 16, Socioeconomics. Please also see Master Response 24 regarding the Delta as a Place. Implementation of mitigation measures and environmental commitments related to noise, visual effects, transportation, agriculture, and recreation, would reduce adverse effects as much as possible (see Appendix 3B, Environmental Commitments, AMMs, and CMs). While construction of the proposed project is anticipated to take 15 years, construction will be staggered across the footprint. For a full construction schedule, please see Appendix 22B.</p>
2612	4	<p>Chapter 15 Recreation: There were comments about sufficient areas for housing for the construction. There are no areas for housing a workforce, unless you anticipate them living in the homes abandoned by the current residents. Under the conditions that will</p>	<p>The proposed project would not permanently displace public or private recreational facilities, as described in Impact REC-1. However, it would result in the long-term reduction of recreation opportunities, as described in Impact REC-2, which would be a significant and adverse effect. For more information regarding impacts to</p>

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		occur, even the workforce will not want to live here and will be required to live outside of the Delta and will just increase the vehicle traffic and congestion. The report indicates there will be no adverse effects on regional parks or recreational facilities, which is true, because no one will be around and they will not be used.	recreation and its associated mitigation measures please see Chapter 15 of the FEIR/EIS.
2612	5	Chapter 15 Recreation: There are comments regarding the aesthetic and visual resources. There are only negative resources. The project will be ugly from beginning to end and the tunnels will be an eyesore in perpetuity.	Resource areas are addressed separately under sections for each of the new project Alternatives, including Aesthetics/Visual (Chapter 17) and Recreation (Chapter 15). Where impacts are determined to be significant, environmental commitments and mitigation measures will be implemented to avoid and/or offset these effects, where possible.
2612	6	Chapter 15 Recreation: The most galling statements were that noise traffic modeling indicates that truck hauling and worker commutes would not result in substantial increases in local noise levels. How can they make statements like that in the report? It calls into question all of their statements, it is so absurd and incredulous. I live here and do not know about modeling but we can hear trucks and farm equipment from across the river if they are running in front of our home. Trucks that go by the front of our house are very loud and to make statements otherwise [is] irresponsible.	The statement in Chapter 15 has been revised to be consistent with the findings in Chapter 23, which indicate project related traffic would result in a substantial increase to noise levels at residences, parks and recreational uses. This increase would exceed the project threshold for traffic noise along project roadway segments identified in Chapter 23. Implementation of Mitigation Measures NOI-1A and 1B would reduce impacts, but not necessarily to a less than significant level, and therefore these impacts are considered to be significant and unavoidable. Noise impacts are considered in the recreation analysis for each alternative, and are described by recreation location in Table 15-15 for the proposed alternative.
2612	7	To dismiss out of hand that the Sacramento and San Joaquin River flows are "less than significant" and so no determination need be made for reverse flow conditions is irresponsible. We have significant tidal action and during the drought those flows have been dramatic.	The comment refers to the determination that the changes in tidal flows in Old and Middle River, including reverse flow conditions, under the proposed project as compared to Existing Conditions or the No Action Alternative are less than significant. The statement in the EIR/EIS is not referring to the effects of reverse flows on recreation in an absolute value, but only the incremental difference of conditions with the project as compared to conditions without the project.
2612	8	I have a full time job and have to constantly respond to Federal, State and County agencies trying to take more and more control over my private property. In this instance, to address the ruination of the Delta for which you have spent untold millions of dollars and untold man/woman hours to justify the taking of our water and land rights and done in thousands of pages that no one individual can read or defend. I was also hospitalized and still recovering. I just did not have the time, nor would I have had the time to address all the issues and problems raised. However, the thousands of pages of paid-for science will not change what is lacking in common sense and simple logic. You will not be able to hide behind the sheer volume of the report to remove your culpability. You are on notice that the damage that you will cause, you will not be able to mitigate, and for which you will be held accountable.	For more information, please see Master Response 38 regarding the length and complexity of the document. For more information regarding purpose and need please see Master Response 3. For more information regarding mitigation for the proposed project please see the MMRP in the Final document.
2612	9	With regard to the Long-Term Reduction in Boating and related Recreation Opportunities, you state that "because the details surrounding the location and implementation of many of the measures are under development, these topics are addressed at a programmatic level." What does that mean? What it means to me is that you are not really going to address the problem. The truth is that the reduction in boating will be catastrophic. The traffic and congestion alone will slaughter the industry. People already complain about how expensive it is to own and moor their boats. The boaters will not put up with 15 years of what you propose. Boaters want to come here and enjoy themselves. Nobody enjoys constant traffic. That is the reality: the tunnels will end boating! Are you ready to mitigate for that?	The analysis for CMs 2-21 was completed at a programmatic level, as described in Section 4.1.2 of Chapter 4, Approach to the Environmental Analysis. Waterways will still be navigable during construction and operation of the proposed project. The proposed project would result in temporary impacts to boaters and on-water recreationists. The specific lengths and distances of project features have been included in Impact REC-3. The project includes plans to reduce those impacts as much as possible with implementation of environmental commitments to prepare and implement a water navigation plan and provide notification of construction and maintenance activities in waterways (Appendix 3B, Environmental Commitments). Additionally, Mitigation Measure TRANS-1a would reduce impacts on marine navigation by development and implementation of site-specific construction traffic management plans, including specific measures related to management of barges and stipulations to notify the commercial and leisure boating communities of proposed barge operations in the waterways. Barge routes and landing sites will be selected by the construction contractor and will be expected to comply with the following

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			<p>criteria:</p> <ul style="list-style-type: none"> • Maximize continuous waterway access between departure port and shaft site • Maintain minimum waterway width greater than 100 feet (assuming maximum barge width of 50 feet) • Use of existing barge landings where possible • Minimum water depth of 6 feet
2612	10	[ATT1: BDCP comment letter 1747]	This comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2613	1	I say no to the water intakes and no to the tunnels. I thought the government was run by the people. What happened?	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S.
2613	2	The old saying "Don't mess with Mother Nature" will be so evident if these intakes and tunnels are built to take fresh water out of the Sacramento River. Common sense tells me if you pump a large volume of water out through tunnels underground, as the tide rises salt water will move in to take the place as fresh water. This will disrupt and destroy the Delta as we know it. What will happen to the fresh water species, birds, and wildlife? What about farming? I don't know of many crops that can grow on salt water.	<p>Salinity in the Delta is a function of the amount and timing of freshwater input from the major tributaries, tidal action from San Francisco Bay, and exports from the Delta. During the late winter and spring months of seasonally elevated flows, and in wet years, seawater intrusion is limited and the Delta has mostly low salinity. During low-flow summer and fall months, and during dry years, lower freshwater flows result in greater amounts of seawater intrusion. Staff from DWR and USBR constantly monitor Delta water quality conditions and adjust operations of the SWP and CVP in real time as necessary to meet water quality objectives set by the State Water Resource Control Board protection of agricultural water supply, municipal and industrial drinking water supply, and fish and wildlife beneficial uses. See section 4.3.4 for a discussion on the proposed projects effects on water quality, salinity and electrical conductivity.</p> <p>Effects of the alternatives on salinity levels are described in Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity, EIR/EIS and Appendix A of the RDEIR/SDEIS. Modeling results indicate that the implementation of the water conveyance facilities may positively or adversely affect in-Delta water quality, depending on a number of factors including location, time of year, and hydrologic conditions. See tables in Appendices 8E through 8N for specific results related to various water quality constituents (including bromide and chloride).</p> <p>In addition to potential effects associated with the project and alternatives, modeling results for the No Action Alternative indicate that, with or without the proposed project, rising sea levels will bring saline tidal water further into the Delta than occurs at present.</p>
2613	3	Why is it so difficult for college-educated Representatives to understand this common sense issue? I suspect preserving the environment has nothing to do with their intentions. Could it be greed, money, and status?	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2613	4	With the wonderful scientific knowledge and engineering we are capable of today, I am sure we can come up with a much better solution to provide water to those in need, such as desalination and recycling greywater.	Appendix 1C of the Final EIR/EIS, Demand Management Measures, describes conservation, water use efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project. Refer to Master Response 7 for information on why desalination was not included in the proposed project. Also, please see Master Response 3 for additional details on the project purpose and need.
2614	1	Our winter-run Chinook salmon are suffering a 95% morality rate this year in the Sacramento River. National Marine Fisheries Service is expecting just 4-5% survival rate	For information about effects of the preferred alternative, Alternative 4A, on winter-run Chinook salmon, please see Chapter 11, Fish and Aquatic Resources, which indicates that effects would not be adverse. The

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		this year of this very important salmon run. The proposed plan misses this reality, as clearly there is no room to further manipulate this ecosystem. The conservation plan for these Chinook was developed in 2009 and the result, through more than a full life cycle, is that we are killing 95 out of every 100 fish. Now, in 2015, our state and federal water agencies are proposing to build massive tunnels to further reduce out water management options and provide even less ability to exercise the precautionary principle for species protection. This proposed California WaterFix fails in the science of conservation biology. The RDEIR/SDEIS fails in its alternatives analysis, its use of science, and its public disclosure of significant and cumulative impacts.	preferred alternative is not part of a habitat conservation plan and the determination of whether the alternative causes jeopardy to the continued existence of winter-run Chinook salmon and its critical habitat will be determined by NMFS as part of a separate ESA Section 7 consultation.
2614	2	The Delta tunnels/California WaterFix plan will neither appropriately nor effectively prepare California for the longer and hotter droughts of our future. The plan fails to describe and evaluate alternatives or subsets of alternatives that are ripe and should be fundamental to assessing a real water fix: a reworking of the policies and management practices to actually achieve aggressive water conservation and substantively penalize water profiteering and resource degradation; an alternative that would effectively utilize and accelerate emerging demand management technologies to achieve reductions in agricultural water use equal to or greater than the fix could deliver; and invest in the monitoring and real-time management of our water and groundwater resources to achieve efficiencies and demand reductions that many other states and countries have already proven to be attainable. The "smart investments" warrant serious evaluations before we invest in a major infrastructure project that carries significant economic and environmental risks. A project purpose of a big water fix shoulders the responsibility to look hard and objectively at the systemic causes of our water system failures. The agencies responsible for this fix should not limit themselves to only those alternatives they know how to implement. The proposed fix builds on the past legacies of big projects that further exacerbate our recurring problems of ever-growing demands in desert climates that result in continues ecosystem degradation and highly subsidized economic and social structures.	This comment is on the merits of the action alternatives presented in the EIR/EIS and proposes a broader more comprehensive approach to water resources management in California. While many of these approaches were considered for review in the EIR/EIS (please refer to Appendix 3A for a screening analysis and discussion of other alternatives considered), many including water conservation and demand management are independent state programs that would complement the California WaterFix, not replace it. These and other water resources management actions are presented in and are being implemented under the California Water Action Plan. Please refer also to Master Response 6, related to desalination and demand management approaches and Appendix 1C, Demand Management Measures.
2614	3	The pan fails to demonstrate credible means to protect the Chinook and numerous other endangered and at-risk species, species that were to be protected in several past state and federal "commitments" that have not achieved meaningful species recovery. This plan provides no confidence for achieving the necessary recovery of salmonid and smelt species that are continuing to this day on an accelerating path to extinction.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.
2614	4	The proposed plan does not provide a path to the vastly greater conservation we must achieve in agriculture, which is our single greatest opportunity to fix our shortfalls. The plan does not meaningfully address how we will restore the tremendous water resource losses caused by subsidence. A "California WaterFix" carries that restoration burden.	The Proposed Project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in agricultural and municipal/industrial water conservation, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Water Demand Management). Other programs including the California Water Action Plan recognize that all Californians have a stake in the future of our state's water resources, and that a series of actions are needed to comprehensively address the water issues before us. The five-year agenda spells out a suite of actions in California to improve the reliability and resiliency of water resources and to restore habitat and species — all amid the uncertainty of drought and climate change. For more information regarding future developments of the California Action Water Plan please follow http://resources.ca.gov/docs/Final_Water_Action_Plan_Press_Release_1-27-14.pdf . The California Water Plan evaluates different combinations of regional and statewide resources management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. Follow the California Water Plan here: http://www.waterplan.water.ca.gov/ .

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			Recent adoption of the Sustainable Groundwater Management Act will implement groundwater monitoring programs and require implementation of groundwater sustainability plans throughout California, including in areas with ongoing subsidence issues.
2614	5	The Delta Reform Act of 2009 committed to protecting and restoring cultural, recreational, natural resource, and agricultural values of the Delta. Additionally, our water agencies gave the Public Trust responsibility to protect our Public Trust resources for future generations. This plan does not describe how the resources of the Delta will be restored and protected sufficient to meet the needs of future generations. Many of our Public Trust assets (fisheries, wildlife, clean and sufficient water) have been significantly degraded and will require substantive restoration to meet the needs of future generations and the natural resources of the Delta. The plan fails to adequately describe the future water quality and water quantity needs to the Delta and the San Francisco estuary ecosystems, when we will experience decades-long droughts and Central Valley agriculture shifts to hotter temperatures, less surface water, and very limited groundwater. A proposed action that will impact the next century and several Public Trust resources must more coherently describe what the resulting conditions of those resources could look like.	<p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility. Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project.</p> <p>For more information regarding the proposed project's compliance with the Delta Reform Act and climate change please see Master Response 31. For more information regarding BDCP compliance with the Delta Reform Act please see Appendix 3I, and for 4A consistency with the Delta Plan please see Appendix 3J of the FEIR/EIS.</p>
2614	6	This 'fix' does not provide a compelling case for the tunnels. Reviewing the growing body of science from climate shifts to legacy soil and water contamination in the Central Valley, one must question if the tunnels would have utility within three decades. In addition, the available flows will be far less and the economic and technology shifts affecting water will be substantial in both the agriculture and urban environments. And how will more reliable water result when the Delta watershed is already oversubscribed by five times and future watershed yields will fall far short of today's and tomorrow's demands, let alone the greater ecosystem needs of the Sacramento Basin and the San Francisco Estuary?	<p>As described in Chapter 5, Water Supply, the No Action Alternative and the action alternatives are evaluated with assumptions for future climate change and sea level rise. As indicated in Chapter 5, the effects of climate change and sea level rise will reduce available water supplies for many water users, including the SWP and CVP water users.</p> <p>The anticipated hydrologic changes due to climate change (increased temperatures and more years of critical dryness, increased water temperatures, changes in precipitation and runoff patterns, sea level rise, and tidal variations) will indeed constrain and challenge future water management practices across the state, with or without the projects. The state is addressing climate change through strategies and a decision-making framework as outlined in the California Climate Adaptation Strategy and Adaptation Planning Guide. However, no single project and indeed none of the action alternatives would be able to completely counteract all of the impacts of climate change.</p> <p>The project would help to address the resilience and adaptability of the Delta to climate change through added water management flexibility created by new water diversions and operational scenarios. Under the Proposed Project, SWP and CVP exports would be similar or less than under Existing Conditions or the No Action Alternative. Over the long-term, the proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries in drier periods.</p>
2614	7	The plan does not provide the serious alternative analyses that water recycling, stormwater harvesting, and aggressive conservation deserve. The RDEIS/SDEIS should not shy away from providing an evaluation of conservation drivers such as aggressive pricing, significant penalty systems, outcome-based subsidies, and diet-based household water management. These demand-side alternatives have far greater economic value to the state, spreading job opportunities throughout the state instead of concentrating massive public finds on a narrow geographic area and in a limited sector of the economy.	Appendix 1C of the Final EIR/EIS, Demand Management Measures, describes conservation, water use efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project. Also, please refer to Master Response 4 for additional details on the selection of alternatives and Master Response 3 for information on the project purpose and need.

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2614	8	Salinity intrusion is impacting Delta farms, the native fisheries, and the habitats of numerous at-risk terrestrial species. Climate shifts will make these conditions worse. How does the "fix" reconcile taking even more fresh water out of this system? Given that the costs and economic justification for the tunnels will require maximizing opportunities to use them, should we expect regular waivers for water quality and "adjustments" to species protection obligations? Will the precautionary principle be ignored as it has been with the winter-run Chinook?	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/EIS.
2614	9	Our state and federal agencies must not get lulled into thinking that a very expensive public works project demonstrates a serious effort to fix things for a better water future. This plan is an old fix that will do little to correct our recurring water crises. The public needs a new fix of aggressive conservation, water recycling, stormwater harvesting, farm subsidy reprogramming, and a much clearer integration of our water and climate goals. The plan must address the Public Trust responsibilities of the water agencies, their specific goals and actions for Trust Asset replenishment, and the asset protection necessary to meet the needs of future generations.	<p>The proposed project is one component, among many, of the California Water Action Plan. The California Water Plan evaluates different combinations of regional and statewide resources management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. Follow the California Water Plan here: http://www.waterplan.water.ca.gov/.</p> <p>Appendix 1C of the Final EIR/EIS, Demand Management Measures, describes conservation, water use efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project.</p> <p>Also, please refer to Master Response 4 for additional details on the selection of alternatives and Master Response 3 for information on the project purpose and need.</p> <p>Discussion of the Public Trust Doctrine as it relates to the California WaterFix is included in Chapter 31, Other CEQA/NEPA Required Sections, including Mitigation and Environmental Commitment Impacts, Environmentally Superior Alternative, and Public Trust Considerations</p>
2614	10	The California WaterFix by title and by price tag warrant bold, new, and dynamic thinking. The tunnels fail the tests of good stewardship, real sustainability, meaningful conservation, clear vision, and Public Trust accountability. We can and must do better for a genuine fix.	<p>The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project. Please see Master Response 5 for more information on costs and funding.</p>
2616	1	We applaud the recent comments by Governor Brown: "The Delta pipeline is essential to completing Water Project and protecting fish and water quality. Without this fix, San Joaquin farms, Silicon Valley and other vital centers of the California economy will suffer devastating losses in their water supply. Claims to the contrary are false, shameful and do a profound disservice to California's future." We respectfully urge the Department of Water Resources and the Administration to move forward to bring this plan to fruition.	<p>This comment letter is in part a form letter that has been submitted by many commenters. To locate the response to the form letter portion of the comment, please refer to the index of commenters in Chapter 4 of Volume II of the Final EIR/EIS, and cross reference the Form Master letter number shown there with the index of Form Masters also provided in Chapter 4 of Volume II of the Final EIR/EIS. The text below responds to the specific substantive portions of the comment letter that were submitted by the commenter.</p> <p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.</p>
2617	1	I am against the Governor's plan for the Department of Water Resources and the U.S.	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S. By establishing a point of water diversion in the north

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		<p>Bureau of Reclamation for the BDCP/ California Water Fix.</p> <p>It would hurt too many people, farmers, homeowners and our beautiful Delta. We deserve a better solution and a more prudent investment to address the state's water supply needs.</p>	<p>Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility. Refer to Master Response 3 (Purpose and Need) and Master Response 24 (Delta As A Place).</p>
2618	1	<p>The problem is that under "normal" weather conditions in California, there is not enough water to supply all the users at unrestricted levels. Plus, with a steady increase of the population, the requirement for water for human use will have to displace some of the water used for intensely irrigated, marginal agricultural land.</p> <p>This four year drought has pointed out that we need more water resources to provide for our current and future requirements. The Delta Tunnel project will create no new water for our use, and it will have a negative impact on the delta fisheries, as well as the Delta farmers, and a cascade of other environmental issues. It may benefit some San Joaquin Valley farmers in the short term, but without more water from somewhere, the farmers will be shut down progressively over time anyhow as human requirements for water increase.</p>	<p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. The hydrologic analysis in the EIR/S considered changes over long-term conditions which includes high flow events and drought periods, conditions similar to the 1976-1977 and 1987-1992 droughts, as described in Appendix 5A, Modeling Technical Appendix. Water delivered to the SWP and CVP water contractors participating in proposed project would be within the existing contract amounts to serve agricultural lands that have been cultivated and existing and planned community populations. As described in Chapter 5, Water Supply, of the EIR/S, it is anticipated that climate change would result in more frequent and more severe rainfall events and less snowfall than under historic conditions. These rainfall events would result in periods of time when the capacity of the existing intakes would not be adequate. Therefore, the proposed project would provide the maximum capacity in the intakes and tunnels during those periods of time to convey water during extremely wet periods to areas south of the Delta for storage and use during drier times. The proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase flows in the wet winter months when the river flows are high to improve conditions for aquatic resources. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries in drier periods. The north Delta and south Delta intakes would only be used to divert water under existing water rights that were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements.</p> <p>All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights that were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. DWR and Reclamation operate with water rights issued by the State Water Resources Control Board that are junior in priority to many senior water rights holders in the Delta watershed. Under the action alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative. Conveyance facilities under the action alternatives could only deliver the amount of water diverted under the existing SWP and CVP water rights and in accordance with the existing and future related regulatory requirements based upon river water levels and flow, water available in the system, the presence of threatened and endangered fish species, and water quality standards.</p>
2618	2	<p>I believe that the billions of dollars that would be spent on the Delta Tunnel project should go instead for desalination plants in coastal California, like the new one in Carlsbad, near San Diego. So, instead of trashing the Delta, there would be new potable water created right where it is needed (50,000,00 gallons/day/plant).</p>	<p>For more information regarding desalination please see Master Response 7.</p>
2619	1	<p>I wish to make known my objection to the proposed Delta tunnels. This issue should not be taken without the voters consent. The implications of what it will do to the Delta environmentally are clear. Without flow the whole area will increasingly become saline. Without the replenishing flows of fresh water the Bay will become more polluted and saline.</p>	<p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. The EIR/S modeling results for the No Action Alternative indicate that, with or without the project, rising sea levels will bring saline tidal water further into the Delta than occurs at present.</p>
2619	2	<p>I understand the problems of Southern California. But as it is we have no control over who gets to decide to plant a farm or what they grow. Why should the future of our beloved Bay and estuary be given over to such arbitrary decisions? So much work has been done to preserve the small bits of land surrounding the Bay for all species and</p>	<p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.</p> <p>The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such it is intended to be environmentally beneficial, not detrimental. By establishing a point</p>

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		plants that to do this is an insult to all that effort.	of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.
2619	3	If the issue is the levees, why not fix them instead? This is just another water grab by farmers. Why should they have the ultimate say in this matter that affects us all?	<p>Please see Chapter 2, FEIR/EIS, for the BDCP/CWF purpose and need, and Appendix 6A Sections 6A.2 and 6A.3 for discussion on existing levee improvement programs and funding mechanisms, which would not be affected by the BDCP/CWF.</p> <p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility. Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project.</p> <p>For more information regarding floods and levees please see Appendix 6A.</p>
2620	1	<p>We have been following this matter since it was first envisioned by Governor Brown five years ago with grave and multiple major concerns, because it is nothing more than a water grab to ship more water to Southern California, with virtually no regard to the severe negative environmental impact on the entire Sacramento, San Joaquin and Suisun Deltas.</p> <p>Today, we read the article in the San Francisco "Open Forum", authored by Mr. Gary Bobbker, Director of the Bay Institute and Barbara Barrigan-Parilla, Executive Director of Restore the Delta and as result we concur and support their comments and let me explain why.</p> <p>I have hunted in the Suisun Marsh for well over 70 years and some years ago we, formally organized a Reclamation District, managing some 1000 acres of agricultural and managed wetlands. As a result we have the necessary experience and extreme knowledge of the ever-changing and/or negative impact on the 77,000 acres of property known as the Suisun Delta.</p> <p>We have been amazed to the claims, on how the pending and/or proposed program to divert more than 60% of the fresh water that flows through into the Sacramento, San Joaquin and Suisun Deltas, by means of a 22 billion dollar so called "Twin Tunnels" that if and when they should be built and come into operation we, are not only amazed but appalled by the ludicrous claim that these tunnels will, amongst others, "enhance the environment and the fish and wildlife in the entire Delta System," this claim being offered by not only Governor Jerry Brown, but the Head of Fish and Wildlife Department Charlton Bonham. As a member of the Suisun Resource Conservation District we are appalled to see that he is in full support of Governor Brown's proposal to create the twenty two billion dollar boondoggle, but Jerry Brown signs his check, what else can one expect?</p> <p>Once again, the matter of the diverting more water to Southern California and the</p>	<p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>The proposed project was developed to meet the rigorous standards of the federal and State Endangered Species Acts; as such the proposed project is intended to be environmentally beneficial. By establishing a point of water diversion in the north Delta and new operating criteria to improve water, timing to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>The environmental impacts, whether adverse or beneficial, are described in the 2015 RDEIR/SDEIS. No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised by this comment.</p>

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		<p>growing opposition to it, is getting to become more intense as indicated in the prominent news media, especially since out Governor, Jerry Brown, is attempting to ram the project down our throats, regardless of cost or negative environmental consequence, possibly as his last chance effort to follow the legacy of his father, Pat Brown, in Jerry's waning political years.</p>	
2620	2	<p>The project, as being proposed, by taking massive quantities of fresh water from the confluence of the Northern California rivers, somewhere east of Sacramento, divert it under ground in these massive "twin tunnels" to the existing location near the pumps in Tracy.</p> <p>The question that all the so called "proponents", including California Fish and Wildlife and some members of commissions who allegedly manage our water, whom support the project no one asks let alone answers as to what would replace the fresh water before it enters the combined Deltas?</p> <p>Remember, the historical water flow will be diverted before it even enters the Sacramento/San Joaquin Delta and including the Suisun Delta, water that is presently used for irrigation and flushing the Delta complex.</p> <p>We are not talking about "gallons" of fresh water a day, we are talking volumes of fresh water measured in "millions of acre feet."</p> <p>No one needs to be a rocket scientist to know water seeks its own level and combined with tides from the San Francisco Bay, with that loss of fresh water from California Deltas, will surely be replaced with salt water.</p> <p>Somehow, the Governor, his aids and supporters ignore this glaring fact.</p> <p>This is a fact and a basic matter of physics. Yet, until recently, this fact has not been addressed, especially by entities like the U.S. Fish and Wildlife Service and now the California Department of Fish and Wildlife, who have come out in favor of the twin tunnel diversion program, which is as incomprehensible as it is ludicrous.</p>	<p>Regarding your comment about the "loss of fresh water from " the Delta, please see Master Response 14.</p> <p>Model results show that long-term average Delta outflow under Alternative 4 (scenarios H1 - H4 at LLT) would be similar to that under Existing Conditions and No Action Alternative, with a minor increase in flows during the winter months and a minor reduction in flows during the spring months relative to Existing Conditions due to the shift in system inflows caused by climate change, as well as increased water demand expected in the LLT. In wet water year types, this trend is more evident, while in other water year types, Delta outflow under Existing Conditions and the No Action Alternative is generally within the range of Alternative 4 H1 - H4 scenarios. For more information and specific modeling results for all Alternatives, please refer to Chapter 5, Water Supply, and Appendix 5A, BDCP/California WaterFix EIR/S Modeling Technical Appendix</p>
2620	3	<p>Further, when the so called "California Canal" was envisioned, the CEQA and/or EIRs that were required at that time, did not have anywhere near the compressive reviews and assessments that are required by today's standards.</p> <p>If they did the twin canals surely would not have been built.</p> <p>This is fact, because of the known negative environmental impact on just the Suisun Delta for the past 20 years, which no one wants to acknowledge.</p> <p>The known fact of the already significant negative environmental impact on the 77,000 acre Suisun Marsh and surrounding areas when the pumps were turned on and diverted water to Southern California decades ago, for all practical purposes, have been ignored.</p> <p>The point being, the Suisun Marsh experience should be a premier eye opening example of what happens when salt water replaces traditional fresh water flows that passed through the Delta Area prior to the California Canal becoming operational.</p> <p>As a result, the river water that once irrigated crops and historical vegetation to attract water fowl is not compatible to the past environments because the salinity has</p>	<p>The issue raised by the commenter addresses the merits of the project and does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>

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		increased so much and can no longer sustain crops and other vegetation that was traditional to the 77,000 acre Delta complex.	
2620	4	Aside from the loss of fresh water for irrigation, the loss of historical vegetation and food for migrating waterfowl, then how about a fish for another example? The somewhat infamous Delta smelt, the so called "measuring rod" of the overall health of the Suisun Delta is in decline. Some blame the pumps chewing up the breeding stock, others blame the industrial water pollution and other factors. Might I suggest increased salinity is either killing the fish and/or forcing them east, where the water is less saline, you think?	Please refer to Appendix 11A, Covered Fish Species Descriptions, for a discussion of factors thought to affect covered fishes, included delta smelt.
2620	5	If and when these proposed tunnels should become reality, it will surely spell doom to the 77,000 acre Suisun Delta complex, because it will be surrounded completely by 100% saline water immediately and eventually to the balance of the thousands of acres, or more, of prime agricultural lands in the Sacramento/San Joaquin Delta as we know it today who rely on this water for irrigation.	With regard to your comment about the Delta being "surrounded completely by 100% saline water," please see response to comment 2620-6, below.
2620	6	Further, if the Governor and his paid consultants, under the guise of "Saving the Delta" is one of the most outrageous claims that could ever be considered and frankly speaking, is an outrageous misrepresentations of the truth, more specific, an outright lie. Simply put, if he has his pending, dictatorial and unrestricted way, it will surely be an environmental disaster for the entire Delta system because of the inevitable and undeniable intrusion of salt water replacing millions of acre feet of fresh California river water. Further, not only will the water be contaminated for humanity, irrigation, fish and wildlife; eventually, the aquifers, which provide drinking water for humanity and livestock will forever be terminated, a disaster beyond comprehension.	Salinity in the Delta is a function of the amount and timing of freshwater input from the major tributaries, tidal action from San Francisco Bay, and exports from the Delta. During the late winter and spring months of seasonally elevated flows, and in wet years, seawater intrusion is limited and the Delta has mostly low salinity. During low-flow summer and fall months, and during dry years, lower freshwater flows result in greater amounts of seawater intrusion. Staff from DWR and USBR constantly monitor Delta water quality conditions and adjust operations of the SWP and CVP in real time as necessary to meet water quality objectives set by the State Water Resource Control Board for protection of agricultural water supply, municipal and industrial drinking water supply, and fish and wildlife beneficial uses. See section 4.3.4 for a discussion of the proposed project effects on water quality, salinity and electrical conductivity. Effects of the alternatives on salinity levels are described in Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity, EIR/EIS and Appendix A of the RDEIR/SDEIS. Modeling results indicate that the implementation of the water conveyance facilities may positively or adversely affect in-Delta water quality, depending on a number of factors including location, time of year, and hydrologic conditions. See tables in Appendices 8E through 8N for specific results related to various water quality constituents (including bromide and chloride). In addition to potential effects associated with the project and alternatives, modeling results for the No Action Alternative indicate that, with or without the proposed project, rising sea levels will bring saline tidal water further into the Delta than occurs at present. In regard to water quality, please also see Master Response 14.
2620	7	The current California Canal System has already demonstrated the fact that by diverting a comparatively small quantity of water from the traditional water flows have already resulted in a significant negative environmental impact on only a portion of the Northern California Delta system. Are we the people pf Northern California so ignorant as to allow the planned massive environmental disaster and multibillion dollar boondoggle to become reality? God help us. I surely hope not. Let us all rally to stop this pending, massive disaster.	The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts; as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria to improve water timing designed to improve native fish migratory patterns and allow for greater operational flexibility. No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.
2621	1	It is imperative that alternate solutions be developed to provide water to the farmlands of the San Joaquin Valley other than piping water from the Sacramento Valley. I call your attention to the "Open Forum" column that appeared in the San Francisco Chronicle on Tuesday October 27, 2015. The statement authored by Gary Bobker, rivers and Delta	A wide range of alternatives have been considered for analysis in the EIR/EIS. Appendix 3A, provides a screening analysis of alternatives considered but not included in the EIR/EIS, including discussion of alternative proposals received during public review of the Draft EIR/EIS and RDEIR/SDEIS. Please also refer to

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		<p>program director for the Bay Institute, and Barbara B. Parrilla, executive director of Restore the Delta, suggests workable solutions. As a geographer and a longtime observer of water problems of the entire state of California I urge you to consider their proposals.</p>	<p>Master Response 4, which addresses the EIR/EIS alternatives development.</p>
2622	1	<p>Procedural Issues Pertaining to Public Review Process</p> <p>LAND [Local Agencies of the North Delta] objects both to the failure to make comments on the 2013 Draft Bay Delta Conservation Plan and Associated Draft Environmental Impact Report/Environmental Impact Statement (2013 “BDCP” and “DEIR/S”) available to the public [Foot Note 2: Access to these comments was made possible not by the lead agencies, but by a non-profit river advocacy group, Friends of the River, which obtained the comments through public records requests and posted them on its own website at: http://www.friendsoftheriver.org/site/PageServer?pagename=bdcpccomments.] and the failure to provide responses to comments as required under the California Environmental Quality Act (Pub. Resources Code, §§ 21000 et seq. (“CEQA”); CEQA Guidelines, § 15088) and NEPA (40 C.F.R. 1503.4). The public disclosure purposes of CEQA and NEPA are not met when lead agencies actively frustrate public review by limiting access to the comments of others and unnecessarily delaying responses to comments. At the very least, an index of changes made in response to comments should have been provided with the RDEIR/S to assist in public review of the document.</p> <p>It is noted that many exhaustive comment letters were submitted in 2014 and are being submitted now by other entities explaining in detail their concerns about the legal and scientific adequacy of the Tunnel documents. The comments in this letter do not attempt to catalogue all defects in the documents. LAND incorporates by reference all other comments that pertain to the protection of the unique cultural, agricultural and environmental values of the Sacramento San Joaquin Delta.</p> <p>LAND’s prior comments submitted in 2014 are relevant to the WaterFix (“Alt. 4A), except where the specific elements are no longer contained in Alt. 4A. The lead agencies are in the best position to determine the applicability of LAND’s prior comments to Alt. 4A since no responses to our July 29, 2014 letter, or even an index of the changes made pursuant to comments, has been provided. We request responses to all of our prior comments as they pertain to Alt. 4A, in addition to these comments and the attached expert reports.</p>	<p>The obligations of California public agencies under Article 1, section 3(b)(1), of the California Constitution and under the Public Records Act, do not include any obligation to post comments on draft environmental documents on agency websites as such comments come in from the public and interested agencies. Rather, those statutes deal with the obligation for public agencies to hold certain kinds of meetings of public bodies and public officials in public, and to make non-privileged documents of various kinds available to members of the public in response to formal requests. To date, neither the California Legislature nor Congress has required Lead Agencies for CEQA and NEPA documents to post comments on draft environmental documents on their websites during the public review periods for those draft documents.</p> <p>Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Response 42 regarding treatment of public comments.</p>
2622	2	<p>The RDEIR/S claims that changes to the project are being made in response to public comments. (RDEIR/S, pp. 4.1.2 to 4.1.4.) The changes to Alternative 4 (“Alt. 4” or “BDCP”) made to create Alt. 4A, however, are not fully responsive to concerns voiced in LAND’s [Local Agencies of the North Delta] prior comment letters or anything that has occurred during the last eight years of the process; LAND is unaware how the changes included in Alt. 4A respond to particular public comments, nor are any specifics discussed in the RDEIR/S. While the dramatic reduction in the scope of planned restoration alleviates some concerns regarding the massive scale of conversion of farmland to habitat and other impacts to agricultural operations, for instance, the change away from a commitment to meet the habitat plan conservation goals in the long term is also concerning. Operations of the South Delta pumps under Section 7 of the Endangered Species Act (“ESA”) (see 16 U.S.C. §§ 1531, 1536) does not provide local</p>	<p>The commenter raises issues related to the adequacy of the EIR/EIS, the justification for putting forth the new proposed project, water quality, the range of alternatives studied, the impact conclusions and the degree to which all comments received on the Draft EIR/EIS were addressed in the RDEIR/SDIES.</p> <p>The proposed project is a joint RDEIR/SDEIS prepared in compliance with the requirements of CEQA and NEPA. Before the selection and approval of an alternative considered, the Lead Agencies must comply with the necessary state and federal environmental review requirements. The Final EIR/EIS is intended to provide sufficient CEQA and NEPA support for approval of the proposed project or any of the action alternatives for either compliance strategy. As implementation of the proposed project or any of the action alternatives will require permits and approvals from public agencies other than the Lead Agencies, the CEQA and NEPA documents are prepared to support the various public agency permit approvals and other discretionary decisions. These other public agencies are referred to as responsible agencies and trustee agencies under CEQA (State CEQA Guidelines Sections 15381 and 15386) and cooperating agencies under NEPA (e.g., USACE</p>

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		<p>communities much hope that such an approach will have any better results in the North Delta if diversions are constructed here. The Central Valley Project (“CVP”)/State Water Project (“SWP”) continued to violate even the weakened water quality standards that were applicable this year because of the drought. These same communities would live at the whim of the CVP/SWP’s irresponsible operations if diversions are built in the North Delta.</p> <p>In summary, the changes to Alt. 4A appear to be undertaken for reasons independent of public comments on the DEIR/S, namely that Alt. 4 could not meet the minimum legal standards applicable to Habitat Conservation Plans (“HCP”) and Natural Community Conservation Plans (“NCCP”). The numerous calls for consideration of other ways to meet water supply needs without constructing new diversions on the Sacramento River have gone unheeded since the inception of the BDCP in 2006, a process prematurely premised on the supposed need for a canal (later Tunnels). Moreover, with no responses to the public comments provided in 2014, it is nearly impossible to locate the instances in which public suggestions were incorporated into the project and/or RDEIR/S. Thus, it is entirely inaccurate for the RDEIR/S to now claim that project changes were made in response to public comments to “reduce many of these impacts and ease the burden on the environment and Delta communities.” (RDEIR/S, p. 4.1-4.) The most destructive part of Alt. 4 remains intact (the Tunnels), which “would be constructed and maintained identically to those proposed under Alternative 4.” (RDEIR/S, p. 4.1-4.) As a result, impacts of this project remain significant and unacceptable.</p>	<p>and EPA).For more information please see 1.1.5 of Section 1 Introduction of the RDERI/SDEIS.</p> <p>Consistent with the requirements of the CEQA (CEQA Guidelines §15088) and NEPA (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Responses 42 regarding treatment of public comments.</p> <p>For more information regarding alternatives to the proposed project please see Master Response 4.</p> <p>For more information regarding CEQA/NEPA determinations please see Master Response 1.</p> <p>For more information regarding permitting please see Master Response 45.</p>
2622	3	<p>Alternative 4A is not properly analyzed in the context of CEQA/NEPA, as the elements of other prior alternatives (such as the HCP/NCCP and its habitat) are not carried forward in 4A, but the text repeatedly conflates these elements in the descriptions of impacts/effects for Alt. 4A. The purported environmental analysis provided for Alt. 4A relies on the analysis completed for the prior BDCP (Alt. 4), and attempts to state that prior analysis is sufficient to understand the impacts of the Alt. 4A on the environment. Instead, the analysis conflates the potential benefits of habitat creation from Alt. 4 with the reduced impacts of just constructing the Tunnels. The results provide neither an accurate environmental analysis nor even a coherent description of the project impacts.</p> <p>For illustration, in the case of the water quality analysis for the new Alt. 4A, a supplemental document is appended as Appendix B, Supplemental Modeling Results for New Alternatives, B.1 Alternative 4A CALSIM II Sensitivity Analysis (p. B-2.), again focusing on wet years, and differences between averages, and which still relies on uncited analyses developed in the prior Appendix 5A Modeling Technical Appendix, as well as the new Draft Technical Memorandum, DCP EIR/EIS Water Quality Sensitivity Analysis (June 21, 2015, by CH2M HILL). Appendix B further attempts to explain why the wrong model, with serious material defects, using limited water years, still showed significant exceedances. (See RDEIR/S, App. B, Table B.2-1 (Surface Water Summary Table for Alternative 4A); see also p. B-47 and Table B-4 (Period Average Change in Boron Concentrations (µg/L) for Alternative 4A Scenario H3 ELT Relative to Existing Conditions and the No Action Alternative ELT), at. p. B-73.) Even with those errors, the model was still used inappropriately to assume future conditions without any technical justifications: “Even though the sensitivity analyses were performed at LLT, the factors identified to explain modeled salinity exceedances at LLT are expected to be valid similarly at Early Long-term (ELT) conditions.” (RDEIR/S, App. 8H, p. 3.) Those analyses relied on all of the original errors in the modeling identified by LAND in its previous comments (see also comments by Contra Costa Water District and others) and simply</p>	<p>The EIR/EIS provides detailed information regarding the components, characteristics, impacts, and mitigation for all of the alternatives. The type and format of information provided is consistent with the requirements of CEQA and NEPA to provide sufficient information regarding the relative merits of the proposed project and alternatives to permit a reasoned choice. For additional information regarding the level of detail in the environmental analysis, including analysis of the new sub-alternatives, please see Master Response 4. Also, please see Master Response 14 regarding water quality and Master Response 30 regarding modeling and sensitivity analyses conducted to support the RDEIR/SDEIS and Final EIR/EIS.</p>

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		made a few minor modifications based on the removal of CM2 and the habitat geometry. In any case, the analysis provided is simply intended to compare between alternatives and not determine the actual environmental impacts. The distinctions between the various Alt. 4, Alt. 4A and various operating scenarios are virtually indecipherable in the detailed analysis; this discussion must be reorganized, clarified and reanalyzed in a manner that the differences are apparent for purposes of understanding their environmental impacts.	
2622	4	<p>Bulbouts, the setting back of levees required when projections into the river create elevated flood heights (stages) are also inadequately described in the RDEIR/S. Bulbouts were described informally in the Steering Committee process and then defined slightly more clearly in the BDCP Fish Facilities Technical Team process when the intakes were wholly within the river. More recently, bulbouts have been identified by the California Department of Water Resources (“DWR”) engineering staff as not needed for the intakes proposed for Alt. 4A. LAND [Local Agencies of the North Delta] formally requested documentation to support the assertion that flood stages would not change as a result of the on-bank intake structures supported by the modelling data in NEPA cooperator meetings. To date the DWR has never provided any technical information to substantiate these claims. Moreover, the wetland delineations submitted to the U.S. Army Corps of Engineers include the bulbout areas on the opposite banks from the project intakes [Footnote 3: https://s3.amazonaws.com/californiawater/pdfs/5n2mg_Complete_Final_CA_Water_Fix_USACE_404_Permit_Application.pdf]. LAND strenuously objects to bulbouts and the potential project impacts from these features on the environment, levee maintenance, public safety, agricultural operations and transportation. Bulbouts have not been adequately analyzed in the RDEIR/S.</p>	<p>As described in Appendix 3F in the EIR/EIS and the Conceptual Engineering Report referred to in the EIR/EIS, the final design criteria for each intake will be developed during final design phase. During that design process, information will be used to determine design criteria to avoid effects on flood management. As described under Impact SW-7 in Chapter 6, Surface Water, in the EIR/EIS, the USACE, Central Valley Flood Protection Board, and DWR would require that any construction that would disturb existing levees to be designed in a manner that would not adversely affect existing flood protection. As described in Section 3.6.1.1 of Chapter 3, Description of Alternatives, facilities to be constructed along the levees would be designed to provide flood neutrality and to provide continued flood management at the same level of flood protection as the existing levees; or if applicable, to a higher standard for flood management engineering and permitting requirements if the standards are greater than the existing levee design during construction and operations. Additionally, DWR would consult with local reclamation districts to ensure that construction activities would not conflict with reclamation district flood protection measures. Construction within the waterways also would be required to not increase erosion or sedimentation in accordance with Stormwater Pollution Prevention Permit and requirements of the USACE, Central Valley Regional Water Quality Control Board, and Central Valley Flood Protection Board, as described in Chapter 6, Surface Water. Because permanent intrusions into the water channels related to Alternative 4A intakes would be minimized by project design, setting back levees is not anticipated to be needed. Preliminary hydrodynamic analyses performed by DWR for intake locations indicate that increases in surface water elevations associated with the intakes would be minimal. Please also refer to Chapter 6, Surface Water and Appendix 5A, which provide surface water elevation changes at various locations in the Delta associated with conveyance facility operations. These changes are generally minimal (under 1 foot elevation changes) and are not expected to create downstream flooding conditions.</p> <p>Please see Final EIR/EIS, Appendix 6A – BDCP/California WaterFix Coordination with Flood Management Requirements.</p>
2622	5	<p>The preferred alternative (4A) is not clearly or fully described in the RDEIR/S. The technical information required to assess the project’s complex physical infrastructure is missing and the important technical details, although known to DWR, beyond the basic project details such as intake geometry and distances between facilities are absent. Therefore it is very difficult to assess the physical environmental project impacts in what is really a program-level perspective. However, more detailed project information is found in DWR’s Conceptual Engineering Report [CER] (July 1, 2015) (“2015 CER”).⁴ For example, the 2015 CER states: “The MPTO/CCO [Modified Pipeline / Tunnel Option - Clifton Court Forebay Pumping Plant Option] must be able to deliver up to 9,000 cubic feet per second at the low water level in the Sacramento River.” (2015 CER, p. 1-1.) Thus, DWR has designed the infrastructure to take the full 9,000 cubic feet per second volume from the Sacramento River under the low-flow conditions, contrary to the operations information and environmental analysis in the RDEIR/S. Such operation would require completely different water quality and river stage analyses, among other impacts.</p>	<p>This comment misstates the discussion of conveyance facilities operations included in Section 4 of the RDEIR/SDEIS and Chapter 3, Description of Alternatives, which provides detailed information of the operating criteria for the north Delta intakes. Contrary to this comment, these criteria would require north Delta intake operation to be guided by bypass flow rules which would reduce diversions as Sacramento River flow decreases. Analyses of the conveyance facility footprint effects were prepared using Geographical Information System (GIS) analyses that have accounted for all of the physical effects of conveyance facilities on resources addressed in the EIR/EIS. The EIR/EIS includes sufficient detail to analyze the environmental impacts of the alternatives as required under CEQA and NEPA.</p>

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2622	6	The description of Alt. 4A operations curiously excludes certain components of existing CVP/SWP operations as well as actions required to be undertaken under the 2008 and 2009 Biological Opinions. The description of project operations in the RDEIR/S states that the Alt. 4A does not include certain California EcoRestore elements, such as Fremont Weir Operations. (RDEIR/S, p. 4.1-6.) This omission is concerning, since operation of the Fremont Weir will divert water from entering the Delta through the Sacramento River. The bulk of the actions contemplated by EcoRestore are required to be undertaken by the Biological Opinions issued in 2008-2009 for operation of the South Delta diversions. While the operations plan for Alt. 4A shown in Table 4.1-2 includes operations of the South Delta diversion facilities as well as the Delta Cross Channel, which are part of the 2008-2009 Biological Opinions, the Fremont Weir operations are omitted. All of the actions contained within the requirements of the Biological Opinions should have been included as part of Alt. 4A operations.	<p>The EIR/EIS has included the effects of the past, present (and ongoing programs/projects) and reasonably foreseeable projects in the analysis which is consistent with both CEQA and NEPA. Please see Master Response 9 regarding the cumulative impacts analysis.</p> <p>Alternative 4 remains a viable alternative; however, the preferred alternative is Alternative 4A and does not contain an HCP. Alternative 4A reflects the state’s proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. Operations for the proposed project would still be consistent with the criteria set by the FWS (2008) and NMFS (2009) BiOps and State Water Resources Control Board Water Right Decision 1641 (D-1641), subject to adjustments made pursuant to the adaptive management process as described in the 2008 and 2009 BiOps (RDEIR/SDEIS Executive Summary ES.2.2).</p>
2622	7	<p>LAND [Local Agencies of the North Delta] previously commented on the omission of disclosure and analysis regarding the BDCP’s plan to rely on water transfers to meet flow and water quality requirements necessary to operate the project. Those concerns remain. The RDEIR/S fails to disclose what transfers are necessary for the project and the amount of increased transfers that would occur as a result of the Tunnels. Without providing any details, the Alt. 4A operations description states that spring outflow for Longfin Smelt would be provided by water purchases for willing sellers. (RDEIR/S, p. 4.1-6.) The Alt. 4 BDCP analysis describes ultimately ramping up to 1.3 million acre feet of water transfers (RDEIR/S, App. D, pp. D.3.83 to 85.); it is unclear to what extent these water transfers are contemplated under Alt. 4A. Tunnels proponent Kern County Water Agency [KCWA] has indicated its plans to meet spring outflow requirements with Proposition 1 funded water purchases. (KCWA RDEIR/SDEIS draft Comment Letter, October 30, 2015, p. 3.) Use of these funds to meet regulatory requirements is specifically prohibited. (Wat. Code, §§ 79709(c), 79710(a), 79753(b).) The Tunnels proponents cannot plan on securing freshwater flows to meet any of the existing compliance obligations of the state and federal water projects (SWP/CVP.)</p> <p>Water transfers result in myriad environmental impacts, including groundwater depletion, loss of agricultural crops, reduction in wildlife habitat and other impacts. Moreover, the state’s water accounting system does not monitor critical streamflow data that would be necessary to perform accurate accounting of water transfers, making “gaming the system” a real risk. The location of new, northern SWP/CVP diversions will by definition increase water transfers from north to south bypassing the Delta. There will</p> <p>be tremendous demand to attempt to use the Tunnels for more transfers, and there will be pushback against letting flows bypass the new diversions. As these impacts will occur as a result of the project, they must be analyzed in the RDEIR/S. If the project relies on transfers or will facilitate additional transfers, those facts must be disclosed and analyzed; the RDEIR/S fails to do so.</p>	<p>The text referred to in this comment has been modified in the Final EIR/EIS to not include acquisition of water related to spring outflow criteria. Please refer to Chapter 3, Description of Alternatives description of Scenario H for Alternative 4A operations (page 3-261). The model results presented in the Final EIR/EIS do not include water acquisition methods. Please see Master Response 43 regarding water transfers.</p>
2622	8	LAND [Local Agencies of the North Delta] has previously commented on the BDCP Chapter 7 Governance structure proposed under Alt. 4, pointing out its inadequacy with respect to addressing local impacts during and after project construction. Now, with Alt. 4A, there is no governance structure at all, and the implementation will apparently be	<p>This Final EIR/EIS provides extensive analyses addressing potential construction-related impacts of the action alternatives. When impacts are considered adverse/significant, mitigation measures are provided to reduce impacts as much as possible. All of the mitigation measures, environmental commitments, and avoidance and minimization measures will be implemented for the selected alternative to reduce potential</p>

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		carried out by the SWP and CVP contractors via the Delta Conveyance Facility Design and Construction Enterprise. The existence of “Environmental Commitments” (“ECs”) (RDEIR/S, App. 3B) does nothing to allay these concerns. As described in this and other comment letters, the impacts on local communities will be severe, including interruption and degradation of drinking and irrigation water supplies, interruption of access to farms and homes, damages to roads, homes and other structures from subsidence induced by dewatering, and structural or other damages from excessive construction noises and vibrations. LAND is disappointed that its prior suggestion to create a local concerns and claims alternative dispute resolution process to address these issues is not included in the RDEIR/S. The Government Tort Claims Act is entirely inadequate and too slow to adequately address the scope and scale of the readily foreseeable impacts to local communities and agricultural operations. The absence of any plan to address these localized impacts indicates not only a complete disregard for the burdens and significant environmental and other impacts the project would put on local communities, but also is an abrogation of CEQA and NEPA’s most basic mitigation requirements.	environmental impacts, including local impacts associated with construction activities. These actions are also included in the California WaterFix Mitigation Monitoring and Reporting Program (MMRP) and implemented by DWR and Reclamation as required under CEQA and NEPA. Some of the proposed mitigation measures provide for input and feedback from residents affected by construction (i.e. for traffic and noise effects). For information regarding governance structure, please refer to Master Response 5. For more information regarding the legal standards governing mitigation measures, environmental commitments, and avoidance and minimization measures, see Master Response 22.
2622	9	One of the main talking points of the project proponents is that reverse flows will be lessened by the addition of diversion points in the North Delta. Yet the Tunnels would create reverse flows anew in the North Delta. In particular, as a result of the project, Georgiana, Sutter and Steamboat Sloughs will experience increases in reverse flows, increasing salinity and hindering fish migration. The project does not restore a more natural flow regime for the Delta. The project simply brings reverse flow problems to the north Delta.	The proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta. Reverse flows in the Sacramento River also are not shown in the model results because the CALSIM II model assumptions related to the North Delta Bypass Flows were specifically developed to reduce or eliminate diversions at the north Delta intakes during periods that would cause reverse flow patterns along the Sacramento River (see Appendix 5A, Section B). Therefore, tidal flows in the Sacramento River would be similar under the action alternatives and the No Action Alternative.
2622	10	LAND [Local Agencies of the North Delta] submitted detailed comments regarding deficiencies in the approach to mitigation in 2014. Those errors have not been corrected. Instead of strengthening mitigation measures to meet minimum legal requirements, the RDEIR/S includes basically the same “optional menu” approach to mitigating even the most serious water quality impacts. (See, e.g., WQ MIT-11.) Moreover, with the BDCP now abandoned, some of the prior conservation measures are now called ECs [Environmental Commitments], in addition to the ECs that were included in the DEIR/S. While the RDEIR/S attempts to show how these ECs will help reduce impacts, no enforcement mechanism is provided, and the ECs are not included in the Executive Summary’s list of mitigation measures, though there is a promise to include them at a later date. Such information is necessary to informed decision making and must be included in the RDEIR/S.	<p>Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP</p> <p>Comments made on the 2013 DEIR/DEIS will be addressed in the FEIR/FEIS as required by CEQA and NEPA. The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling). The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Construction of the proposed California WaterFix water conveyance facilities would be sequenced over approximately 10 years. Construction of individual components (e.g. intakes, tunnels) would range from one to six years. Temporary construction-related impacts include noise, visual, and transportation, among others. The construction-related impacts are disclosed in individual resource area chapters in the EIR/EIS and RDEIR/SDEIS.</p> <p>As part of the planning and environmental assessment process, the project proponents will incorporate environmental commitments and best management practices (BMPs) into the action alternatives to avoid or minimize potential adverse effects (a NEPA term) and potential significant impacts (a CEQA term). The project proponents will implement these environmental commitments as part of the project construction activities. In other words, these commitments will be satisfied even if not separately imposed by the permitting agencies. If permitting agencies impose additional measures or modifications, those will also be adhered to as part of the permit(s). The Lead Agencies will coordinate planning, engineering, design and construction, operation, and maintenance phases of the alternative with the appropriate agencies. For more information regarding Environmental Commitments please see Appendix 3B of the RDEIR/SDEIS.</p>
2622	11	LAND’s [Local Agencies of the North Delta] prior comments and other comments have	Regarding reduction of fish entrainment at existing SWP/CVP facilities, screening the intakes at Clifton Court

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		<p>described in detail the failure of the lead agencies to consider a reasonable range of alternatives to carry out the project objectives and purpose. LAND continues to disagree, in particular, with the failure of the lead agencies to consider alternatives that include maintaining and improving the existing infrastructure, including the existing levee system and South Delta diversion facilities. We note that the BDCP's 2007 Points of Agreement including a commitment to:</p> <p>Modifications to existing south Delta facilities to reduce entrainment and otherwise improve the State Water Project's (SWP) and Central Valley</p> <p>Project's (CVP) ability to convey water through the Delta while contributing to near and long-term conservation and water supply goals</p> <p>will also be evaluated. This approach may provide enhanced operational flexibility and greater opportunities for habitat improvements and fishery protection.</p> <p>Unfortunately, there has been no follow through on this issue, and Alt. 4 includes no improvements to the South Delta pumps to reduce take of imperiled fish.</p> <p>Additionally, LAND notes that there are now major similarities between Alt. 4A and the Peripheral Canal, which was rejected in 1982. To illustrate this point, LAND revised a BDCP document entitled, "BDCP: A 21st Century Strategy" to include a fourth column for the currently proposed Alt. 4A. (See Exhibit A.) A slightly updated version of the Peripheral Canal is not a 21st Century Strategy.</p>	<p>Forebay was analyzed during the water conveyance alternative development process and is described in the 2013 Public Draft EIR/EIS, Appendix 3A. This alternative was eliminated from further evaluation because initial results of recent studies, including information included in the recent NMFS biological opinions, supported a phased approach that would emphasize improvements to operations of fish handling facilities and reduced predator potential within Clifton Court Forebay prior to further analysis of installation of fish screens. Nevertheless, DWR and Reclamation will continue investigating strategies to increase fish salvage efficiency, reduce pre-screen losses, and improve screening efficiencies, consistent with the 2009 biological opinion of the SWP/CVP.</p> <p>The technology required at the proposed north Delta intakes and the existing south Delta export facilities differ fundamentally. The north Delta intakes would be located on the side of the river channel and so would be designed to comply with CDFW, NMFS, and USFWS fish screening criteria (Appendix 5B Section 3.B.3.3). The south Delta export facilities are located on dead-end channels and requires active collection and salvage of fishes.</p> <p>Please refer to Master Response 4 for additional details on the selection of alternatives, Master Response 3 for additional details on the project purpose and need. Please see Final EIR/EIS Appendix 6A regarding BDCP/California WaterFix Coordination with Flood Management Requirements. For more information regarding the differences between the proposed project and the peripheral canal please see Master Response 36.</p>
2622	12	<p>The water supply analysis is misleading and fails to represent the recent actions by the project proponents to gain more water yield in drought periods at the State Water Resources Control Board ("SWRCB") [Footnote 5: http://www.sacbee.com/news/state/california/water-and-drought/article24683440.html], create dams in the Delta to divert water to the export pumps, reoperation of the Delta Cross-Channels, as well as the routine use of emergency exemptions to lower water quality standards. (RDEIR/S, Section 5.3.1.1</p> <p>5 Quantitative Analysis of SWP and CVP Water Supply Impacts, p. 5-2, lines 23-42 and 5- 3 lines 1-9.) Each of these common modifications to operations have significant project- level environmental effects as well as cumulative impacts, which have to be described and modeled in the RDEIR/S. The RDEIR/S has further failed to identify the additional water supply for the new mitigation requirements defined for Alt. 4A for its habitat, which consumptively uses almost double of the water demand by Delta crops [Footnote 6: http://www.water.ca.gov/landwateruse/anlwuest.cfm</p> <p>]. The RDEIR/S assumes that water use for restoration is the same as agriculture, which is</p> <p>simply wrong, uncited, and not supported by science. (RDEIR/S, Section 5.3.1.2 Project- and Program-Level Components, p. 5-3, lines 10-19.) In fact, as explained in LAND's [Local Agencies of the North Delta] prior comments, water demand for riparian and open water habitat is about twice as high as average agricultural water demand.</p>	<p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS. Please see Master Response 30 regarding modeling.</p> <p>The text referenced in this comment also refers to habitat restoration (Environmental Commitments) that would be implemented as mitigation for construction and operation of the conveyance facility. Although the types and locations for those mitigation areas have not been fully defined at this time, the identification and analysis of mitigation measures in the EIR/EIS fully complies with CEQA and NEPA. Please refer to Chapter 3, Description of Alternatives for Alternatives 4A, 2D and 5A, and each resource chapter for analysis of the proposed Environmental Commitments for these alternatives. A portion of the habitat restoration would replace the amount of habitat that would be removed due to construction of conveyance facilities, which would not result in an increase in water use for vegetation. A portion of the habitat restoration would be associated with protection of existing vegetative habitat or replacement of existing vegetation with species that would have a higher habitat value. Therefore, there would not be a substantial increase in water use by vegetation.</p> <p>For additional information regarding mitigation measures, please see Master Response 22.</p>
2622	13	<p>Please see LAND's [Local Agencies of the North Delta] prior comments on surface water impacts. As explained previously, modeling for Alt. 4 cannot substitute for modeling for</p>	<p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously</p>

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		<p>Alt. 4A. Additionally, LAND continues to be concerned that the resulting effects of surface water changes from operation of the proposed diversions have not been adequately analyzed with respect to impacts on agricultural operations in the Delta. Moreover, mitigation for these impacts remains inadequate.</p>	<p>provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS. Please see Master Response 30 regarding modeling.</p> <p>Mitigation measures related to significant adverse impacts to agricultural resources under the proposed project or other action alternatives as compared to Existing Conditions are presented in Chapter 14 of the EIR/EIS.</p>
2622	14	<p>The groundwater impacts analysis fails to fully analyze how the project will “Alter Local Groundwater Levels” in any clear manner that would provide for an understanding of the groundwater impacts or thresholds. The Impact GW-1 focuses almost entirely on the direct impacts on wells, which are critical, but a small part of the agricultural water supply balance in the North Delta. (RDEIR/S, Section 7.3.3.9 Alternative 4 – Dual Conveyance with Modified Pipeline/Tunnel 28 and Intakes 2, 3, and 5 (9,000 cubic feet per second; Operational Scenario H), p. 7-10, lines 19-20.) The RDEIR/S describes potential project impacts on wells, with only indirect and inferential language regarding the main form of groundwater use and management in the Delta: drainage systems.</p> <p>For Delta agriculture, the groundwater table is often controlled through local management of drainage (both by gravity using control gates, as well as by drain sumps and pumps), as well as through the application of surface water from perimeter pumps and siphons. (See LAND’s previous comments describing this system.) The two systems are directly related, as surface water and groundwater are continuously substituted in this system. These interrelated impacts should have been analyzed in concert for the purposes of the RDEIR/S. The drainage system, which is how groundwater and surface water reconnect, is only incompletely described by the RDEIR/S in Impact GW-4: During Construction of Conveyance Facilities, Interfere with Agricultural Drainage in the Delta. The analysis fails to describe, then analyze, how these two systems, groundwater and surface water, work in concert and are managed at the farm gate scale, and then managed collaboratively at the local island scale within the Delta.</p>	<p>Changes in groundwater supplies associated with groundwater wells or root zone irrigation and to drainage facilities under the proposed project or other action alternatives as compared to Existing Conditions and No Action Alternative are presented in Chapter 14 of the EIR/EIS.</p>
2622	15	<p>Changing groundwater elevations, either by lowering them with groundwater pumping for construction dewatering, or cutting off the seepage through cutoff walls at the intakes, or at shafts, etc. as the project proposes, will have both direct and indirect impacts on Delta homes, farms and drainage districts. The project can even impact surface water supply and drainage systems in ways that have significant effects in combination where the individual effect may appear insubstantial. For example, lowering a local water table by 5 feet may not affect a drinking water well that is isolated and used at a low rate. (See RDEIR, App. A, Figure 7-27 (showing groundwater levels diminished by dewatering).) Lowering the same water table at an area with multiple wells in a narrow belt, as it is common along the levees, can significantly increase the size of the cone of depression created by the aggregate of the wells and lead to intermittent water supplies and burning out pumps through excessive cycling. This is exacerbated where all of the wells are taking water from the same sandy lens, which is typical. The RDEIR/S fails to even describe the pump damage as an impact, even though replacing those pumps can be economically catastrophic to poor rural residents. The project places the burden of demonstrating that the pumping impacts on their drinking water wells and pump damage was caused by the project on those least able to make that claim. This is a classic environmental justice issue by which a project fails to</p>	<p>Effects on overall groundwater resources are described in Chapter 7. Effects on agriculture and municipal/industrial water supplies are described in Chapters 14 and 20, respectively.</p> <p>With respect to changes in groundwater elevations related to dewatering activities at construction locations, as described in the EIR/EIS, during construction, slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions.</p> <p>With respect to limiting transmission of water from the Sacramento River towards the groundwater located east of the Sacramento River between the locations of Intake 1 and Intake 5, the length of the slurry walls at the intakes would represent less than 20 percent of the total river bank length in this reach. The slurry walls would not extend more than 100 feet below ground surface. It also should be noted that the levees along the Sacramento River generally are designed to minimize water flow from the Sacramento River towards the groundwater aquifer at the depths of the levee structures. It also should be noted that groundwater recharge in this area is also influenced by groundwater flows from the foothills and associated water bodies located to the east of the intake sites. The effects on groundwater recharge of the slurry walls at the tunnel shafts or the tunnel structures on groundwater flow would be minimal due to the relatively small dimensions of the tunnel shafts and tunnel as compared to the overall dimensions of the groundwater</p>

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		<p>analyze its impacts at the local, project level, and fails to mitigate for a readily foreseeable project impact. The only analysis provided is exclusive to drinking water quality impacts. (RDEIR/S, App. A, p. 28-13.)</p> <p>In a parallel illustration, lowering that same water table 3 feet might not affect those same drinking water wells, but could require significantly (dozens to hundreds of acre-feet per farm) more river water pumping to maintain irrigation on a field, which was reliant on under seepage, a very common scenario. In the Delta, it is very common to have water from the levees or even adjacent islands essentially percolate up into the neighboring fields. (DWR, 2014.) When that water is cut off, a farmer has to place new pumps in the river, a massive economic cost with extensive permitting timelines, replace pumps, or run pumps for far longer. In this case, the environmental impacts include the need to spend more money to pump over the levee, greater energy use and carbon emissions, and greater loss to evaporation from having to use above ground systems to replace the highly efficient seepage. This is yet another obvious and common situation in the Delta, ignored in the environmental analysis.</p> <p>In a final illustration, lowering the same water table 3 feet changes the drainage system elevations (hydraulic head) and could result in the loss of drainage capacity from one field to the next. This directly affects the beneficial reuse of agricultural water from one field from one river intake to the next field down gradient, which would have otherwise received the recharge of the non-consumptively used water for growing crops or salt control. Drainage within an island can be understood as a series of miniature ship locks, each lock holding the water table to maintain the next, but each entirely reliant on inches of relative height to control that water, rather than feet.</p>	<p>aquifer.</p> <p>It is possible, that some impacts may result in effects to agricultural resources depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to agricultural water supplies to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p>
2622	16	<p>Where the RDEIR/S does analyze its potential groundwater dewatering impacts, ignoring the scenarios described above, the analysis is confusing and poorly supported. For example the RDEIR/S states that: "Tunnel shafts are assumed to be constructed using slurry diaphragm walls, . . . is not anticipated to result in significant impacts to surrounding groundwater as the dewatered zone will be hydraulically isolated from the surrounding aquifer system." (Section 7.3.3.2 Alternative 1A – Dual Conveyance with Pipeline/Tunnel and 3 Intakes 1–5 (15,000 cubic feet per second; Operational Scenario A), p. 7-3 lines 6- 40.) This analysis inaccurately describes the process for building the walls; the isolation only occurs after the excavation and slurrying is complete, which requires lowering the groundwater table for the length and width of the excavation. Only after that dewatering is completed, is the interior area isolated. A correct environmental analysis would identify how much dewatering would occur for the installation of the slurry walls and then identify how much volume of water would not be pumped in this scenario. No such analysis is provided. Even the limited information that is presented cannot be verified, since no substantive details are provided.</p> <p>Additionally, this slurry diaphragm wall is a new project feature with its own environmental impacts that are not properly analyzed. The heavy equipment needed to excavate the wall, and place the slurry is not described. The analysis fails to identify how many excavators and cranes each location will require, nor is there any description as to the number of dump trucks, tons of steel and tons of slurry used at each location. It also does not identify what kind of slurry and its source(s). Nor can this information be inferred from the total depth, area or perimeter, since none of this information is provided.</p>	<p>Slurry walls would be constructed as one of the initial construction activities surrounding the intakes, tunnel shafts, and forebays. Slurry wall construction allows for simultaneous excavation and placement of the slurry within the groundwater without dewatering. Following completion of the slurry walls, groundwater dewatering would occur only within the slurry walls; thereby, not affecting groundwater or river flows located outside of the slurry walls.</p> <p>Slurry diaphragm walls would be constructed in a similar manner with the placement of structural members within the wall, including rebar. As described in the Conceptual Engineering Report referenced in the EIR/EIS, the slurry walls will be constructed with a soil cement-bentonite mixture and high-strength concrete. In addition, structural rebar and similar structural members would be added to diaphragm walls.</p> <p>The overall number of construction equipment being used throughout the construction is included in Appendix 22B in the EIR/EIS.</p>

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2622	17	The project impacts to the riparian zone from the groundwater depletion is never identified. Cutoff walls can isolate riparian vegetation from the groundwater and simply kill it. The RDEIR/S must analyze these biological resources impacts as well.	The slurry walls would be placed along the levees adjacent to the intakes and along the levees that would surround Clifton Court Forebay. In these areas, the riparian vegetation would be removed for construction of the intake and forebay facilities. Please see Chapter 3, Description of Alternatives and Appendix 3B for a description of slurry wall construction. The slurry walls would not extend along the riparian zone past the locations of the intakes or forebay levees. Potential biological effects of the proposed slurry walls are addressed in Chapter 12, Terrestrial Biological Resources, which accounts for all footprint effects at conveyance facility construction sites.
2622	18	<p>In addition to the grossly out of date model parameters used in the RDEIR, the groundwater data now are so far out of date (variable dates, but generally 1962-2003) that it can no longer be used with any reliability. Use of this data biases the results, particularly since the last 4 years of the drought are not included. This error biases the effects by using the wettest years and ignoring the drought and the overall trend to drier years. The analysis should use the entire period of the record and provide a supplemental analysis of trends of the last two decades. The analysis also uses exceptional projections for sea level rise when it suits the analysis to minimize the environmental effects from the project, but uses narrow and old data that predate current trends when it suits other arguments. (RDEIR/S, Sections 7A.1 Introduction and 7A.2 Modeling Objectives p. 7A- 1, lines 3-33.) In order to realistically understand the potential project impacts on local, sole-source drinking water wells, the RDEIR/S must use contemporary information and current water table information influenced by the drought and the complex local hydrogeology.</p> <p>Moreover, the modeling tool used was a regional analysis tool and not a site-specific model. No local shallow water table data, such as the local well elevations and their response to the drought, or site specific geology describing the complex local sand layers and under channel stratigraphy, are provided. (DWR 2014.) The Delta is unique for its complex groundwater interactions, which do not meet (nor do regional models ever intend to assess) the standard assumptions of groundwater models[Footnote 7: http://www.water.ca.gov/environmentalservices/docs/frpa/Prospect_Island_Ryer_Island_Data_Analysis_Summary_Memo_Report_Final_ReaderView_6_19_14.pdf]. For other projects in</p> <p>the same area, DWR does not fully understand the need to collect and analyze site-specific data for project-scale hydrogeological impacts. For instance, DWR completed an extensive study in 2014 for a restoration project on Prospect Island. (DWR 2014.) It is important to note that despite this study, empirical observation identified that unexpected and non-linear impacts resulted from groundwater elevation changes over large distances [Footnote 8: http://deltarevision.com/maps/islands_floods_levees/ryer-1996flood-no.pdf]. The RDEIR/S should build on best available geology and calibrated with current local well data in order to assess the project impacts on the local water tables. The provided programmatic-level analysis fails to have any reasonable predictive power for defining water table impacts at the intakes. This entire section must be reanalyzed in order to understand the project's impact on groundwater.</p> <p>Finally, the mitigation is based on several factors, including the modeled radius of impact, which has an additional defect: it appears that Mitigation Measure GW-1 is not intended to apply to the wells that are impacted beyond the arbitrarily selected distance of 2,600 feet. (RDEIR, App. A, Section 7.3.3.2 Alternative 1A – Dual Conveyance with Pipeline/Tunnel and 3 Intakes 1–5 (15,000 cubic feet per second; Operational Scenario</p>	<p>The EIR/EIS analysis is based upon comparison of conditions under the action alternatives and conditions under the Existing Conditions and the No Action Alternative. The basis of the hydrologic and water quality models, including the CVHM and CVHM-D models, are monthly models. These types of models are the most appropriate to analyze potential changes due to different operational assumptions for the SWP and CVP. However, as described in Appendices 5A and 7A of the EIR/EIS, these models cannot be used in a predictive manner to define absolute values. Rather, they must be used in a comparative manner to indicate overall changes between alternatives as compared to the Existing Conditions and the No Action Alternative. Therefore, the EIR/EIS only evaluates the incremental differences, and cannot be used to predict absolute values. Please see Master Response 30 regarding modeling.</p> <p>During the design phase, detailed geotechnical surveys, analysis of well logs in the vicinity of the construction sites, and well water elevation and water quality testing would be completed. Localized site-specific groundwater modeling may be required to confirm that the adjacent pre-construction groundwater conditions would not be changed due to the construction activities. The groundwater elevations, groundwater quality, and surface water quality would continue to be monitored during construction and during initial operations.</p> <p>Effects on overall groundwater resources are described in Chapter 7. Effects on agriculture and municipal/industrial water supplies are described in Chapters 14 and 20, respectively. As described in the EIR/EIS, during construction, slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. No dewatering would be required along the tunnel alignment. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p>

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		<p>A, p. 7-3, lines 37- 38 and p. 7-4, lines 9-13.) So it appears that wells that are impacted outside of that radius do not receive the mitigation, despite the RDEIR/S’s failure to analyze the current groundwater conditions or geology at a project-site specific scale. (RDEIR/S, App. A, Section 7.3.3.2 Alternative 1A – Dual Conveyance with Pipeline/Tunnel and 3 Intakes 1– 5 (15,000 cubic feet per second; Operational Scenario A, p. 7-4, lines 19-21).)</p> <p>A curious caveat is provided repeatedly in the analysis: “It should be noted that the forecasted impacts described above reflect a worst-case scenario as the option of installing seepage cutoff walls during dewatering was not considered in the analysis.” (See, e.g., RDEIR, App. A, p. 7-4.) It would seem that the mitigation measure should be applied to the project from the outset, as part of an avoidance strategy. Instead, the mitigation approach places the burden of proof of project impacts from the reduction of groundwater levels on the environment, the adjacent landowners and agricultural water users.</p> <p>The impacts caused by the dewatering of the intakes, the intermediate forebay and the tunnel access all suffer from the same failure of technical analysis of the nature and extent of the environmental impacts, and the failure to adequately mitigate those impacts under all construction scenarios.</p>	
2622	19	<p>LAND [Local Agencies of the North Delta] has previously commented on water quality impacts and continues to have grave concerns regarding the water quality impacts of this project. The RDEIR/S excuses for continuing to rely on a broken model to predict water quality effects of the project are inadequate. (See RDEIR/S, App. 8H, Attachment 1 TM, p. 5.) As has been previously explained, factors such as use of a truncated period of record, and unreasonable assumptions regarding the ability to meet water quality standards, make the modeling of little use. References to the expectation of adjustments to CVP/SWP operation to meet delta standards are also contradicted by experience. (See RDEIR/S, App. 8H, Attachment 1 TM, p. 5.) For instance this year, the CVP and SWP repeatedly violated water quality standards that had already been weakened by the SWRCB in response to CVP/SWP requests pursuant to the drought. The record refutes any assumption in the analysis of water quality that assumes actions will be taken by the CVP/SWP to meet Delta standards.</p> <p>As a result of supposed “sensitivity analyses” the RDEIR/S has downgraded several water quality impacts that were previously characterized as significant and unavoidable and or adverse to less than significant. Yet the mitigation has not been improved. Adding to the confusion, Chapter 31 still shows Impact WQ-11, effects on electrical conductivity concentrations resulting from facilities operations and maintenance still shows for conclusions after mitigation significant and unavoidable and or adverse. (RDEIR/S, App. A, p. 31-3.) But the executive summary shows Impact WQ- 11 as less than significant and not adverse. (RDEIR/S, p. ES-44.)</p>	<p>The EIR/EIS used the best available tools that are used by state and federal agencies. The full set of inputs needed for these tools are limited to 82-year (Water Years 1922 – 2003) at the time the analysis for the EIR/EIS was performed. The DSM2 analysis was limited to a 16-year analysis. Section D.12 of the Appendix 5A in the EIR/EIS discloses potential differences between the 16-year versus 82-year DSM2 simulations. As noted in this comment, given the 16-year simulation period used for the DSM2 modeling is drier than the 82-year period, the water quality impact analyses would be more conservative, and represents conditions similar to those found over the full 82-year period. The CALSIM II assumptions include compliance with Delta water quality over the long-term operations, and do not reflect changes that could occur during emergency situations such as the recent drought when long-term water quality criteria were modified for the drought conditions. Please see Master Response 30 regarding modeling.</p> <p>Regarding the Executive Summary, the impact call for Alternative 4 for electrical conductivity should have been shown as significant and unavoidable (SU), which was the impact call in Chapter 8, Water Quality, Impact WQ-11, and has been corrected in the Final EIR/EIS.</p>
2622	20	<p>First identified in the Sacramento-San Joaquin River Delta in 1999, blooms of blue-green algae (cyanobacteria) have spread for miles throughout the Delta as a result of warmer temperatures and low flows (Berg and Sutula, 2015). This threat appears to increase as the drought goes on (Berg and Sutula, 2015). The proposed project will create essentially permanent drought conditions in the Delta, defeating the significant reductions in effluent by the new treatment facility completed at great cost to the taxpayers, by withdrawing up to half of the water from the Sacramento River. Granted</p>	<p>Cyanobacteria are the most common harmful algae in freshwaters and Microcystis is the most common genera to bloom in freshwaters, including the Delta (Lehman et al. 2013). The toxin most often associated with Microcystis is microcystin. Although it is possible that other cyanobacteria species, such as Anabaena may form, Microcystis serves as an appropriate surrogate for all cyanobacteria. This is because cyanobacteria generally utilize similar conditions (i.e. high nutrients, low residence time, water temperatures greater than 19°C). A complete assessment of the impacts of the project alternatives on Microcystis bloom potential is provided in Chapter 8, Water Quality. Also, please see Master Response 14</p>

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		<p>some of that waste water and its nutrients will be exported, as it is currently, but the beneficial dilution effects and significant mixing zones that existed from Freeport to the South Delta would no longer occur because up to half of that flow will be missing.</p> <p>The project’s impacts associated with, and related to, blue-green algae in general and cyanobacteria specifically, none of which are identified, include lower flows, longer residence times as a result of those lower flows, Delta Cross-channel operational impacts (lowering flows further in the Sacramento River sloughs and Cache Slough complex). There is a brief and non-specific analysis for potential impacts associated with riparian and tidal habitat creation (providing locally increased nutrients). (RDEIR, App. A, p. 28- 16 (Environmental Justice).) The project’s contributions to flow and nutrient impacts, and the consequential impacts on aquatic and terrestrial species and human health are ignored, and instead what limited analysis exists is solely and incorrectly focused on the equivocal nature of the nutrient data and their relationship to the blooms of a single species, <i>Microcystis aeruginosa</i>.</p> <p>Cyanobacteria thrive in warm water; every 10 degree C rise in temperature prompts a growth rate increase of 1-4 times. (Berg and Sutula, 2015, p. 32.) Higher temperatures also prompt higher levels of toxins. (Brutemark, 2015.) Lower flows also increase their blooms because lower flows reduce water column mixing. (Berg, 2015, p. 44.) Increased salinity levels (up to 10 parts per trillion) do not discourage these organisms; rather they appear to survive in brackish water. (Berg, 2015, p. 22.) Blooms of cyanobacteria also reduce the dissolved oxygen content in a water body, and block sunlight needed by other living organisms. (Berg, 2015.) For this reason, cyanobacteria’s rise was investigated as a potential aspect of the pelagic organism decline in the Delta. (P. W. Lehman, 2005.) These are the very same conditions that the project will create by taking up to half of the flow from the Sacramento River.</p>	<p>for additional related response to this comment.</p>
2622	21	<p>The current, and likely exacerbated by the project, spread of cyanobacteria presents public health issues because potent toxins found in many strains of cyanobacteria cause symptoms in both animals and humans, ranging from vomiting, rashes, headaches, and diarrhea to liver failure and even death. (Office of Environmental Health Hazard Assessment, 2009; U.S. EPA, 2015.) The International Agency for</p> <p>Research on Cancer lists the toxin found in cyanobacteria as possibly carcinogenic to humans. (Cogliano, 2010.) Similar to mercury and other bioaccumulative toxins, cyanobacteria toxins are known to build up in the bodies of fish and shellfish; it also can contaminate food crops when present in irrigation water. (Cogliano, 2010, p. 357-358.) The project appears likely to create the perfect storm of aquatic toxicity – algal blooms and elevated mercury, which when combined, contaminates drinking water and fish.</p> <p>Particularly concerning, is the fact that the presence of cyanobacteria toxins, notably microcystins, can shut down drinking water supplies. Toledo residents received a “do not drink or boil” advisory for their water (boiling water infused with microcystins will not render the contaminant harmless) when a cyanobacterial bloom near Toledo’s drinking water intake on Lake Erie caused microcystin spikes in 2014. (U.S. EPA, 2015, p. 14.) A species related to the cyanobacteria that contaminated Ohio drinking water has been detected in the Delta, <i>Microcystis aeruginosa</i>. (Kurobe, 2013.) Traditional methods of killing algae, such as algaecide, can actually increase the presence of the cyanobacteria toxin, which releases upon the death of the organism. (U.S. EPA, 2015, p. 41.) Conventional water treatment systems do not remove the toxins; therefore, U.S.</p>	<p>The potential effects of the alternatives on <i>Microcystis</i> bloom formation potential in the Delta, and impacts to human health, has been fully assessed in the EIR/S in Chapter 8, Water Quality, in Impacts WQ-32 and WQ-33 and in Chapter 25, Public Health, in Impacts PH-8 and PH-9. The degree of potential impact on human health and drinking water supplies due to microcystins cannot be quantified in the analysis. To do so would be speculative. The assessments recognize the potential impacts to drinking water uses and human health. Hence Mitigation Measure WQ-32 is provided to reduce the severity of the significant impacts identified for the action alternatives; Alternatives 4A (the preferred alternative), 2D, and 5A would not have significant impacts such that there would be a substantial increase in <i>Microcystis</i> bloom formation and, therefore, mitigation would not be necessary or required. Please see Master Response 14 regarding water quality.</p>

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		EPA recommends that drinking water systems affected by a cyanobacteria bloom change the location of their intakes, purchase water from a neighbor, or add expensive additional treatments such as reverse osmosis. (U.S. EPA, 2015, pp. 41-43.) The degree of impact on human health and drinking water supplies from the project's impacts on blue-green algae is not adequately assessed or mitigated in the RDEIR/S.	
2622	22	RDEIR/S Section 8.1.3.18 Microcystis (p. 8-45 lines 15-42 and p. 8-46, lines 1-22) is the only detailed analysis on only one form of blue-green algae, Microcystis, and yet fails to discuss the baseline and the drought conditions in any meaningful way, and entirely ignores the project's relationship to flow, nutrients and environmental impacts. The analysis instead looks at a single dimension of algal dynamics, nutrient availability and ratio, and states that the data for nutrients are equivocal. Juxtaposing the current RDEIR/S analysis with the CVP/SWP Contractors' 2010 comments on Sacramento Regional County Sanitation District's wastewater discharges, the data on algal bloom relationships appear to have gone from certain to uncertain when the Tunnels are the source of the impact. (Alameda, 2010.)	Please refer to Master Response 14. Please also refer to response to comment #20 and #21 within this comment letter. The potential effects of the alternatives on nutrients and flow in the Delta have been fully assessed in the EIR/S in Chapter 8, Water Quality, and Chapter __, respectively. The assessment of alternatives impacts on Microcystis took into account both potential changes in nutrients and flow as a result of alternative implementation. Refer to Chapter, Water Quality, Impacts WQ-32 and WQ-33 for details.
2622	23	<p>The RDEIR/S identifies that: "changes in TSS [total suspended solids] and turbidity levels within the Delta under the project alternatives could not be quantified," yet asserts that despite removing thousands of tons of sediment from the river, and removing much of the flow that keeps sediment in suspension, turbidity levels "are expected to be similar under the project alternatives to Existing Conditions and the No Action Alternative." (App. A, Section 8.3.1.7 p. 8-82, lines 18-20.) This is simply idle speculation, not analysis, given the facts presented in the following sections.</p> <p>The RDEIR/S analysis is adamant that water column clarity is critical: "High water clarity is also considered a pre-requisite for Microcystis bloom formation (Lehman et al. 2013.)." Yet, blooms have been increasing over time, and found throughout the Delta, including Sacramento and Suisun Bay. (RDEIR/S, Section 8.3.1.7, p. 8-82, lines 17-18 and 8.3.1.8 (San Francisco Bay), p. 8-85, lines 12-17.) Sacramento even had a recent (October 5, 2015) death of a dog in the Sacramento River at a public beach directly attributed to cyanobacteria [Footnote 9: http://www.sacbee.com/news/local/environment/article38250372.html]. Per the Sacramento Bee article, the Sacramento County environmental health division chief said he expects more blue-green algae events</p> <p>if the state's four-year drought continues: "That's because droughts create more pockets of slow-moving warm water in rivers, a situation that triggers more algal blooms." The</p> <p>identical conditions created or exacerbated by the proposed project.</p>	The analysis attempts to quantify changes in sediment load due to the project based on the best available scientific information, although as stated, there is high uncertainty in this. In addition, there is a low understanding of the factors that contribute to Microcystis bloom formation, but the scientific literature indicates that high water clarity is an important factor. Slow moving water and high nutrient levels appear to play a role as well. Please see Master Response 14 regarding water quality.
2622	24	<p>The RDER/S fails to consider the readily-available literature provided by the CalEPA's Office of Environmental Health Hazard Assessment ("OEHHA"), which documents these issues in great detail:</p> <p>Many cyanobacteria species produce a group of toxins known as microcystins, some of which are toxic;</p> <p>Upon ingestion, toxic microcystins are actively absorbed by fish, birds and mammals;</p>	Please see Master Response 14 regarding information considered in the EIR/EIS regarding microcystin toxicity and potential effects to San Francisco Bay.

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		<p>People swimming, waterskiing, or boating in contaminated water can be exposed to microcystins;</p> <p>Microcystins may also accumulate in fish that are caught and eaten by people;</p> <p>Finally, pets and livestock have died after drinking water contaminated with microcystins [Footnote 10: http://oehha.ca.gov/ecotox/documents/Microcystin031209.pdf].</p> <p>In addition, OEEHA identifies that “Animal poisonings have even occurred under environmental conditions considered unfavorable to cyanobacteria blooms such as cold lakes with low nutrient levels.” (Ibid.) Moreover:</p> <p>Microcystins are toxic to fish at concentrations as low as a few micrograms per liter (µg/L) or possibly even fractional µg/L. Finally, Blooms of cyanobacterial species that produce microcystins and/or anatoxin-a have coincided with the deaths of ducks, gulls, songbirds, pheasants and hawks, as well as several other bird species. The severity of such bird kills have ranged from a few individuals to several thousand birds per incident.</p> <p>(Ibid.)</p> <p>The OEEHA report identifies that it is not just one genus, Microcystis, but several, that create the toxins. People, agricultural and domestic animals, birds and fish are at direct and acute risk. The risk to fish is exceptionally high. And that conditions that are not classically considered favorable can still lead to toxicity sufficient to kill even mammals. Finally, because of its stability, the toxin can be exported out of the Delta into San Francisco Bay.</p>	
2622	25	<p>The only analyses of changes to water operations and creation of tidal and floodplain restoration areas that change water residence times within Delta channels, and increases in Delta water temperatures is a table by which the reader is apparently required to make his or her own determination, and no data on temperature at all. Even those tabularized data come with a caveat: “The data do not represent the length of time that water in the various subregions spends in the Delta in total, but do provide a useful parameter with which to compare generally how long algae would have to grow in the various subregions of the Delta.” (RDEIR/S, Section 8.3.1.7, p. 8-82, p. 31-43.) A parameter that has no documented correlation to bloom formation is used to somehow come to a conclusion that there is no impact. Even if there were a Delta regional correlation, the mechanics of algal bloom formation are local and based on site-specific conditions and this ‘qualitative evaluation’ could not provide any predictive or explanatory information to support the environmental analysis.</p> <p>Notwithstanding any ambiguity which may or may not be associated with historic nutrient levels and ratios, the project has direct impacts on flows by removing up to half of the Sacramento flow; it also directly manipulates the remaining flows within the Delta through operation of the Delta Cross Channel, which directs the flows to the east; and, then through operations of the South Delta pumps, which control regional circulation. The new Tunnels intakes (and the mitigation habitat) will also remove sediment, which allows for more light to enter the water column and exacerbates algal growth. Finally, created mitigation habitat provides elevated nutrients, which locally affect nutrients and</p>	<p>Please refer to responses to comments 20 – 24 within this comment letter. Regarding proposed alternatives effects on temperature, in-Delta water temperatures are primarily affected by atmospheric conditions such as solar radiation, air temperature, and wind. Water temperatures are typically in thermal equilibrium with atmospheric conditions and would not be strongly influenced by the flow changes under the preferred Alternative (4A). Project effects on temperature are assessed in Chapter 11, given the importance of temperature in the Delta for fish and aquatic resources. The modeling results indicate no biologically significant changes in water temperature within the Delta under the preferred Alternative. Refer to Chapter 11, attachment 11D, for detailed modeling results concerning the effects of temperature on Delta fish species.</p>

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		their ratios.	
2622	26	<p>Where blue-green algae are mentioned in relationship to water quality, it is not in terms of the project's impacts on nutrients and algae, but only that they can be a nuisance for drinking water and industrial uses. (RDEIR/S, App. A, Section 8.1.3.10 Nitrate/Nitrite and Phosphorus, p. 8-22, lines 27-30.) Chapter 11, Fish and Aquatic Resources fails to mention any negative potential effect on those resources from changes in algal distribution and occurrence associated with project impacts; where contaminants are mentioned in terms of biological effects, cyanobacterial toxins are not included. Moreover, the mitigation measures identified for the other contaminants will not work for the microorganisms and/or their toxins. (RDEIR, App. A, Section 11.1.4, p. 11-36, lines 21-22; Section 11.3.5.3, p. 11-175, lines 18-19.)</p> <p>Ironically, the Water Quality, Chapter 8, points generically to the Chapter 11, Fish and Aquatic Resources for project alternative effects on algae. (RDEIR/S, App. A, Section 8.3.1.7 Constituent-Specific Considerations Used in the Assessment, p. 8-64, lines 20-22.) However, as noted above, there simply is no such analysis in that Chapter.</p> <p>As most Delta agriculture is reliant on pumping directly from rivers and sloughs, toxic and non-toxic aquatic plants can lead to many potential problems as a result of direct and indirect environmental conditions exacerbated or created by the project both in the near term and cumulatively. Removing up to half of the flow of the Sacramento River and concentrating that effect in a narrow corridor profoundly changes the lower channel flow (velocity), as well as the dilution and the mixing of nutrients. These project-caused conditions either amplify natural conditions that are suitable for toxic and non-toxic aquatic plants or creates the tipping point for bloom expression. As a result, in-Delta Water supply intakes downstream of the proposed Tunnels are likelier to have reduced efficiency or be clogged by filamentous algae and hyacinth (<i>Eichhornia crassipes</i>), which flourish in lower flow conditions, can contain off-flavors that could affect wine grape and other specialized crops, can contain the toxins</p> <p>that would harm or kill livestock, and potentially harm crop economic values, regardless of its actual toxicity [Footnote 11: http://www.sfgate.com/news/article/Pesty-Plant-Clogging-River-Delta-Hyacinth-3009475.php], [Footnote 12: http://www.capradio.org/articles/2013/11/26/stockton-taking-on-channel-clogging,-invasive-hyacinth-problem/] (Lopez et al. (2008), p. 13-17.) These potential impacts to agriculture must be analyzed.</p> <p>Even if we accept the RDEIR/S's biased analysis, water clarity both in the far North Delta and far South Suisun is already sufficient to support the toxic blooms that already exist, as are the temperature and nutrients that support blue-green algal needs.</p> <p>The RDEIR/S must analyze project-related impacts to blue-green algal, and <i>Microcystis aeruginosa</i> communities, their dynamics, and their impacts on human health and the environment under current and cumulative conditions. The failure to seriously examine this significant water quality impact renders the RDEIR/S inadequate.</p>	<p>Please refer to Master Response 14 regarding the adequacy of the <i>Microcystis</i> assessment in the EIR/EIS. Note that the cross-reference in Chapter 8, Water Quality, to Chapter 11, Fish and Aquatic Resources noted in the comment is referring to salinity-related effects of the alternatives. Thus, the cross-reference is appropriate.</p>
2622	27	<p>LAND [Local Agencies of the North Delta] previously commented regarding the need for the project alternatives to include improvements to the South Delta Pumps to reduce entrainment. CCWD [Contra Costa Water District], Metropolitan Water District of Southern California and other SWP contractors have conducted a draft feasibility study,</p>	<p>Screening the intakes at Clifton Court Forebay was analyzed during the water conveyance alternative development process and is described in the 2013 Public Draft EIR/EIS, Appendix 3A. This alternative was eliminated from further evaluation because initial results of recent studies, including information included in the recent NMFS biological opinions, supported a phased approach that would emphasize improvements to</p>

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		<p>which has still not been released, indicating that at a cost of approximately \$200 million dollars, such an improvement could prevent take of a significant number of fish and larvae in the South Delta. No change in response to this study or LAND's prior comments is evident in the RDEIR/S. These comments therefore focus on the experimental nature of the new screens proposed for the North Delta.</p>	<p>operations of fish handling facilities and reduced predator potential within Clifton Court Forebay prior to further analysis of installation of fish screens. Nevertheless, DWR and Reclamation will continue investigating strategies to increase fish salvage efficiency, reduce pre-screen losses, and improve screening efficiencies, consistent with the 2009 biological opinion of the SWP/CVP.</p> <p>Please refer to Master Response 4 regarding why improving the screens on the south Delta intakes were not included in the proposed project and Master Response 3 for additional details on the project purpose and need. For more information regarding entrainment impacts please see Chapter 11 of the FEIR/EIS.</p>
2622	28	<p>The 2011 BDCP Fish Facilities Technical Team Technical Memorandum observed that, "There is a high level of uncertainty as to the type and magnitude of impacts that these new diversions will have on covered fish species that occur within the proposed diversion reach." [Footnote 13: http://baydeltaconservationplan.com/Libraries/Current_Documents/Final_FFTT_Tech_Memo_07_15_2011.sflb.aslx]. With respect to these new diversions, the project must design first and then test the design. Instead, the plan appears to be to construct and operate, and then hope for the best. This is unacceptable as described below.</p> <p>The Tunnels' intakes and screens design was not completed at the project level and is insufficient to assess if even the limited analysis that was provided is correct. The analysis fails to adequately identify under what conditions and to what extent physical contact by fish on the screen face, impingement, entrainment and predation reduction activities would impact each fish species. Each of these impacts would still occur if the project was designed and maintained appropriately. Unfortunately, there is no indication in the analysis that either the project design and or the mitigation described will be appropriate other than unsubstantiated assertions.</p> <p>For example, the RDEIR/S describes that these complex and experimental systems as if they will work as theoretically postulated and that there is no need to describe or assess their installation, operation, and facility maintenance impacts on the environment. This is simply wishful thinking and an indication of how unrealistic and unsupported the analysis really is. While CEQA and NEPA do not require every detail of a project to be known, it does require that the environmental impacts are fully disclosed, which in this case they clearly are not. These details are also essential to the C/ESA permitting process.</p> <p>The design is critical to ensure fisheries protections and not duplicate the massive fish injury and mortality that exists with the current South Delta Pumps and which will still occur at those pumps. (See also prior LAND [Local Agencies of the North Delta] comments). The project should be fully modeled using 3-D Computational Fluid Dynamics ("CFD"), then tested in a physical test chamber to avoid design errors. Then the system should be tested upon the construction of the first intake in-situ to individually tune the plate angles and baffling. For the environmental analysis to be adequate, using CFD, the project needs to identify how one facility will work at its "low-flow" condition (300 cubic feet per second) and then through the full range at high export (3,000 cubic feet per second), at varying water stages associated with the 4 water year classes and the full range of North Delta tides. Then it should complete the same modeling for the combination of the three intakes. The project screens must maintain the appropriate design fish screen criteria along the entire face of each screen. Otherwise the project will have massive and uncontrolled fisheries impacts contrary to</p>	<p>As the commenter notes, CEQA and NEPA do not require every detail of a project to be known in order to conduct adequate environmental review. The EIR/EIS includes sufficient detail to comply with the requirements of CEQA and NEPA. A number of preconstruction studies are proposed prior to operations of the NDD, in order to inform design. These studies are based on the FFTT (2011) memorandum and are described in Section 3.4.7.3 of Chapter 3 in the California WaterFix BA submitted in August 2016. These include both field-based and laboratory-based studies, including elements of the types of studies identified by the commenter.</p>

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		<p>the RDEIR/S conclusions.</p> <p>The studies described above are not studies for their own sake, or trivial technical details that can be worked out later. These studies would define and demonstrate the fundamental mechanics of the purported protection of the fishery promised by the project, and without this supporting analysis, there simply no evidence that the fish protection would work as stated. It is not clear how and under what conditions the project could operate the facility and achieve the appropriate approach and sweep velocities, over that screen length and height, and during high tides. The intake facilities would be located in an area that already has flow reversals, and would induce its own additional flow reversals depending on the sequencing and other operations of the pumps and the tidal cycle. The failure to disclose the intake facility operation plans masks significant environmental impacts both to fisheries and neighboring agricultural intakes.</p>	
2622	29	<p>Redesign of the intermediate forebay and pumping system now relies on gravity for certain flows. The lack of pumps near the screen face means that pump control over the screens is now essentially lost. Flow controls are then only provided by hydraulically inefficient and coarse-control valve structures, with suction developed over 35 miles away. It appears that dynamic flow control baffling at the screen face is critical to maintain fine-scale velocities, particularly in light of tidal flows. Yet, despite pointing these problems out to project engineering staff in the NEPA cooperators process, the engineers did not think that any screen control was required.</p>	<p>As described in the Conceptual Engineering Report referenced in the EIR/EIS, flow control at the intakes would be provided by 8-foot-by-8-foot control gates within the box conduits that are placed between the fish screens and the sedimentation basins. The box conduits also include influent flow meters. The control gates would modulate flow based on the flow meter output to maintain the velocities through the fish screens and through the sedimentation basins. In addition, isolation gates would be provided at each end of the box conduits to isolate the intake from the river during cleaning/maintenance and during flood conditions.</p>
2622	30	<p>By failing to provide the actual design, the project is not disclosing direct physical impacts on agricultural intakes and fisheries, and further fails to identify how it will avoid, minimize or mitigate for significant environmental impacts. DWR has no positive fish barrier screens on the South Delta Pumps and has limited experience in the management and cost of complex fish screen systems. If the intakes have to be redesigned, the economic costs would be massive, and the impacts to the fisheries significant from the expanded construction period. Retrofitted intake systems would be exceptionally expensive and likely not to be nearly as effective as those developed from the ground as a functional system. At best, DWR has proposed a massive experiment on the fisheries of the Delta without disclosing the actual environmental risks and economic costs. If any experiment on the fragile Delta should happen, it should be at the last failed experiment, the South Delta Pumps, not in the unexploited North Delta.</p>	<p>Impacts to agricultural areas and intake designs, are presented in Chapter 14 of the EIR/EIS. Screening of the existing facilities in the south Delta is challenging from the perspective of the location in the southeast corner of the Delta. See additional discussion in Appendix 3.A, Identification of Water Conveyance Alternatives, Conservation Measure 1. As described in the adaptive management and monitoring program in Section 4.1 of the RDEIR/SEIS, as part of the final NDD screen design effort, several pre-construction studies would be implemented to better understand how to minimize losses associated with the three new intake structures. As noted in the RDEIR/SEIR, Alternative 4A also includes investigations to better understand factors affecting juvenile through-Delta migration (as described in the adaptive management and monitoring program in Section 4.1) and includes biologically-based triggers to inform real-time operations of the NDD, intended to provide adequate migration conditions for juvenile salmonids.</p>
2622	31	<p>LAND [Local Agencies of the North Delta] previously provided detailed comments on the agricultural impacts of Alt.</p> <p>Even with the significant reduction in habitat creation, impacts on agricultural resources in and near the Delta will be massive. Impacts stem from converting farmland for project facilities (3,909 acres Important Farmland), degradation of surface and groundwater supplies, changing of local water levels, disruption of farms and farm access, and interference with farm infrastructure, among other impacts. Construction impacts will occur over an estimated 14-year period.</p> <p>With respect to water quality impacts, the RDEIR/S discloses that salinity would be significantly higher and exceed the standard on twice as many days are without the project. (RDEIR, App. A, p. 14-17 (14% of days exceeded under Not Action Alt. increasing to 28-29% of the days).) The new analysis of Alt. 4A indicates a 5% increase in salinity</p>	<p>Please see Master Response 18 regarding agricultural mitigation and Master Response 30 regarding modeling.</p>

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		<p>from existing conditions at the Emmaton compliance point, concluding that water quality impacts are less than significant with implementation of mitigation. (RDEIR/S, p. 4.3.10-4.) As discussed above and in other comments, the RDEIR/S continues to rely on faulty modeling of water quality impacts and cannot be relied upon.</p> <p>The faulty mitigation measures to address impacts to agriculture remain largely the same as the DEIR/S, and do not meet minimum standards, including those pertaining to specificity, enforceability and effectiveness.</p> <p>In any case, the project will clearly bring more salt water into the north Delta, which has historically had very high quality water. The RDEIR/S indicates that changes in water quality “could be addressed with real time operations of the SWP and CVP.” (App. A, p. 14-18.) LAND is not aware of any history of the SWP and CVP reducing water diversions without a clear requirement to do so; this year, the CVP and SWP continued to exceed even the relaxed water quality standards that applied as a result of SWRCB [State Water Resources Control Board] Temporary Urgency Change Permit processes.</p>	
2622	32	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Use of conservation easements for loss of farmland has questionable value in the Delta. While farmland easements are feasible mitigation for farmland conversion, they are typically placed where there is a threat of development. In the Delta, land uses are already largely constrained to the existing small Delta heritage communities and farming. Thus, imposition of an easement does not prevent future growth.</p>	<p>Most of the Delta land within the BDCP project area is in agricultural use. Were these lands subject to urban development pressures, traditional methods of mitigation, particularly agricultural conservation easements, could be effective tools for mitigation. However, almost all of the agricultural land impacts fall within the boundaries of the Delta Primary Zone. Under the Delta Protection Commission’s Master Land Use and Resource Management Plan, Land Use Policy P-2 provides “Local government general plans, as defined in Government Code Section 65300 et seq., and zoning codes shall continue to promote and facilitate agriculture and agriculturally-supporting commercial and industrial uses as the primary land uses in the Primary Zone; recreation and natural resources land uses shall be supported in appropriate locations and where conflicts with agricultural land uses or other beneficial uses can be minimized.” For more discussion on agricultural impact mitigation, please see Master Response 18.</p> <p>Please refer to Mitigation Measure AG-1c: Consideration of an Optional Agricultural Land Stewardship Approach or Conventional Mitigation Approach, Chapter 14, of this Final EIR/EIS. The mitigation measure states: “Where feasible, agricultural land conservation interests should be acquired in the county in which the conversion will take place, provided that any such land either would be at-risk for conversion from agricultural uses in the absence of such long-term protection”.</p>
2622	33	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>- Mitigation for agricultural impacts should be in the vicinity of the impact. Delta farmland has unique values that cannot be replaced with farmland elsewhere in the region/state.</p>	See response to comment 2622-32.
2622	34	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p>	Mitigation Measure AG-1 provides feasible mitigation to reduce potential impacts on agricultural land conversion and other potential disruptions of agricultural operations. Even with these measures, the Final EIR/EIS indicates that Alternative 4A agricultural impacts are significant and unavoidable.

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		-The limitations in the ability of conservation easements to mitigate the significant agricultural impacts has led to an interesting discussion about alternative mitigation approaches – such as the Agricultural Land Stewardship Approach – those discussions have not yet yielded what could be considered adequate mitigation. In some cases, there is simply no way to mitigate for the crushing impacts of the project; yet, the project is still required to mitigate to the extent feasible.	
2622	35	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Any plan to require certain management practices for development of wildlife values cannot be contained within an easement, which by definition limits activities but cannot require them. A management plan, with separate terms and funding may be entered to if certain farming practices are necessary. While easements are typically permanent, a management plan could be for a term of years acceptable to the farmer.</p>	<p>There is nothing in CEQA that bars a lead agency from considering hybrid forms of limiting uses of property in ways that provide multiple types of benefit to respond to adverse effects from a project. Indeed, public agencies have a duty to protect public funding and limit expenditures to those necessary to carry out a project’s public purpose, including environmental mitigation. [See, e.g., Stanson v. Mott, (1976), 17 Cal.3d 206: “We recognize, of course, that public officials who either retain custody of public funds or are authorized to direct the expenditure of such funds bear a peculiar and very grave public responsibility, and that courts and legislatures, mindful of the need to protect the public treasury, have traditionally imposed stringent standards upon such officials.” (Id at 225.) Accordingly, if the multiple demands for mitigation can be met with a single measure that meets those purposes, it is the duty of the public official deciding among those alternative measures to use one that saves public funds.</p> <p>Existing farmland generally has the same species benefits without the restrictions, which is the reason for replacing the land lost with other agricultural land. The restrictions resulting from the proposed hybrid form of agricultural conservation easements with habitat restrictions would ensure the habitat benefits will remain on easement lands, and the farmer would be paid for any restrictions. Because hybrid easements would provide additional certainty for land protections (for farming) and restrictions (for habitat protection) into perpetuity, both resources would benefit. For more discussion on agricultural impact mitigation, please see Master Response 18.</p>
2622	36	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-With respect to areas managed for wildlife purposes, a floating pool concept should be considered that would allow the locations to occasionally change (within a set sub-area), which would allow farmers more flexibility to participate in the program while maintaining some flexibility in the future to make different management decisions</p>	See response to comment 35 within this comment letter, regarding agricultural and wildlife easement hybrids.
2622	37	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Limiting cropping choices, though it may serve conservation goals, does not create a benefit to agriculture that can be counted as mitigation.</p>	See response to comment 35 within this comment letter, regarding agricultural and wildlife easement hybrids.
2622	38	Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced “menu of unenforceable options with no performance standards” approach. This is entirely inadequate under applicable law.	The RDEIR/SDEIS discloses all of the applicable impacts to agricultural resources from construction of the water conveyance facilities and associated Environmental Commitments in Chapter 14, Agricultural Resources Impacts AG-1 through 4. These impacts address the potential for agricultural land conversion

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		<p>(See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Typically, layering of agricultural and wildlife easements is not acceptable. When cropping and other management options are limited by such an agreement, mitigation for the project's impacts to agriculture are not occurring and cannot be counted. In the context of the Delta, it is difficult to see how management plan for wildlife could at the same time help conserve farmland. This is due to the strong land use protections at the local and regional level in the Delta.</p>	<p>and other impacts to agricultural operations from construction and operation of conveyance facilities and implementing conservation measures for BDCP alternatives and Environmental Commitments for the Non-HCP alternatives. Mitigation Measure AG-1, requiring an Agricultural Land Stewardship Plan, is identified to avoid and minimize effects on important farmland and Williamson Act contracted lands. Measures are also recommended to improve agricultural land productivity, preserve agricultural land through purchase of easements and reduce effects on agriculture infrastructure. The mitigation approach will be implemented on case-by-case basis to ensure that the appropriate conventional and optional mitigation strategies are employed to reduce effects on agricultural resources as much as possible. Mitigation Measures are also provided to reduce potential groundwater and water quality effects.</p> <p>The comment related to layering of agricultural land and wildlife easements was proposed for the BDCP preferred Alternative to acknowledge that easements required to protect wildlife habitat (such as agricultural land foraging habitat) could be used, in some cases, to also preserve agricultural land. For the new preferred alternative (Alternative 4A), this potential layering of agricultural land and wildlife habitat easements would likely not be the primary approach for agricultural land preservation because the amount of habitat restoration for Alternative 4A would be substantially less than restoration, protection and enhancement acreages proposed under the BDCP. However, this layering approach could be used if appropriate depending on the specific localized conditions.</p>
2622	39	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced "menu of unenforceable options with no performance standards" approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-The holder of any agricultural easements should be local land trusts with a connection to the community. While larger entities may have some oversight role, existing land trusts should take a significant role in the program.</p>	<p>If the Lead Agencies and local interests in the Delta are able to jointly develop agricultural land stewardship plans, these recommendations could be part of the process.</p> <p>If the agricultural land stewardship is not feasible, where feasible, mitigation shall generally result in the purchase of agricultural conservation property interests, such as easements on other agricultural lands of the same overall quality and acreage either directly or indirectly. The two preferred forms of mitigation in this context shall be (i) the inclusion of sufficient acreages within agricultural preserves within the proposed project's lands to satisfy CEQA and NEPA agricultural resource mitigation in addition to meeting project objectives under the Endangered Species Act and California's Natural Community Conservation Planning Act and (ii) reliance on the California Farmland Conservancy Program or on other established programs in the Delta supported by the county where the project is located, the Delta Stewardship Council, the Delta Protection Commission, or the Delta Conservancy.</p> <p>Please see Chapter 14, Agricultural Resources, Mitigation Measure AG-1, Develop an Agricultural Lands Stewardship Plan (ALSP) to Maintain Agricultural Productivity and Mitigate for Loss of Important Farmland and Land Subject to Williamson Act Contracts or in Farmland Security Zones, for Alternative 4A, for more information regarding the topic addressed in the comment. For more discussion on agricultural impact mitigation, please see Master Response 18.</p>
2622	40	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced "menu of unenforceable options with no performance standards" approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Any successful easement and/or management program would need to be integrated into some form of project governance in order to ensure the stated goals are reached and coordinate the programs with other project activities. As noted above, there is no governance structure associated with Alt. 4A.</p>	<p>Please see Chapter 14, Agricultural Resources, Mitigation Measure AG-1, Develop an Agricultural Lands Stewardship Plan (ALSP) to Maintain Agricultural Productivity and Mitigate for Loss of Important Farmland and Land Subject to Williamson Act Contracts or in Farmland Security Zones, for Alternative 4A, for more information regarding the topic addressed in the comment. For more discussion on agricultural impact mitigation, please see Master Response 18.</p>
2622	41	<p>Unfortunately, the RDEIR/S still does not clearly disclose the impacts to agriculture from the project or improve the previously advanced "menu of unenforceable options with</p>	<p>The lead agencies disagree that the EIR/EIS "does not address the agricultural impacts of the project". As described in Section 14.3.1 of the FEIR/EIS, the agricultural analysis uses project-specific data to determine if</p>

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		<p>no performance standards” approach. This is entirely inadequate under applicable law. (See prior comments on 2013 DEIR/S.) Though there is no new or improved analysis on which to comment, a key concern regarding development of a credible approach to assessing and mitigating agricultural impacts listed below.</p> <p>-Much additional work would be necessary to develop adequate analysis or mitigation of the project’s impacts to agriculture. It is unfortunate that the RDEIR still does not address the agricultural impacts of the project. As the largest contiguous area of Prime Farmland in the state, protecting Delta agriculture should be a higher priority.</p>	<p>the project features would create footprint effects to Important Farmland (see Chapter 14 for “Important Farmland” definition) that would be temporary/short-term or permanent in nature, in addition to analyzing agricultural viability from the project as it relates to operational effects on water quality, groundwater elevation, and inundation frequency. Furthermore, the section also considers several indirect consequences on agricultural resources that may result from implementation of the action alternatives. The Agricultural Lands Stewardship Plan (ALSP) presented in Mitigation Measure AG-1 (MM AG-1) has been included in the project to reduce potential impacts to Important Farmland due to construction of water conveyance facilities. MM AG-1 would reduce impacts by implementing activities such as siting project footprints to encourage continued agricultural production; relocating or replacing agricultural infrastructure in support of continued agricultural activities; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests.</p> <p>Please refer to Master Response 18 for a discussion of Agriculture Impacts and Mitigation.</p>
2622	42	<p>Invasive weed impacts to agriculture are briefly discussed in the RDEIR/S as they relate to temporary construction impacts, as well as CM 13. (RDEIR/S, App. A, Section 12.1.4, p. 12-709.) However, the project operations are likelier by far to exacerbate the weed conditions over the long term and require new analysis and significant new mitigation. This impact to agriculture is mentioned in passing in Chapter 14. Agriculture (p. 14-8.) for “operations” but never adequately described or mitigated for the project operational impacts to agriculture. Water hyacinth is never mentioned at all in Chapter</p> <p>12. Water hyacinth is yet another weed that would be exacerbated by the operationally created permanent drought conditions of the post-project Delta, and has its own implications for Delta environmental quality. Water hyacinth in the Delta is exacerbated in drought due to the lack of flushing flows, which cause mats of the plant to build up without being flushed out of the channels. (Ksander 2005; Cohen et al. 2004.) The spread of water hyacinth poses a threat to human health and safety because it supports human and wildlife disease carrying mosquitoes. This is because mats of water hyacinth act provide a breeding ground where they cannot be reached by predators. (Department of Boating and Waterways 2002.) In addition, the weeds could obscure submerged hazards, such as large trees common to the Delta that could damage boats and hurt passengers. (Coetsee 2015.) These impacts need to be discussed in each of the relevant sections and cross-referenced in Chapters 12, 15, 16, 25 and 28 respectively.</p>	<p>AMM11 in Appendix 3K provides mitigation for the potential spread of invasive weeds associated with terrestrial habitats. The commenter’s description of “permanent drought conditions of the post-project Delta” is not accurate, but it is correct that alternatives with extensive tidal habitat restoration are expected to result in potentially large increases in water residence time in some areas, which could create greater potential for invasive aquatic vegetation. CM13 Invasive Aquatic Vegetation Control is intended to reduce the extent of invasive aquatic vegetation for these alternatives. See, for example, analysis in Chapter 11 for Impact AQUA-11: Effects of Invasive Aquatic Vegetation Management on Delta Smelt (CM13). Where residence time concerns remain for the preferred alternative (4A, i.e., California WaterFix) in relation to less south Delta pumping (an issue that is recognized for Microcystis in the summer; please refer to Master Response 14), real-time operational adjustments to the preference for south Delta pumping would be made to address this issue.</p>
2622	43	<p>Water hyacinth also causes direct economic harm. In the last drought, 1985-86, the Army Corps of Engineers found that Delta marina operators had lost an estimated \$600,000 [\$1,570,594.06 in today’s dollars according to the Consumer Price Index inflation calculator]. (USACE [U.S. Army Corps of Engineers] 1985.) More recently, mats of water hyacinth reduced the ability of commercial boats to navigate at night from the Port of Stockton resulting in delays in cargo deliveries that cost importers at least \$200,000 in additional rental fees. (Coetsee 2015.) Finally, the weed chokes pumping state and federal export facilities, including those at the Delta Mendota Canal, the Tracy Pumping Plant, and the California Aqueduct near Clifton Court Forebay. (USACE 1985.) As a result, the federal and state governments have spent millions in an effort to eradicate the weed. Finally, the secondary effect of the presence of water hyacinth in large numbers significantly contributes to water loss. The invasive weed contributes to the consumption of water via evapotranspiration (Et- water loss), causing water loss at between 3.2 and 6.0 times greater than simple evaporation of open water. (Cohen et al.</p>	<p>This comment provides an opinion about the effects of water hyacinth in the Delta. The action alternatives in this Final EIR/EIS would have no effect on the extent of water hyacinth in the Delta. The BDCP alternatives do provide conservation measure 13, Invasive Aquatic Vegetation Control to reduce ecosystem stresses that could affect covered species under these alternatives. Please see Master Response 5 regarding conservation measures included under Alternative 4 that are not carried over to Alternative 4A. Please refer to the FEIR/EIS Appendix 3B regarding aquatic weed control.</p>

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		2004.) This weed also profoundly affects the ecology of the Delta, (Toft et al. 2003), leading to another loss of water associated with the proposed water operations of the project, not analyzed in the RDEIR/S.	
2622	44	<p>LAND [Local Agencies of the North Delta] retained an air quality expert, Dr. Pless, to conduct a technical review of the significantly revised air quality impact analyses in the RDEIR/S; these comments are attached as Exhibit B.14 The comments prepared by Dr. Pless on the DEIR/S focus on the health risks caused by the project among other issues. Dr. Pless' observations regarding the information provided by the RDEIR/S is summarized below:</p> <p>The lead agencies fail to make determinations of significance for project construction for some pollutants in several air districts because the air districts did not establish quantitative thresholds of significance. The lack of established thresholds of significance does not relieve the lead agencies of their statutory obligation under CEQA to determine whether the project's impacts are significant and to impose feasible mitigation measures and/or alternatives. Given the enormity of emissions during the 14- year construction period for the project, the lead agencies must rely on their own careful judgment based to the extent possible on scientific and factual data in determining whether a project's impacts are significant. At least one air district (SJUAPCD [San Joaquin Unified Air Pollution Control District]) pointed this flaw out to the lead agencies, but this comment was ignored. (Dr. Pless, Comment III.B.)</p>	<p>The determination of whether an air quality impact would be significant under CEQA is based on applicable thresholds adopted by local air districts and the professional judgment of DWR as the CEQA Lead Agency, and relies wholly on the substantial evidence in the administrative record. The air districts in the Plan Area, which include the Sacramento Metropolitan Air Quality Management District (SMAQMD), San Joaquin Valley Air Pollution Control District (SJVAPCD), Yolo-Solano Air Quality Management District (YSAQMD), and Bay Area Air Quality Management District (BAAQMD), have direct and indirect regulatory authority over sources of air pollution and are considered expert air quality agencies within their respective geographies. Each air district has adopted thresholds specific to local conditions based on substantial evidence, scientific analysis, and public review. Since the underlying factors that influence air pollution (e.g., emission sources, meteorology) within each air district differ, the adopted thresholds, including the pollutants addressed and the emissions limit, likewise differ among the districts. For example, as noted in SMAQMD's Ozone Nonattainment Plan, NOx concentrations have a greater effect on the formation of ozone within the Sacramento Area. Accordingly, the air district has established an ozone precursor threshold for NOx and not ROG. Other air districts, however, such as the BAAQMD, have found that local conditions warrant establishment of thresholds for both NOx and ROG. By relying on thresholds adopted by the expert air quality management agencies within each air district, the EIR/EIS ensures it is consistent with the latest science and regulatory requirements. It is important to note, however, that just because a quantitative threshold has not be established, does not mean that the EIR/EIS fails to make a determination regarding its significance. Rather, because the expert local air district does not consider the pollutant a concern, based on existing air pollution levels, regulatory controls, and other relevant factors, the impact analysis concludes less than significant.</p> <p>SJVAPCD's comment letter on the EIR/EIS (773) does not discuss criteria pollutant thresholds or flaws associated with the approach to evaluating project-level significance.</p>
2622	45	<p>The health risk assessment only determines health risks for sensitive receptors located between 3,000 feet and 6,000 feet from the construction footprint and ignores all receptors who are located within or within 3,000 feet of the construction footprint. The RDEIR/S provides no justification for excluding existing sensitive receptors inside of or within 3,000 feet of the construction footprint; these sensitive receptors exist and will experience the highest health risks associated with project construction emissions. These sensitive receptors have a right to know how their health would be impacted. By eliminating a large number of sensitive receptors from the analysis, they are not even afforded the minimal benefits of Mitigation Measure AQ-16, which would "provide individuals residing in areas where construction activities associated with the BDCP would create [diesel particulate matter] concentrations in excess of air district cancer risk thresholds the opportunity to relocate either temporarily during the construction period or permanently, at the discretion of the affected individuals." (Dr. Pless, Comment IV.C.)</p>	<p>Receptors were modeled at locations within 3,000 feet of the project boundaries. The language in Appendix 22C of the RDEIR/SDEIS has been revised to clarify this item. Results of the analysis for Alternative 4A indicates that impacts from particulate matter and diesel particulate matter would be less than significant because construction at sensitive receptors would not exceed chronic non-cancer or cancer thresholds.</p>
2622	46	<p>The health risk assessment fails to identify significant health hazards due to exposure of sensitive receptors to localized particulate matter concentrations resulting from Project construction emissions in the Yolo-Solano Air Quality Management District ("YSAQMD") because it fails to take into account background concentrations of these pollutants. The YSAQMD established as a threshold of significance a violation of an ambient air quality standard for particulate matter. Thus, the question is not whether Project PM10 and PM2.5 emissions by themselves would result in a violation of an ambient air quality</p>	<p>The localized PM10 and PM2.5 thresholds used to evaluate potential impacts in the YSAQMD were provided by the YSAQMD, and applied under the YSAQMD's recommendation to compare project-only concentration contributions to the thresholds.</p>

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		standards but rather whether the Project's contribution of PM10 and PM2.5 concentrations in addition to existing background conditions would result in a new violation or contribute significantly to an existing violation of an ambient air quality standard. (Dr. Pless, Comment IV.E.)	
2622	47	<p>The approach to mitigation of air quality impacts is wholly inadequate. Among other defects, Dr. Pless identified the following concerns:</p> <p>-The ECs and Mitigation Measures proposed by the RDEIR/S to reduce project construction impacts to less than significant levels are inadequate to ensure that project construction emissions would not exceed estimated levels. (Dr. Pless, Comment V.A and V.B).</p> <p>-The lead agencies improperly defer the development of mitigation measures (Comment V.C) thereby removing them from public review.</p> <p>-The lead agencies' "good faith efforts" to enter into development agreements with the affected air districts and the proposed contingency measures in case the "good faith efforts" are not successful fail to demonstrate that project impacts would be reduced to less than significant levels as claimed by the RDEIR/S. (Dr. Pless, Comment V.D.)</p>	<p>Responses to Dr. Pless' comments are provided as individual remarks. Below is a summary of the responses, as well as references to where additional information can be found:</p> <ol style="list-style-type: none"> 1. ECs and Mitigation Measures: Given the dynamic and complex nature associated with project-generated air pollutants, the lead agencies have developed a comprehensive and aggressive mitigation strategy to address air quality and associated human health effects. All requirements have been outlined in the Mitigation Monitoring Report Protocol (MMRP) and considered a condition of project approval. Please refer to responses to comments 2622-50, 2622-49, and 2622-61. 2. Deferred mitigation: The project proponents undertook a multi-year consultation process with the four Plan Area air districts to confirm sufficient emissions reduction credits were available to offset project-generated emissions to net zero. Copies of the air district consultation are provided in the general conformity determination (see Appendix 22E in the recirculated EIR/EIS). Please refer to response to comment 2622-61. 3. "Good Faith Effort": Mitigation Measures AQ-1, AQ-3, and AQ-4 acknowledge that their implementation depends on consultation with air district staff and third party participation, and as such, the project proponents will make a good faith effort to enter into contracts with all required parties. The performance standard of achieving net zero ROG and NOx emissions, however, will be outlined in the MMRP and considered a condition of project approval. Please refer to response to comment 2622-87.
2622	48	With respect to the organization and reviewability of the RDEIR/S, Dr. Pless suggested that the RDEIR/S be recirculated to provide one complete document that revises all sections and incorporates all updated analyses rather than incorporating by reference the numerous files that make up the DEIR/S, RDEIR/S, and errata. Dr. Pless noted that it is virtually impossible for the public to understand this highly complex document by having to refer back to previous documents and across multiple appendices and sections. Reorganization, a table of contents in every chapter, an indication of which alternative is addressed on every page, and improved formatting would help this document better inform the public of the environmental impacts of the project.	For more information regarding the document's length and complexity please see Master Response 38.
2622	49	<p>Greenhouse Gas Emissions [Footnote 15: These comments also relate to Energy Impacts, discussed in RDEIR/S, Section 4.3.17 and Chapter 24].</p> <p>LAND [Local Agencies of the North Delta] retained an air quality consulting firm, SCS Engineers, to conduct a technical review of the greenhouse gas ("GHG") impact analyses in the RDEIR/S; these comments are attached as Exhibit C.16 The RDEIR/S concludes that the project's GHG emissions from construction would be significant, but can be mitigated to less than significant levels. (RDEIR/S, ES-100 (AQ-21).) Project construction will result in</p> <p>emissions of more than three million metric tons of carbon dioxide equivalent ("CO2e") during fourteen years of construction; this is equal to adding 633,000 new passenger cars, or about a five percent increase in total cars on the road. The RDEIR/S goes on to conclude the operational energy demand for the project – estimated to be 1,405 gigawatt hours ("GWh") per year – will result in less than significant GHG emissions and requires no mitigation. Notably, an average power plant produces about 1,000 GWh per</p>	<p>CEQA Guidelines section 15183.5, subdivision (a), provides for tiering and streamlining the analysis of GHG emissions. Under this provision, lead agencies may analyze and mitigate the significant effects of GHG emissions at a programmatic level, and later project-specific environmental documents may tier from and / or incorporate by reference the existing programmatic review.</p> <p>As described in Chapter 22, Air Quality and Greenhouse Gases, Section 22.3.2.3, DWR adopted its Climate Action Plan – Phase I: Greenhouse Gas Emissions Reduction Plan (CAP) in May 2012 for all activities of DWR. Chapter 12 of DWR's CAP outlines how individual projects can demonstrate consistency with the CAP so that they may rely on the analysis it provides for the purposes of a CEQA cumulative GHG impacts analysis. Since the action alternatives would result in additional SWP energy demands in excess of 15 gigawatt hours per year, required consultation with DWR's SWP Power and Risk Office has occurred, and modifications to the Renewable Power Procurement Plan (REPP) to accommodate the action alternatives have been identified to ensure that covered project activities do not conflict with DWR's ability to achieve the GHG reductions outlined in the CAP. As discussed in Chapter 22, power purchased through the REPP would be from renewable resources and not from fossil fuel based power plants. For these reasons, the operational emissions from both increased SWP pumping and project maintenance are found to be less than significant</p>

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		<p>year.</p> <p>The RDEIR/S relies heavily on implementation of DWR’s Climate Action Plan (“CAP”), which is not framed as mitigation, to mitigate for both construction and operational GHG impacts. (RDEIR/S, ES-100, 4.3.18-14.) According to the RDEIR/S, because DWR’s adopted CAP anticipates that DWR will rely on cleaner sources of power in the future, DWR entity-wide emissions would decrease to below the GHG emissions reduction trajectory by 2041, and the 2050 GHG reduction goal would be met. The CAP projects an increase in GHG emissions of more than 500,000 metric tons of CO2e when the project pumps begin operation in 2024. This increase in emissions is well above the GHG emissions trajectory in the CAP and RDEIR/S and exceeds the designated GHG emissions reduction trajectory by 260,000 metric tons of CO2e.</p> <p>In any case, the RDEIR/S concludes that because DWR’s entity-wide GHG emissions are projected to meet 2050 reduction goals, and because project implementation would not affect DWR’s established reduction goals, GHG emissions are not significant, and no mitigation is required. The conclusion that the Project operations would not result in significant GHG emissions is unsupported in light of the GHG emissions likely to result from the electricity demand from massive pumps included in the project. The power used to pump water must be generated somewhere by some facility or combination of facilities. Typically, this generation is from fossil fuels, resulting in significant GHG emissions from combustion. Even in the case of obtaining carbon-free power (e.g., hydro, wind, solar), DWR’s use of that carbon-free power removes it from the California energy grid where it can no longer be used to offset other GHG emissions, thereby increasing GHG emissions. Since the energy requirements of the project are so large, the project effectively adds GHG emissions from power plants.</p> <p>While CEQA allows lead agencies to rely on compliance with existing plans for GHG mitigation, neither the CAP or Mitigation Measure AQ-21 includes enforceable conditions. In particular, there are no monitoring or enforcement conditions for project GHG emissions to ensure that the reduction anticipated in the CAP will actually occur, and that GHG reductions in one area will not simply be displaced by increases elsewhere in the utility grid. There is no guarantee that the CAP will ultimately result in no net GHG emissions.</p>	<p>and no mitigation is required.</p> <p>Through this demonstration of consistency and compliance with the CAP, DWR properly relies both on the GHG reduction commitments embodied in the CAP and on the analysis it provides for the purposes of a CEQA cumulative GHG impacts analysis. Please see Master Response 19 for additional information.</p> <p>In addition to potential GHG impacts from increased SWP pumping, the EIR/EIS also evaluates potential indirect emissions from displaced hydropower to existing CVP customers. It is currently unknown what type of power source (e.g., renewable, natural gas) would be substituted for CVP electricity. However, potential indirect emissions that may result if previous CVP electricity users acquire energy from a source that results in GHG emissions are presented in Chapter 22, Air Quality and Greenhouse Gases. These emissions would result from decisions made by dozens of independent electricity users, which are beyond the control of Reclamation or any of the other Lead Agencies. Accordingly, the EIR/EIS concludes that potential indirect GHG emissions generated by increased CVP pumping would be adverse.</p> <p>With respect to implementation enforcement, since the EIR/EIS GHG analysis relies on the commitments embodied in DWR’s CAP, all requirements outlined in the CAP to avoid or substantially lessen cumulative GHG impacts are legally enforceable commitments of the project. As discussed in Chapter 22, Air Quality and Greenhouse Gases, the CAP commits DWR to monitoring its emissions each year and evaluating its emissions every five years to determine whether it is on a trajectory to achieve its GHG emissions reduction goals. If it appears that DWR will not meet the GHG emission reduction goals established in the plan, DWR will make adjustments to existing emissions reduction measures, devise new measures to ensure achievement of the goals, or take other action.</p> <p>Since construction-related emissions are not covered by DWR’s CAP, binding mitigation specific to the action alternatives is identified in the EIR/EIS. Mitigation Measure AQ-21 provides clear and enforceable means for ensuring that the construction-related GHG emissions of the proposed project will be reduced to net zero (“All selected strategies must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additional[ity]”). All requirements of Mitigation Measure AQ-21 will be outlined in the Mitigation Monitoring Report Protocol (MMRP) and considered a condition of project approval.</p>
2622	50	<p>According to the RDEIR/S, the project’s massive construction emissions will be reduced to less than significant levels by Mitigation Measure AQ-21 (GHG [Green House Gas] Mitigation Program). As explained by SCS [Engineers], Mitigation Measure AQ-21 is flawed and does not sufficiently require consistency with California GHG reduction goals. Mitigation Measure AQ-21 requires the project to develop and implement a GHG mitigation program to reduce GHG emissions to “net zero”. Yet the purchased GHG offsets are not required to be consistent with California GHG reduction goals and policies, and could be potentially be re-used to mitigate for other projects. Moreover, there is no means to ensure that the anticipated reductions under the CAP relied upon to ensure reduced emissions from power sources will actually occur. Yet the RDEIR/S assumes that due to compliance with the CAP, impacts will be less than significant.</p>	<p>Mitigation Measure AQ-15 (now AQ-21) outlines an extensive GHG Mitigation Program to reduce construction-related GHG emissions to net zero. The mitigation identifies 13 potential strategies. Since construction of the project, as mitigated, would not increase GHG emissions, it is consistent with California GHG reduction goals. Moreover, several of the strategies identified by Mitigation Measure AQ-21 would facilitate implementation of statewide GHG programs and legislation, such as the Assembly Bill 32 Scoping Plan and Renewables Portfolio Standard (RPS). All selected strategies must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionally (i.e., the reductions would not happen without the financial support of purchased offset credits or other mitigation strategies). Accordingly, reductions achieved by projects funded under Mitigation Measure AQ-21 cannot be “re-used” to mitigate other projects. As noted in Mitigation Measure AQ-21, the project proponents will develop a mechanism for quantifying, funding, implementing, and verifying emissions reductions associated with the selected strategies. These requirements will be outlined in the Mitigation Monitoring Report Protocol (MMRP) and considered a condition of project approval.</p> <p>With respect to reference to DWR’s climate action plan (CAP), as discussed in Chapter 22, Air Quality and Greenhouse Gases, the CAP is only used to evaluate operational emissions from SWP pumping. Consistent</p>

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			with CEQA Guidelines Section 15183.5, the operational SWP emissions analysis tiers from the programmatic review conducted for the CAP. Since the SWP emissions analysis presented in Chapter 22 meets the consistency requirements detailed in the DWR CAP, operational SWP GHG impacts are determined to be less than significant.
2622	51	While the RDEIR/S refers to a “gravity-based” system, the project creates tremendous new electricity demands in order to operate. These energy demands will occur for the life of the project and will result in increased GHG [Green House Gas] emissions, as explained in the SCS [Engineers] report. The RDEIR/S’ reliance on the CAP, which has no mechanism for enforcement, to make a less than significant impact determination, is thus erroneous. With respect to GHG emissions during project construction, the RDEIR/S is similarly flawed, as it relies on development of a future plan that includes measures that are “nonexclusive, untested, and of unknown efficacy.” (See <i>Communities for a Better Environment v. City of Richmond</i> (2010) 184 Cal.App.4th 70, 93.) Feasible and enforceable mitigation measures are available to mitigate to the project’s significant GHG impacts but have not yet been required. With a project as large and energy intensive as the Tunnels, it is essential that the lead agencies properly disclose and mitigate the GHG impacts, which the RDEIR/S fails to do.	See response to 2584-14. The energy impact determination is based on the high efficiency of the pumps and the small amount of additional electrical energy that will be required for Delta conveyance, relative to the electrical energy already used to pump the water supply to south-of-Delta CVP and SWP contractors.
2622	52	<p>The RDEIR/S attempts to show the Tunnels’ consistency with the Delta Plan in Appendix G, since the Tunnels would not be automatically incorporated into the Delta Plan as was contemplated for the BDCP. The Tunnels are clearly a covered action that would be subject to consistency review. Even as weak as the Delta Plan is in carrying out the Coequal goals expressed in the 2009 Delta Reform Act, the Tunnels could never be consistent with it. For instance, the RDEIR/S for the tunnels fails to provide any showing that it was developed according to the Delta Council’s adopted Best Available Science policy. (Cal. Code Regs., tit. 23, §§ 5002, 5001, subd. (ff) and Appendix 1A.) The deep flaws the project’s adaptive management approach have been addressed by LAND [Local Agencies of the North Delta] and others.</p> <p>Appendix G discusses the alleged consistency of other actions being taken outside of the Tunnels project as evidence of consistency with Delta Plan policies and regulations pertaining to reduced reliance on the Delta. The question in a consistency process, however, will pertain to the project under review, not other actions. (Wat. Code, § 85225.) Appendix G also refers to ECs [environmental commitments] as means to demonstrate consistency with the Delta Plan. Yet as discussed previously, it is entirely unclear whether ECs will be undertaken as part of Alt. 4A. It is for these reasons that the Tunnels proponents are busily working to amend the Delta Plan to permit an eventual determination of consistency. Whether these changes to the Delta Plan can be made consistent with the mandates of the 2009 Delta Reform Act remains to be seen. In any case, the information provided in Appendix G clearly shows that the Tunnels are not consistent with the Delta Plan.</p>	<p>Comment is addressing the consistency with the Delta Plan. See Master Response 31 for more information about the Delta Reform Act.</p> <p>See Master Response 33 for more details on adaptive management.</p> <p>In April 2015 state and federal agencies announced a new sub-alternative—Alternative 4A (California WaterFix) —which replaced Alternative 4 (the proposed BDCP) as the state’s proposed project. Alternative 4A reflects the state’s proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. These two efforts are a direct reflection of public comments.</p> <p>From a Statewide perspective, the water agencies throughout the state have developed portfolios to provide the necessary water for their region. The solution to the State’s water problem is multi-faceted and will include multiple actions throughout the state. Ways to reduce demand are in process at this time. Various programs for storage, reuse and added reliability are being evaluated and implemented. Those actions do not provide the entire solution; therefore, the project is being proposed as one of the pieces of the overall program. However, the neither State nor Federal government has the authority to dictate action by the various water entities.</p>
2622	53	Perhaps least convincing of all is the argument that the possibility of developing an Agricultural Lands Stewardship Program to help mitigate for the significant impacts of the project on agriculture from land conversion, water supply and other impacts somehow demonstrates “respect for local land use” under Delta Plan Policy 2. (Cal. Code Regs., tit. 23, § 5011.) As discussed above, this alternative mitigation for agricultural impacts is currently little more than a possibility, and has not been developed into an actual mitigation measure. Certainly, locating the Tunnels and associated facilities by force on private and public lands in the Delta that are already in other uses is not	Please refer to Master Response 24, Delta as a Place and Master Response 31, for additional details regarding the California WaterFix and compliance with applicable Delta Reform Act requirements.

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		respectful of local land uses.	
2622	54	Thank you for considering these comments, and we hope they help lead to a more productive discussion about how to address state-wide needs without completely sacrificing Delta communities, agriculture and environment. These documents still do not reflect a good faith effort at full disclosure or a hard look at the Tunnels project. Such an approach would lead to better solutions than the Alt. 4A “Delta Not Fixed” project. The Delta is a place, not just plumbing, and this project has consistently focused on plumbing over place, to everyone’s detriment. In any case, we remain willing to work in good faith with the lead agencies and others toward an acceptable approach to managing Delta water and other resources.	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.
2622	55	[ATT 1: Table Comparing Peripheral Canal, BDCP, and WaterFix]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	56	<p>Instead of providing a complete revised document that incorporates the new alternatives, the lead agencies chose the format of a partially recirculated document which further complicates the already challenging review (see Comment II.A) by providing the analysis of environmental impacts under the three new action alternatives (4A, 2D, and 5A) in Chapter 4 of the main body of the PRDEIR/SDEIS and relegating to Appendix A revisions to the environmental impact analyses (Chapters 5 through 30) for the other 15 action alternatives. This presentation requires the reviewer to constantly go back and forth between the main body of the PRDEIR/SDEIS, the revised chapters and their respective revised appendices in PRDEIR/SDEIS</p> <p>Appendix A, and the DEIR/DEIS for sections, appendices and figures that were not revised. Apparently recognizing that this presentation is far from intuitive, the lead agencies provide a Document Review Road Map, shown below.</p> <p>I note that the Document Review Road Map fails to refer to the new PRDEIR/SDEIS Appendices B through G. Further confounding review is that not all sections that should have been were revised or amended (e.g., the PRDEIR/SDEIS does not provide figures illustrating DWR total emissions of greenhouse gases for Alternatives 4A, 2D, and 5A or revised figures for the other 15 action alternatives).</p> <p>Further, not all revised chapters and appendices in Appendix A are provided as redline strikeout (e.g., Chapter 22, Air Quality and Greenhouse Gases and Appendix 22C). In addition, the PRDEIR/SDEIS changed some heading numbering within the revised Chapters (e.g., the Air Quality and Greenhouse Gases Cumulative Analysis, formerly Chapter 22.3.3.17, is now Chapter 22.3.4). Finally, the lead agencies posted errata to the document on August 8, September 23, and October 13, 2015. In sum, the presentation of the PRDEIR/SDEIS unnecessarily complicates review of what was already impenetrable document.</p>	<p>The proposed project is a joint RDEIR/SDEIS prepared in compliance with the requirements of CEQA and NEPA. Before the selection and approval of an alternative considered, the Lead Agencies must comply with the necessary state and federal environmental review requirements. The Final EIR/EIS is intended to provide sufficient CEQA and NEPA support for approval of the proposed project or any of the action alternatives for either compliance strategy.</p> <p>The size and complexity of these drafts reflect an unprecedented effort to analyze a proposed project under both state and federal laws for endangered species along with 15 Alternatives and 3 subalternatives. Please refer to Master Response 38 for more information pertaining to the size and complexity of the documents.</p>
2622	57	[ATT 2: Document Review Road Map from RDEIR/SDEIS]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	58	The BDCP/CWF would be constructed within parts of three air basins, the Sacramento Valley Air Basin (“SVAB”), the San Joaquin Valley Air Basin (“SJVAB”), and the San Francisco Bay Area Air Basin (“SFBAAB”) which are under the jurisdiction of four air	Regarding the organization of Chapter 22, Air Quality and Greenhouse Gases. The document and air quality analysis reflects several years of collaboration, responses to requests for additional information, careful thought, accumulation of the latest scientific information, and thorough analyses needed to develop and

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		<p>districts, the Yolo-Solano Air Quality Management District (“YSAQMD”), the Sacramento Metropolitan Air Quality Management District (“SMAQMD”), the Bay Area Air Quality Management District (“BAAQMD”), and the San Joaquin Valley Air Pollution Control District (“SJVAPCD”). For each of the now 18 action alternatives, the PRDEIR/SDEIS evaluates the significance of emissions of criteria pollutants— reactive organic gases (“ROG”) and nitrogen oxides (“NOx”), which are both ozone precursors, carbon monoxide (“CO”), particulate matter equal to or smaller than 10 micrometers (“PM10”), particulate matter equal to or smaller than 2.5 micrometers PM2.5, and sulfur dioxide (“SO2”)—diesel particulate matter (“DPM”), carbon dioxide-equivalent (“CO2e”) greenhouse gases (“GHG”), and odors by affected air district under NEPA and CEQA [Footnote 4: DEIR/DEIS, Table 22-86, p. 22-226].</p> <p>I [Dr. Petra Pless] previously commented that Chapter 22 Air Quality and Greenhouse Gases in the DEIR/DEIS is impenetrable due to its highly repetitive structure and lack of effective formatting [Footnote 5: 2014 Pless DEIR/DEIS Comments, Comment IV.A]. The PRDEIR/SDEIS did not change this approach. In fact, the PRDEIR/SDEIS Appendix A, Chapter 22 Air Quality and Greenhouse Gases, has grown from 408 to 514 pages (without appendices) due to inclusion of eight new impact analyses and remains in what looks like a 10 point font size for the body text; the PRDEIR/SDEIS’s analyses of Air Quality and Greenhouse Gases for the three new alternatives, Chapters 4.3-18 (Alternative 4A), 4.4-18 (Alternative 2D, and 4.5-18 (Alternative 5A) add another 19 to 21 pages each. The sheer length of these chapters, their monotonous, indistinct formatting, and repetitive and internally redundant structure frustrate public review and defeat the public disclosure requirements of CEQA and NEPA.</p> <p>Specifically, the PRDEIR/SDEIS’s presentation of Effects and Mitigation Approaches in Appendix A, Chapter 22, Section 22.3, and PRDEIR/SDEIS, Chapter 4, Section 4.3-18 (Alternative 4A), 4.4-18 (Alternative 2D, and 4.5-18 (Alternative 5A), follows the same structure for each of the 18 action alternatives for presenting:</p> <ul style="list-style-type: none"> a) Summary of methodology. B) Presentation of emission estimates in tables (criteria pollutants from electricity consumption, construction, and operation and maintenance). C) Discussion of NEPA Effects and CEQA Conclusions including applicable mitigation measures for each of the following impacts: <p>Impact AQ-1: Generation of Criteria Pollutants in Excess of the SMAQMD Regional Thresholds during Construction of the Proposed Water Conveyance Facility</p> <p>Impact AQ-2: Generation of Criteria Pollutants in Excess of the YSAQMD Regional Thresholds during Construction of the Proposed Water Conveyance Facility</p> <p>Impact AQ-3: Generation of Criteria Pollutants in Excess of the BAAQMD Regional Thresholds during Construction of the Proposed Water Conveyance Facility</p> <p>Impact AQ-4: Generation of Criteria Pollutants in Excess of the SJVAPCD Regional Thresholds during Construction of the Proposed Water Conveyance Facility</p>	<p>conduct an environmental review of a project that impacts the Delta estuary and water supplies for million Californians.</p> <p>Although the science and analyses that support the draft EIR/EIS, including the air quality and GHG chapter, are complex, the lead agencies have made every attempt to present the information in plain language and in a clear format with emphasis on the information that is useful to the public, agencies, and decision makers.</p> <p>For more information, please see response to comment 1787-255 and Master Response 38 regarding the length and complexity of the document.</p>

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		Impact AQ-5: Generation of Criteria Pollutants in Excess of the SMAQMD Regional Thresholds from Operation and Maintenance of the Proposed Water Conveyance Facility	
		Impact AQ-6: Generation of Criteria Pollutants in Excess of the YSAQMD Regional Thresholds from Operation and Maintenance of the Proposed Water Conveyance Facility	
		Impact AQ-7: Generation of Criteria Pollutants in Excess of the BAAQMD Regional Thresholds from Operation and Maintenance of the Proposed Water Conveyance Facility	
		Impact AQ-8: Generation of Criteria Pollutants in Excess of the SJVAPCD Regional Thresholds from Operation and Maintenance of the Proposed Water Conveyance Facility	
		Impact AQ-9: Exposure of Sensitive Receptors to Localized Particulate Matter in Excess of SMAQMD's Health-Based Concentration Thresholds	
		Impact AQ-10: Exposure of Sensitive Receptors to Localized Particulate Matter in Excess of YSAQMD's Health-Based Concentration Thresholds	
		Impact AQ-11: Exposure of Sensitive Receptors to Localized Particulate Matter in Excess of SJVAPCD's Health-Based Concentration Thresholds	
		Impact AQ-12: Exposure of Sensitive Receptors to Localized Particulate Matter in Excess of BAAQMD's Health-Based Concentration Thresholds	
		Impact AQ-13: Exposure of Sensitive Receptors to Health Hazards from Localized Carbon Monoxide	
		Impact AQ-14: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of SMAQMD's Chronic Non-cancer and Cancer Risk Assessment Thresholds	
		Impact AQ-15: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of YSAQMD's Chronic Non-cancer and Cancer Risk Assessment Thresholds	
		Impact AQ-16: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of BAAQMD's Chronic Non-cancer and Cancer Risk Assessment Thresholds	
		Impact AQ-17: Exposure of Sensitive Receptors to Health Hazards from Diesel Particulate Matter in Excess of SJVAPCD's Chronic Non-cancer and Cancer Risk Assessment Thresholds	
		Impact AQ-18: Exposure of Sensitive Receptors to Coccidioides immitis (Valley Fever)	
		Impact AQ-19: Creation of Potential Odors Affecting a Substantial Number of People during Construction or Operation of the Proposed Water Conveyance Facility	
		Impact AQ-20: Generation of Criteria Pollutants in Excess of Federal	

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		<p>De Minimis Thresholds from Construction and Operation and Maintenance of the Proposed Water Conveyance Facility</p> <p>Impact AQ-21: Generation of Cumulative Greenhouse Gas Emissions during Construction of the Proposed Water Conveyance Facility</p> <p>Impact AQ-22: Generation of Cumulative Greenhouse Gas Emissions from Operation and Maintenance of the Proposed Water Conveyance Facility and Increased Pumping</p> <p>Impact AQ-23: Generation of Cumulative Greenhouse Gas Emissions from Increased CVP Pumping as a Result of Implementation of CM1</p> <p>Impact AQ-24: Generation of Regional Criteria Pollutants from Implementation of CM2-CM11</p> <p>Impact AQ-25: Exposure of Sensitive Receptors to Health Hazards from Localized Particulate Matter, Carbon Monoxide, and Diesel Particulate Matter from Implementation of CM2-CM11</p> <p>Impact AQ-26: Creation of Potential Odors Affecting a Substantial Number of People from Particulate Matter from Implementation of CM2-CM11</p> <p>Impact AQ-27: Generation of Cumulative Greenhouse Gas Emissions from Implementation of CM2-CM11</p>	
2622	59	<p>The PRDEIR/SDEIS provides no discussion why, contrary to the remainder of Chapter 22 Air Quality and Greenhouse Gases, the order of impacts analyzed for the four air districts was changed from YSAQMD (1), SMAQMD (2), BAAQMD (3), and SJVAPD (4) in the DEIR/DEIS to SMAQMD (1), YSAQMD (2), BAAQMD (3), and SJVAPD (4), further complicating public review. Further, the renumbering of impacts by the PRDEIR/SDEIS turns a direct comparison with impact discussions in the DEIR/DEIS into a hunt for the corresponding impacts.</p>	<p>The order of Impacts AQ-1 and AQ-2 was flipped in the RDEIR/SDEIS to evaluate impacts in SMAQMD before YSAQMD since SMAQMD manages and implements the HDLEVIP on behalf of all air districts within the SFNA. The procurement of offsets through SMAQMD's HDLEVIP is used to mitigate impacts in both SMAQMD and YSAQMD. Accordingly, the RDEIR/SDEIS presents impacts in SMAQMD first so that mitigation through the HDLEVIP can be referenced in the YSAQMD analysis. The lead agencies recognize the reorganization may make a direct comparison to the DEIR difficult, but elected to make the change to improve the flow and readability of the RDEIR/SDEIS. A summary of air quality impacts by impact for the RDEIR/SDEIS can be found in Table ES-9 in the Executive Summary.</p>
2622	60	<p>Because there are no indications which alternative is discussed on a respective page, it is easy to lose sight of the alternative under review when scrolling through a PDF document or thumbing through a printed document. This is not helped by errors in the document that incorrectly label impacts (e.g., p. 22-234 incorrectly labels Alternative 2B Impact AQ-5 as AQ-6; p. 22-261 incorrectly labels Alternative 3</p> <p>Impact AQ-5 as AQ-6). Because of this repetitive structure, which analyzes each of the 27 impacts separately for each and every one of the 18 action alternatives and follows more or less the same outline within each impact discussion, the PRDEIR/SDEIS, contains a multitude of recurring statements and sometimes whole paragraphs (where "X" stands for any of the 18 action alternatives):</p> <p>Electricity consumption</p> <p>– Construction and operation of Alternative [X] would require the use of electricity, which would be supplied by the California electrical grid. Power plants located throughout the state supply the grid with power, which will be distributed to the</p>	<p>The comment is regarding the organization of Chapter 22, Air Quality and Greenhouse Gases. The document and air quality analysis reflects several years of collaboration, responses to requests for additional information, careful thought, accumulation of the latest scientific information, and thorough analyses needed to develop and conduct an environmental review of a project that impacts the Delta estuary and water supplies for million Californians.</p> <p>Although the science and analyses that support the draft EIR/EIS, including the air quality and GHG chapter, are complex, the lead agencies have made every attempt to present the information in plain language and in a clear format with emphasis on the information that is useful to the public, agencies, and decision makers.</p> <p>For more information, please see response to comment 1787-255 and Master Response 38 regarding the length and complexity of the document.</p>

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		<p>Study area to meet project demand. Power supplied by statewide power plants will generate criteria pollutants. Because these power plants are located throughout the state, criteria pollutant emissions associated with Alternative [X] electricity demand cannot be ascribed to a specific air basin or air district within the study area and it cannot be determined whether the air pollutant emissions associated with electricity generation would degrade air quality in a specific air basin or air district within the Study area. Criteria pollutant emissions from electricity consumption, which are summarized in Table [] for Alternative [X] ..., are therefore provided for informational purposes only and are not included in the impact conclusion.</p> <p>Construction</p> <ul style="list-style-type: none"> – Construction activities would generate emissions of ozone precursors (ROG and Nox), CO, PM10, PM2.5, and SO2. Table [] summarizes criteria pollutant emissions that would be generated in the BAAQMD, SMAQMD, SJVAPCD, and YSAQMD in pounds per day and tons per year. Emissions estimates include implementation of environmental commitments (see Appendix 3B, Environmental Commitments). Although emissions are presented in different units (pounds and tons), the amounts of emissions are identical (i.e., 2,000 pounds is identical to 1 ton). Summarizing emissions in both pounds per day and tons per year is necessary to evaluate project-level effects against the appropriate air district thresholds, which are given in both pounds and tons (see Table []). – As shown in Appendix 22B, Air Quality Assumptions, construction activities during several phases will likely occur concurrently. To ensure a conservative analysis, the maximum daily emissions during these periods of overlap were estimated assuming all equipment would operate at the same time—this gives the maximum total project-related air quality impact during construction. Accordingly, the daily emissions estimates represent a conservative assessment of construction impacts. Exceedances of the air district thresholds are shown in underlined text. <p>Operation</p> <ul style="list-style-type: none"> – Operation and maintenance activities under Alternative [X] would result in emissions of ROG, Nox, CO, PM10, PM2.5, and SO2. Emissions were quantified for both ELT and LLT conditions, although activities would take place annually until project decommissioning. Future emissions, in general, are anticipated to lessen because of continuing improvements in vehicle and equipment engine technology. – Table [] summarizes criteria pollutant emissions associated with operation of Alternative [X] in the BAAQMD, SMAQMD, and SJVAPCD in pounds per day and tons per year (no operational emissions would be generated in the YSAMQD). Although emissions are presented in different units (pounds and tons), the amounts of emissions are identical (i.e., 2,000 pounds is identical to 1 ton). Summarizing emissions in both pounds per day and tons per year is necessary to evaluate project-level effects against the appropriate air district thresholds, which are given in both pounds and tons (see Table 22-8). <p>Health Risk</p> <ul style="list-style-type: none"> – Diesel-fueled engines, which generate DPM, would be used during 	

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		<p>construction of the proposed water conveyance facility. These coarse and fine particles may be composed of elemental carbon with adsorbed materials, such as organic compounds, sulfate, nitrate, metals, and other</p> <p>trace elements. The coarse and fine particles are respirable, which means that they can avoid many of the human respiratory system’s defense mechanisms and enter deeply into the lungs. DPM poses inhalation- related chronic non-cancer and cancer health threats.</p> <p>These statements (which, by no means constitute an exhaustive list), repeated word for word for each alternative, could have simply been incorporated into a summary text that applies to all alternatives to reduce the overall length and improve accessibility of Chapter 22 Air Quality and Greenhouse Gases.</p> <p>Another example of the internally redundant organization of this chapter: only nine of the 18 action alternatives (Alternatives 1A, 2A, 2B, 2C, 2D, 4A, 5A, 6A, and 6C) would construct permanent features in all air four districts. For the nine alternatives that would not have impacts in one or more air districts (Alternatives 1B, 1C, 3, 4, 5, 6C, 7, 8, and 9), the PRDEIR/SDEIS provides the following repetitive discussion of operational impacts where “X” stands for any of these 9 alternatives and “Y” stands for Impacts AQ-5 and SMAQMD, AQ-6 and YSAQMD, AQ-7 and BAAQMD, and</p> <p>AQ-8 and SJVAPCD:</p> <p>Impact AQ-[Y]: Generation of Criteria Pollutants in Excess of the YSAQMD Regional Thresholds from Operation and Maintenance of the Proposed Water Conveyance Facility</p> <p>NEPA Effects: Alternative [X] would not construct any permanent features in the YSAQMD that would require routine operations and maintenance. No operational emissions would be generated in the [Y]. Consequently, operation of Alternative [X] would neither exceed the [Y] thresholds of significance nor result in an adverse effect to air quality.</p> <p>CEQA Conclusion: Operational emissions generated by the alternative would not exceed YSAQMD’s thresholds of significance. This impact would be less than significant. No mitigation is required.</p> <p>This entire discussion, repeated word-for-word for each of the nine action alternatives without activities in the respective air districts, could have simply been replaced by a summary table in a strategic location indicating that an analysis of impacts is not applicable for these alternatives.</p> <p>In other words, the presentation of the methodology and impacts for each alternative is often redundant and could have been considerably shortened by consolidating repetitive information, e.g., in introductory paragraphs to and/or in summary tables before the alternative-specific discussion in PRDEIR/SDEIS Appendix A, Chapter 22, Section 22.3 Determination of Effects. In fact, providing summary tables instead of repetitive discussions would go a long way towards shortening the Air Quality and Greenhouse Gases section, which consists of a total of 573 pages [Footnote 7:</p>	

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		(514+19+21+19) = 573.), and towards helping to orient the reader and provide a more readily accessible discussion. Despite this overly lengthy presentation, the PRDEIR/SDEIS fails to adequately discuss impacts. (See Comments III and IV.)	
2622	61	I understand that the analyses of Air Quality and Greenhouse Gases in PRDEIR/SDEIS Appendix A, Chapter 22, and PRDEIR/SDEIS Chapters 4.3.18, 4.4.18, and 4.5.18, were intentionally structured to be consistent with other sections of the EIR/EIS [Footnote 8: Personal communication Petra Pless with Laura Yoon, ICF International, July 18, 2014.]; however, I suggest that the lead agencies rethink the organization of this section (and other similarly problematic sections) and carefully assess whether a more streamlined internal organization wouldn't be more practical and make the document more readily accessible for public review in order to understand impacts associated with BDCP/CWF alternatives and proposed mitigation measures. In addition, the document could be vastly improved by using more distinctive formatting as a visual aid for the various levels of headings and mitigation measures (currently the only difference in the heading formatting is font size and indented text for mitigation measures; the latter is inconsistently applied throughout the chapter). To enhance readability, I also suggest including a header on each page indicating the alternative under review.	<p>The comment is regarding the organization of Chapter 22, Air Quality and Greenhouse Gases. The document and air quality analysis reflects several years of collaboration, responses to requests for additional information, careful thought, accumulation of the latest scientific information, and thorough analyses needed to develop and conduct an environmental review of a project that impacts the Delta estuary and water supplies for million Californians.</p> <p>Although the science and analyses that support the draft EIR/EIS, including the air quality and GHG chapter, are complex, the lead agencies have made every attempt to present the information in plain language and in a clear format with emphasis on the information that is useful to the public, agencies, and decision makers. Please see Master Response 19 for additional information regarding climate change and GHG.</p> <p>Please refer to response to comment 60 within this comment letter.</p>
2622	62	<p>The BDCP/CWF [California Water Fix] website, which posts the PRDEIR/SDEIS, appendices, and other supporting documents, fails to provide the following supporting documentation that forms the basis for estimates of air pollutant and greenhouse gas emissions presented in the PRDEIR/SDEIS:</p> <ul style="list-style-type: none"> • Spreadsheets used to calculate electrical energy demand (Table 21-9) and fuel use (Table 21-10) for construction of the water conveyance facilities, as described in PRDEIR/SDEIS, Appendix A, Chapter 21, Section 21.3.1; • Spreadsheets used to calculate criteria pollutant and greenhouse gas emissions from heavy-duty off-road equipment, marine vessels, locomotives, on-road vehicles, road dust, helicopters, fugitive dust from earth moving, fugitive ROG from paving, electricity usage, and concrete batching during construction per the emission calculation methodology described in the PRDEIR/SDEIS, Appendix A, Appendix 22A, Section 22A.1; • Spreadsheets used to calculate criteria pollutant and greenhouse gas emissions from operation and maintenance activities and electricity usage per the methodology described in PRDEIR/SDEIS, Appendix A, Appendix 22A, Section 22A.2; • Spreadsheets used to calculate health risks, as described in the PRDEIR/SDEIS, Appendix A, Appendix 22C; and • Dispersion modeling files (AERMOD) for PM10, PM2.5 and DPM concentrations as described in PRDEIR/SDEIS, Appendix A, Appendix 22C. <p>As I [Dr. Petra Pless] commented previously on the DEIR/DEIS [Footnote 9: 2014 Pless DEIR/DEIS Comments, Comment II], access to this documentation is integral to any meaningful review of the air quality, health risk and greenhouse gas analyses presented in Chapter 22 of the PRDEIR/SDEIS; without this documentation, proper review and verification of the Project's impacts on air quality and associated health risks and global climate change, as quantified and presented by the PRDEIR/SDEIS, are not</p>	<p>A full list of assumptions used to quantify emissions is found in RDEIR/SDEIS Appendices 22A, Air Quality Analysis, 22B, Air Quality Assumptions, and 22C, Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions, all of which are available on the BDCP website. Appendix 22A also provides the equations that were used to quantify emissions.</p> <p>The physical analysis spreadsheets are part of the administrative record and have been provided upon specific request. Spreadsheets used to calculate electrical energy demand, criteria pollutants, greenhouse gas emissions, and health risks were provided to the commenter in August and September 2015.</p>

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		<p>possible and the reviewer has to accept presented results at face value.</p> <p>In my extensive experience with the public review process under NEPA and CEQA, this documentation is routinely provided in appendices and in the few cases it was unintentionally omitted was supplied upon request without delay. It is not acceptable that an environmental review document of this magnitude (several Gigabytes of information on tens of thousands of pages) that analyzes a long-term project with implications as far-reaching and impacts as severe as the BDCP/CWF does not provide this essential information to the public and the reviewing agencies, including the affected air districts.</p>	
2622	63	<p>I understand that your office [Soluri Meserve] requested this supporting documentation on August 11, 2015. Some files were provided about a month later; however the spreadsheets supporting the health risk assessment were not provided until September 28, 2015. I note that none of the provided Excel spreadsheets are functional, i.e., all equations and crosslinks were removed, thereby unnecessarily hampering review. Since all equations and crosslinks between spreadsheets can be re-established with enough patience and time, provided that all assumptions are laid out in detail, I find that the consulting firm's stated concerns regarding functionality and proprietary reasons [Footnote 10: Personal communication Meserve/Laura Yoon, ICF International, July 15, 2014, and Email from Shay Humphrey, ICF International, to Osha Meserve, Soluri Meserve, RE: Air Quality Modeling Documents] are not reasonable. In my experience, fully functional spreadsheets are normally provided upon request by interested reviewers (only sometimes requiring a confidentiality agreement). In any case, even though review of the provided files was hampered by delay in receiving a limited amount of information, making it unnecessarily time-consuming, I have identified several issues of concern.</p>	<p>A full list of assumptions used to quantify emissions is found in RDEIR/SDEIS Appendices 22A, Air Quality Analysis, 22B, Air Quality Assumptions, and 22C, Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions, all of which are available on the BDCP website. Appendix 22A also provides the equations that were used to quantify emissions.</p> <p>The physical analysis spreadsheets are part of the administrative record and have been provided upon specific request. The formulas and overall set-up are an ICF-model that ICF uses for multiple projects and represents ICF intellectual property; therefore the spreadsheets are provided in a hardcoded format. This is consistent with information that would be provided by a model output, which are typically given in PDF format. The information presented for the RDEIR/SDEIS is consistent with what was provided for the 2013 Public Draft EIR/EIS.</p> <p>The State CEQA Guidelines provide that no EIR "available for public examination shall include a 'trade secret' as defined in Section 6254.7 of the [California] Government Code[.]" That referenced statute, in turn, provides that "trade secrets" "may include, but are not limited to, any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article of trade or a service having commercial value and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it." The lead agencies acknowledge that ICF's intellectual property comes within this statutory definition.</p>
2622	64	<p>The PRDEIR/SDEIS provides summary tables with criteria pollutant and precursor emission estimates for construction for each alternative and for each air district compared to the respective air district's quantitative significance thresholds (where significant impacts are underlined) [Footnote 12: For example: PRDEIR/SDEIS, Table 22-99, Criteria Pollutant Emissions from Construction of Alternative 4 (lbs/day and tons/year)]. These emission estimates include the implementation of Environmental Commitments (see Appx. 3B). In addition, the PRDEIR/SDEIS provides summary tables for modeled increases in PM10 and PM2.5 concentrations resulting from construction emissions for each alternative and for each air district compared to the respective air district's quantitative significance thresholds [Footnote 13: For example: PRDEIR/SDEIS, Table 22-99, Criteria Pollutant Emissions from Construction of Alternative 4 (lbs/day and tons/year)]. For each alternative, the PRDEIR/SDEIS then goes through the NEPA and CEQA impacts for each of the above-summarized 27 impacts (AQ-1 through AQ-27) and identifies which pollutants would exceed applicable air district thresholds and would therefore be considered significant, typically in just one sentence that provides little to no additional information beyond that provided in the summary tables or prior discussions. The PRDEIR/SDEIS fails entirely to put significant impacts into perspective; in other words, it provides no discussion of the severity of the resulting impacts or a</p>	<p>Impacts AQ-1 through AQ-4 evaluate construction-generated criteria pollutant emissions against adopted air district thresholds. The EIR/EIS concludes that violations of these thresholds "could contribute to or worsen existing air quality conditions" and that violations of adopted air district thresholds for ROG and NOX could contribute to secondary ozone formation, which could impede regional attainment of the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS). This text explicitly links project-level emissions in excess of adopted thresholds to potential deterioration of regional air quality.</p> <p>While project-generated construction emissions could worsen existing air quality, Mitigation Measures AQ-1, AQ-3, and AQ-4 would offset NOx, ROG, and PM (as applicable) to net zero. All offsets must come from projects located within the same air basin as the generated emissions. Reductions must also be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2018 would need to be reduced offsite in 2018). Mitigation Measures AQ-1, AQ-3, and AQ-4 would therefore eliminate the potential for increased ozone formation and adverse effect on future air quality and regional attainment of the NAAQS and CAAQS.</p> <p>The commenter is correct that the emissions modeling includes implementation of environmental commitments identified in Appendix 3B, Environmental Commitments. The RDEIR/SDEIS included narrative discussions explaining how each environmental commitment reduces the severity of environmental effects and whether the level of impact reduction is sufficient to render the effects less than significant. This</p>

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		<p>discussion of the impacts in the context of the respective air basin’s existing air quality.</p> <p>As an example: For impacts resulting from construction of Alternative 4/4A in the San Francisco Bay Area Air Basin under the BAAQMD’s [Bay Area Air Quality Management District] jurisdiction, the PRDEIR/SDEIS simply states that emissions would exceed the respective significance threshold for ROGs [reactive organic gases] in the years 2020 through 2028 and for Nox [nitrogen oxides] during the years 2018 through 2029 [Footnote 14: PRDEIR/SDEIS, p. 4.3-18-2 and Appendix A, Chapter 22, p. 22-294]. The PRDEIR/SDEIS makes no effort to put emissions of these ozone precursors into context with respect to the federal and state ozone non-attainment status of the region. Review of PRDEIR/SDEIS Appendix A, Chapter 22, Table 22-99 shows that maximum daily emissions of ROG during Alternative 4/4A construction would be up to 203 lbs/day in 2025, exceeding the BAAQMD’s daily significance threshold for ROG of 54 lbs/day by 276% [Footnote 15: Alternative 4 BAAQMD Year 2025: (203 pounds ROG/day) / (54 pounds ROG/day) – (1) = 2.76]; maximum daily emissions of Nox during Alternative 4/4A construction would be up to 1,700 lbs/day in 2025, exceeding the BAAQMD’s daily significance threshold for Nox (54 lbs/day) more than 30 times, or by 3048% [Footnote 16: Alternative 4 BAAQMD Year 2025: (1700 pounds Nox/day) / (54 pounds Nox/day) – (1) = 30.48]. Figure 1 [ATT 3] illustrates the enormity of ROG and Nox emissions within the San Francisco Bay Area Air Basin over the 14-year construction phase of Alternative 4/4A (2016 through 2029) in comparison to the BAAQMD’s significance thresholds for these pollutants of 54 lbs/day.</p> <p>Construction emissions of ROG and Nox shown in the above chart include the mitigating effects of the Environmental Commitments[Footnote 17: Environmental Commitments should be included as mitigation measures in the Mitigation Monitoring and Reporting Plan to make them enforceable] laid out in PRDEIR/SDEIS, Appendix 3B. (For a discussion of the PRDEIR/SDEIS’s unrealistic approach regarding their effectiveness see PRDEIR/SDEIS, Appendix A, Chapter 22, see Comment V.) Figure 1 illustrates just how enormous construction emissions of the ozone precursors ROG and Nox would be under Alternative 4/4A and by how much these already mitigated emissions (by Environmental Commitments) would exceed the quantitative thresholds of significance thresholds established by the BAAQMD.</p> <p>For all impacts due to criteria pollutant and precursor emissions from construction or operation and maintenance found to be significant, the PRDEIR/SDEIS simply finds—without any quantitative analysis and feasibility analysis whatsoever— that the implementation of proposed mitigation measures (beyond Environmental Commitments) would result in less than significant impacts [Footnote 18: See PRDEIR/SDEIS, pp. ES-97 and ES-98]. As discussed in Comment V, these findings are not supported.</p>	<p>approach provides a succinct presentation and analysis of each environmental commitment’s effectiveness in reducing environmental impacts in a comprehensive and understandable manner without reproducing all the original Draft EIR/EIS impact discussions that reference environmental commitments. Please refer to Appendix 3B, Environmental Commitments. All environmental commitments will be outlined in the Mitigation Monitoring Report Protocol (MMRP) and considered a condition of project approval.</p> <p>With respect to Mitigation Measures AQ-1, AQ-3, and AQ-4; DWR undertook a multi-year consultation process with the four Plan Area air districts to confirm sufficient emissions reduction credits were available to offset project- generated emissions to net zero. Copies of the air district coordination are provided in the general conformity determination (see Appendix 22E in the recirculated EIR/EIS). These letters, which were drafted by the expert agencies that manage the offset programs, serve to justify the feasibility of Mitigation Measures AQ-1, AQ-3, and AQ-4. As noted in the letters, DWR and the air districts are committed to working together to reduce air pollution generated by construction of the water conveyance facility, consistent with the requirements outlined in the mitigation and required by local air district rules and regulations. Please refer to response to comment #60 within this comment letter.</p>
2622	65	ATT 3: Figure 1: Alternative 4/4A maximum daily ROG and NOx construction emissions in BAAQMD (including Environmental Commitments) compared to BAAQMD’s CEQA daily construction significance thresholds for ROG and Nox	This comment describes an attachment to the comment letter. See above responses to comments.
2622	66	The PRDEIR/SDEIS estimates maximum daily and annual emissions of criteria pollutants and precursors from construction and determines their significance based on the respective quantitative mass thresholds of significance for construction established by the affected air districts (Impacts AQ-1 through AQ-4). All emission estimates account	The determination of whether an air quality impact would be significant under CEQA is typically, and may legitimately be, based on applicable thresholds adopted by local air districts and the professional judgment of DWR as the CEQA Lead Agency, and relies wholly on the substantial evidence in the administrative record. Please see response to comment 2622-44.

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		<p>for implementation of the Environmental Commitments described in Appendix 3B.</p> <p>If an air district did not establish or recommend a quantitative mass threshold of significance for construction for a specific pollutant, the PRDEIR/SDEIS simply concludes that emissions of that pollutant would not exceed the respective air district’s significance thresholds and, consequently, makes a determination of less than significance for that pollutant. For example, the PRDEIR/SDEIS does not find significant ROG emissions in the SMAQMD [Sacramento Metropolitan Air Quality Management District] despite emission estimates being on the same order of magnitude as in the BAAQMD [Bay Area Air Quality Management District] (see Figure 2) [ATT 4] and the despite the fact that both air basins are designated nonattainment with the federal and state ambient air quality standards (“NAAQS” and “CAAQS”) for ozone [Footnote 19: PRDEIR/SDEIS, Appx. A, Chapter 22, Table 22-4]</p> <p>This approach is not satisfactory. Air districts develop thresholds of significance for construction to address the impacts of short-term construction projects on the respective airshed’s air quality, not the impacts of a massive construction project that spans three air basins and requires 14 years of construction. Therefore, the massive amount of construction required for the Project and the enormous emissions over 14 years cannot be treated like a regular short-term construction project, where mitigation is only required when emissions exceed a quantitative mass threshold of significance established by an air district.</p> <p>Air basins are not airtight bodies; rather emissions occurring in one air basin often affect the air quality in downwind air basins. For example, ozone precursors can be transported a long way before ozone is formed in a downwind area. (Transport may also have a significant contribution on the impacts of other pollutants such as fine particles.) As shown in Figure 3 [ATT 5], ozone and ozone precursor emissions originating in the San Francisco Bay Area Air Basin frequently travel into the Sacramento Valley Air Basin and the San Joaquin Valley Air Basin and contribute to the poor air quality throughout Northern California</p> <p>The reverse happens when north winds blowing through the Broader Sacramento Area turn westward and carry pollutants to the eastern part of the San Francisco Bay Area Air Basin. Under such conditions, while infrequent, violations of ambient air quality standards can be significantly impacted by pollutants transported from the Broader Sacramento Area [Footnote 20: CARB 2001 Ozone Transport Review, p. 25]. On days when the north wind carries pollutants from the Broader Sacramento Area into the northern San Joaquin Valley, afternoon breezes from the west may then push polluted air from the valley into the Sierra Nevada foothills. On such days, the transport contribution can be shared between the Sacramento Valley Air Basin, the northern San Joaquin Valley Air Basin and the San Francisco Bay Area Air Basin, as shown in Figure 4 [ATT 6].</p> <p>Similarly, under certain conditions, winds blowing from the south and southwest can carry pollutants from the northern San Joaquin Valley Air Basin towards Sacramento, as shown in Figure 5 [ATT 7].</p>	<p>With respect to the statement regarding the “short term” nature of construction activities; construction would require approximately 14 years. This is considered short-term relative to the operational timeframe of the project. . . Characterizing construction emissions as short term is consistent with CEQA guidance provided by all four Plan Area air districts.</p> <p>With respect to pollutant transport among air districts; all mass emissions thresholds adopted by the Plan Area air districts account for expected criteria air pollutant contributions from downwind air basins. Accordingly, use of the Plan Area air district thresholds to evaluate construction and operational impacts associated with the project is appropriate and supported by substantial evidence (see California Air Resources Board 2011b in the Administrative Record for the Draft EIR/EIS and also the local air district threshold justification reports for additional information). Project-level ozone transport or dispersion modeling is not required.</p> <p>As discussed in Chapter 22, Air Quality and Greenhouse Gases, the BDCP EIR/EIS identifies a suite of aggressive onsite measures that would substantially reduce criteria pollutant and greenhouse gas emissions. The commitments summarized in Appendix 3B were identified by the project Proponents based on a comprehensive review of all feasible onsite control strategies, considering project-specific equipment and reasonably foreseeable technologies. The document goes further by requiring ROG, NOx, and PM (as applicable) emissions be offset to net zero or below air district thresholds through mitigation contracts with local air districts or other alternative means (see Mitigation Measures AQ-1, AQ-3, and AQ-4). Accordingly, the BDCP EIR/EIS satisfies CEQA and air district requirements to implement all feasible onsite and offsite mitigation. Please also see response to comment 1787-264.</p>

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		<p>Under the California Clean Air Act, when emissions from one region contribute to violations of ambient air quality standards in a downwind area, the upwind area shares responsibility for controlling those emission sources [Footnote 21: See, for example, CARB 2001 Ozone Transport Review, p. 3]. Thus, the lack of quantitative thresholds of significance established or recommended by a local air district does not indicate that Project construction emissions would not result in significant impacts on air quality and does not relieve the lead agencies of their statutory obligation under CEQA to determine whether the Project’s impacts are significant and to impose feasible mitigation measures and/or alternatives. In the absence of established thresholds and standards, lead agencies must rely on their own careful judgment based to the extent possible on scientific and factual data in determining whether a project’s impacts are significant [Footnote 22: CEQA Guidelines §§15064(b), 15064.7].</p> <p>Here, the lead agencies could have either developed their own thresholds of significance, relied on the most stringent thresholds of significance established by any of the affected air districts, or, for ozone, provided transport modeling. In any case, the lead agencies must require all feasible mitigation for all phases no matter in which air district emissions occur.</p>	
2622	67	ATT 4: Figure 2: Alternative 4/4A maximum daily ROG construction emissions in BAAQMD[Bay Area Air Quality Management District] and SMAQMD [Sacramento Metropolitan Air Quality Management District] (lbs/day)	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	68	ATT 5: Figure 3: San Francisco Bay Area Air Basin ozone transport	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	69	ATT 6: Figure 4: Sacramento Valley Air Basin: Broader Sacramento Area ozone transport	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	70	ATT 7: Figure 5: San Joaquin Valley Air Basin ozone transport	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	71	<p>The Project would require grading of about 5,500 acres of land, cut-and-fill of more than 20 million cubic yards of soil, and excavation of about 5.7 million cubic yards of soil [Footnote 23: From workbook ‘MPTO_Grading_ec_NF.xlsx,’ spreadsheet ‘Quantities’ provided by ICF International]. These activities would increase the surface material available for entrainment and would greatly increase the potential for windblown dust. Wind erosion of graded surfaces and storage piles during Project construction can be expected to be substantial and will contribute to the very high PM10 and PM2.5 concentrations frequently measured in the affected air basins, which are all in nonattainment of one or more particulate matter ambient air quality standard [Footnote 24: PRDEIR/SDEIS, Appx. A, Chapter 22, Table 22-4]. These windblown fugitive dust emissions during the 14-year construction period will hinder the affected air districts’ compliance with or progress towards compliance with the ambient air quality standards for these pollutants. The PRDEIR/SDEIS acknowledges that windblown dust would contribute to particulate matter emissions [Footnote 25: PRDEIR/SDEIS, Appx. 22C, p. 8], yet, it does not estimate PM10 and PM2.5 emissions from wind erosion of graded surfaces or storage piles.</p> <p>23 Emissions from wind-blown fugitive dust from graded surfaces can be estimated, for example, based on methodology developed by Maricopa County Air Quality Department (“MCAQD”) in Arizona [Footnote 26: Maricopa County Air Quality Department, 2008 PM10 Periodic Emissions Inventory for the Maricopa County, Arizona,</p>	<p>As noted by the Maricopa County 2008 PM10 Periodic Emissions Inventory and by the Western Regional Air Partnership Handbook, generic categories of fugitive dust include the following: agricultural areas, construction, material handling, traveled surfaces, minerals production, abrasive blasting, livestock, and wind erosion of exposed areas. As shown by the Maricopa County analysis, the land use categories with the highest potential to result in windblown dust are agriculture, passive open space, and vacant lands (see Table A4-8).</p> <p>The BDCP EIR/EIS evaluates all sources of potential fugitive dust relevant to the proposed project. These include physical construction activities (i.e., site grading, bulldozing, and truck loading), road dust entrainment from traveled surfaces, minerals production (i.e., concrete batching) and aggregate and material handling. Where appropriate, the potential for windblown dust, consistent with approved models and quantification procedures, is accounted for in the analysis. For example, truck loading emission factors account for mean wind speed, where projects located in windier areas would have a higher potential to result in windblown dust emissions from truck loading. Wind speed assumptions for the project area are based on air district supplied information, as provided by CalEEMod. Emission factors for site grading, bulldozing, and entrained road dust also account for the potential for wind erosion through the incorporation of soil moisture and precipitation assumptions. As noted in the Maricopa County analysis, soil moisture is a key factor in predicting the likelihood and quantity of windblown dust. Precipitation data were obtained from local monitoring stations in Sacramento, San Joaquin, and Contra Costa counties, as available from the Western Regional Climate Center.</p> <p>With respect to aggregate handling and storage piles during concrete batching; emission factors from onsite</p>

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		<p>Nonattainment Area, Revised June 2011, Appendix 4. Windblown Dust Emission Estimation Methodology; https://www.maricopa.gov/airquality/divisions/planning_analysis/docs/Reports/2008/08_PM10_PEI_Entire</p> <p>23 Maricopa County Air Quality Department, 2008 PM10 Periodic Emissions Inventory for the Maricopa County, Arizona, Nonattainment Area, Revised June 2011, Appendix 4. Windblown Dust Emission Estimation Methodology; https://www.maricopa.gov/airquality/divisions/planning_analysis/docs/Reports/2008/08_PM10_PEI_Entire.pdf. I estimated emissions of fugitive windblown dust during Project construction based on emission factors for disturbed soil established by MCAQD, disturbed Project acreage, and information about the amount of time during a year certain wind speeds are exceeded in the area, and assuming a of 300 acres, as shown in Table 1 [ATT 8].</p> <p>Table 1 shows that windblown PM10 emissions have the potential to contribute significantly to the air districts' threshold of significance for this pollutant depending on the extent of the disturbed acreage throughout a year. Thus, the PRDEIR/SDEIS substantially underestimates PM10 emissions from Project construction.</p> <p>Particulate matter emissions from wind erosion of storage piles, which would further increase the above emissions, can be estimated based on methodology developed by the U.S. Environmental Protection Agency ("EPA"), Compilation of</p> <p>24 Air Pollutant Emission Factors ("AP-42"), Chapter 13.2.4 Aggregate Handling and Storage Piles [Footnote 27: PA, AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles; http://www3.epa.gov/ttnchie1/ap42/ch13/final/c13s0204.pdf].</p>	<p>batch plants were quantified using emission factors from AP-42 Chapter 11.12, Concrete Batching. To ensure a worst-case assessed of potential dust emissions, the factors assumed all storage piles would be "active" sites throughout the entirety of construction.</p> <p>Excavated storage piles would be present onsite, as noted by the commenter. However, material extracted during tunneling will be completely saturated and therefore would not constitute a fugitive dust concern. The piles will remain moist throughout tunnel construction due to the continual addition of tunnel material. Once tunneling is complete, top soil or other measures consistent control strategies outlined in Appendix 3B, Environmental Commitments will either be placed or the material may be transported to final disposal sites. Final disposal of the material, if moved, would be subject to all emissions control strategies outlined in Appendix 3B, Environmental Commitments. Please refer to Chapter 31 for additional information.</p> <p>The EIR/EIS also outlines a comprehensive Fugitive Dust Control Plan to reduce direct and indirect particulate matter emissions. The dust control plan addresses dust from 1) site grading, 2) unpaved roads, and 3) concrete batching. As noted in Appendix 3B, Environmental Commitments, water will be applied to all exposed soil areas, including unpaved roads, with adequate frequency for continued moist soil. Frequency of watering will be increased during especially dry or windy periods or in areas with high construction activity. All disturbed areas will be promptly finished and/or protected and maintained in a manner to control fugitive dust. Active site grading will also be suspended when wind speeds exceed 20 miles per hour. Dust control features at concrete batch plans include the use of water and chemical stabilizers to reduce windblown dust emissions from active storage piles. Please refer to Appendix 3B, Environmental Commitments, Section 3B.2.17 for additional information on the comprehensive set of strategies that will be implemented to reduce fugitive dust emissions.</p>
2622	72	ATT 8: Table 1: Fugitive dust PM10 emissions due to wind erosion from disturbed soil	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	73	<p>The PRDEIR/SDEIS estimates particulate matter emissions from bulldozing, grading, and earthmoving (loading) based on factors from CalEEMod, AP-42, and the South Coast Air Quality Management District assuming a 61% reduction efficiency for all activities. This factor originates with the Western Regional Air Partnership Handbook and represents the emission reduction efficiency for watering during site grading and does not apply to earthmoving activities. Furthermore, the loading factors already include the effects of watering as they were determined for 12% and 40% soil moisture; the latter already includes the effects of watering. Finally, the PRDEIR/SDEIS treats earthmoving activities as if they occur only once per unit material handled. This underestimates emissions as earthmoving for cut-and-fill activities typically involve several step: loading of material onto storage piles, loading material onto trucks, and unloading material from trucks.</p>	<p>The commenter is correct that the fugitive dust analysis assumes a reduction efficacy of 61% for disturbed areas. This reduction would be achieved by the extensive set of fugitive dust controls outlined in Appendix 3B, which include watering all exposed soil areas with adequate frequency for continued moist soil. Accordingly, dust generated through grading, bulldozing, and excavation, which are all activities that occur on exposed soil areas, would be reduced accordingly. It is also important to note that the 61% reduction efficacy used in the analysis likely underestimates benefits achieved by the Fugitive Dust Control Plan—the plan requires exposed areas to maintain "moist soil" conditions, which is the highest level of dust control one can achieve outside of paving the affected area. According to the Western Regional Air Partnership Handbook, water application at the highest frequency achieves a 74% reduction in fugitive dust. While additional reductions may be achieved by the Fugitive Dust Control Plan, an efficacy of 61% was assumed in the analysis to ensure emissions were not unrepresented.</p> <p>The soil moisture content of the excavated material is based on natural conditions (i.e., groundwater saturation, precipitation) and does not include the effects of project-level fugitive dust controls. Implementation of the Fugitive Dust Control Plan would achieve additional saturation.</p> <p>Emission factors for truck loading are drawn directly from CalEEMod/AP-42 and are therefore consistent with best practices for estimating fugitive dust from truck loading.</p>

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2622	74	<p>The PRDEIR/SDEIS discusses the results of a revised health risk assessment for emissions from construction of the water conveyance facilities in Chapter 4 (new action alternatives 4A, 2D, and 5A) and Chapter 22 (all other alternatives). The revised health risk assessment (provided in Appendix 22C) reflects implementation of the modified Construction Equipment Exhaust Reduction Plan as well as changes to on-road vehicle and helicopter emissions. The assessment of health risks for the various alternatives provided by the PRDEIR/SDEIS is inadequate and its findings are not supported.</p>	<p>The assessment of health risks for the alternatives is provided in Chapter 22, and Appendix 22C and meets the requirements to disclose potential health risks from construction emissions. Because this comment does not specify specific health risk assessment deficiencies not additional response is possible.</p>
2622	75	<p>All four affected air districts consulted for the health risk assessment modeling protocol recommended dispersion modeling for health risks based on a receptor grid with varying spacing, as summarized in Appendix A Modeling Protocol to Appendix 22C:</p> <p>BAAQMD [Bay Area Air Quality Management District]: “For cases with emissions from short stacks or vents and a close property line, a receptor spacing of 10 meters may be sufficient.”</p> <p>SMAQMD [Sacramento Metropolitan Air Quality Management District]: “SMAQMD recommends that the spacing of a receptor grid be 10 meters. Discrete receptors shall be added to ensure that specific nearby sensitive receptors are represented in the model.”</p> <p>YSAQMD [Yolo-Solano Air Quality Management District]: “If receptors are greater than 500 feet from the site, YSAQMD is not too concerned with modeling. For less than 500 feet, setup receptor grids with 10 meter spacing.”</p> <p>SJVAPCD [San Joaquin Unified Air Pollution Control District]: “For Cartesian receptor grid: 25-meter spacing on the facility boundary:</p> <ul style="list-style-type: none"> • 25-meter spacing from Facility Boundary to 100 • 50-meter spacing from 100 to 250 meters • 100-meter spacing from 250 to 500 meters • 250-meter spacing from 500 to 1000 meters • 500-meter spacing from 1000 to 2000 meters <p>Leland Villalvazo (SJVAPCD) also suggested looking at receptors up to 2 kilometers [Footnote 28: PRDEIR/SDEIS, Appx. 22C, p. A-4].”</p> <p>Ignoring the air district guidance to establish receptor grids as well as discrete receptors, the PRDEIR/SDEIS instead opted to only identify 12,874 discrete Cartesian receptors within the 2 kilometer buffer area of construction emission sources, but outside of the construction footprint [Footnote 29: PRDEIR/SDEIS, Appx. 22C, p. A-4]. This approach has the drawback that health risks are only established at the specific identified existing discrete receptors and information about the spatial extent of health risks is not provided. This could be important for public disclosure purposes and also for new projects that may be constructed concurrently with the Project such as new residential homes, schools, parks, places of worship, and other sensitive receptors.</p> <p>Health risk assessments typically model receptor grids in order to determine the spatial</p>	<p>As described in Appendix A of the Appendix 22C Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions, the use of discrete receptors in lieu of receptor grids was included in the modeling protocol proposed to the districts for their review and comment. This approach was taken to ensure sensitive receptors were evaluated and considering the often large distances between sensitive receptors in many areas in the Delta. The modeling protocol was finalized after receiving responses from the districts, and this methodology was consistently applied to this analysis.</p> <p>Appendix B: BDCP Sensitive Receptor Modeling Results has been included as an attachment to RDEIR/SDEIS Appendix 22C Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions As in the DEIR/DEIS, Appendix B provides the complete list of all modeled receptors.</p>

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		<p>extent of health risks around a project site which can be visually illustrated in so-called isopleth maps. An isopleth is a line drawn on a map through all points of equal value of some measurable quantity; in this case, chronic and carcinogenic health risk and PM10 and PM2.5 concentrations. Figure 6 shows an example of such an isopleth map, which clearly shows the extent of cancer risks around the project site.</p> <p>The preparation of isopleth maps is not only typical for stationary sources but also for construction projects, for example, construction of the San Francisco-Oakland Bay Bridge [Footnote 30: See U.S. Department of Transportation Federal Highway Administration, The State of California Department of Transportation, and United States Coast Guard, Draft Environmental Impact Statement, San Francisco - Oakland Bay Bridge, East Span Seismic Safety Project on Interstate 80 between Yerba Buena Island and Oakland in San Francisco and Alameda Counties, Appendix D, Potential Cancer Risk Isopleths by Part and by Category; http://www.arb.ca.gov/ch/communities/ra/westoakland/documents/appendixd_final.pdf.]</p> <p>When only modeling discrete Cartesian receptors in the absence of a receptor grid, isopleths cannot be drawn and health risks can only be identified for the modeled discrete receptors. This approach fails to disclose the spatial extent of health risks from Project construction. The lack of modeling for a receptor grid also precludes properly implementing guidance for health risk assessments and likely results in a substantial underestimate of cancer risks for a number of receptors. (See Comment IV.D.) Further, since the RDEIR/SDEIS does not provide a map showing the location of the discrete receptors it considered, it is impossible to verify whether health risks were actually modeled for all sensitive receptors. I recommend that the lead agencies provide maps as well as a table with addresses identifying all sensitive receptors included in the dispersion modeling for each alternative and for each air district.</p>	
2622	76	ATT 9: Figure 6: Example isopleth map illustrating cancer risk	This comment describes an attachment to the comment letter. Please see above response to comment.
2622	77	<p>The revised health risk assessment in Appendix 22-3C provides 58 summary tables for the 10 sensitive receptors within each affected air district who would experience the highest chronic and carcinogenic health risks and the highest PM10 and PM2.5 concentrations. The location of the respective 10 sensitive receptors is given in Universal Transverse Mercator (“UTM”) coordinates, as shown in the following excerpted table for chronic and carcinogenic health risks for Alternatives 4 and Alternatives 1C, 2C, and 6C in the BAAQMD [Bay Area Air Quality Management District].</p> <p>This presentation is meaningless to the general public who wishes to understand the potential health risks they would experience due to Project construction emissions.</p> <p>Specifically, a location in UTM coordinates without any graphical presentation on a map (or listing of an address) means nothing to affected sensitive receptors and the general public cannot be expected to translate these coordinates to a location on a map to find out whether they would be affected or not.</p> <p>Further, the presentation of only those 10 sensitive receptors within each affected air district who would experience the highest chronic and carcinogenic health risks and the</p>	<p>The language regarding exceedances in the impact discussions includes descriptions of the receptor locations with exceedances. In addition, the Universal Transverse Mercator (“UTM”) coordinates provided can be used to further look into receptor locations of exceedances.</p> <p>Appendix B: BDCP Sensitive Receptor Modeling Results has been included as an attachment to RDEIR/SDEIS Appendix 22C Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions. As in the DEIR/DEIS, Appendix B provides the complete list of all modeled receptors.</p> <p>Appendix B provides the full modeling results for all sensitive receptor locations. As described in Mitigation Measure AQ-16, DWR will offer to provide relocation assistance to affected receptors residing in areas where construction activities associated with the project would create DPM concentrations in excess of air district cancer risk thresholds.</p>

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		<p>highest PM10 and PM2.5 concentrations fails to disclose the significance of impacts for other sensitive receptors where carcinogenic health risks would exceed the significance threshold of 10 in one million as seen in the excerpted table for Alternatives 1C, 2C, and 6C in the BAAQMD. While the PRDEIR/SDEIS acknowledges that</p> <p>“186 receptor locations were found to exceed the BAAQMD’s significance threshold for cancer risk” and indicates that these exceedances are “due to the proximity of a large track [sic] home development [Footnote 31: PRDEIR/SDEIS, p. 22-162]” it fails to disclose the addresses (or UTM coordinates) of the affected receptor locations. This approach defeats the main purpose of CEQA, which is to provide adequate information to the public to understand the consequences of a project. (I note that unlike the health risk assessment provided by the DEIR/DEIS, the PRDEIR/SDEIS revised health risk assessment in Appendix 22C does not provide a complete list of impacts for all modeled receptors [Footnote 32: See DEIR/DEIS, Appx. 22C, Appendix B: BDCP Sensitive Receptor Modeling Results.]).</p> <p>To mitigate these significant health risks, the PRDEIR/SDEIS proposes implementation of Mitigation Measure AQ-16, which would “provide individuals residing in areas where construction activities associated with the BDCP would create DPM concentrations in excess of air district cancer risk thresholds the opportunity to relocate either temporarily during the construction period or permanently, at the discretion of the affected individuals [Footnote 33: PRDEIR/SDEIS, Mitigation Measure AQ-16, p. 22-84].” However, without disclosure of the specific addresses of the affected sensitive receptors, this mitigation measure is a hollow promise and fails to ensure that impacts are mitigated to a less than significant level.</p> <p>I recommend that the lead agencies specifically identify and notify all sensitive receptors modeled to experience significant health hazards prior to adopting the Final EIR/EIS.</p>	
2622	78	ATT 10: Table 22. Alternative 4 Chronic and Carcinogenic Heath Risk Results in BAAQMD [Bay Area Air Quality Management District] and Table 47. Alternative 1C, 2C, and 6C Chronic and Carcinogenic Health Risk Results in BAAQMD.	This comment describes an attachment to the comment letter. Please see above response to comments.
2622	79	<p>The PRDEIR/SDEIS does not model health risks for all affected discrete sensitive receptors. Specifically, Appendix 22-3C, provides</p> <p>the following explanation regarding which sensitive receptors were taken into account for dispersion modeling and determination of health risks:</p> <p>For each alternative, the sensitive receptors evaluated using the AERMOD model was removed if located within an alternative’s construction footprint. Modeled receptors were evaluated for their potential to exceed air district significance thresholds with receptor locations analyzed at a minimum of 3,000 feet from a project feature. Pollutant concentrations and health risk were estimated for each of these receptors [Footnote 34: PRDEIR/SDEIS, Appx. 22-3C, pp. 15-16, emphasis added].</p> <p>In other words, the PRDEIR/SDEIS health risk assessment only determines health risks for discrete receptors located between 3,000 feet and 6,000 feet (2 kilometers) from the construction footprint and ignores all receptors who are located within or within 3,000 feet of the construction footprint. The PRDEIR/SDEIS provides no justification for</p>	<p>Receptors were modeled at locations within 3,000 feet of the project boundaries. The language in Appendix 22C of the RDEIR/SDEIS has been revised to clarify this item.</p> <p>Potential receptors within the project construction footprint are assumed to be removed or relocated temporarily or permanently as part of the plan’s property acquisition actions, and are therefore not considered in the health risk assessment modeling.</p>

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		<p>this approach.</p> <p>Consequently, instead of determining health risks for all 12,874 discrete sensitive receptors within the 2 kilometer buffer area of construction emission sources (outside of the construction footprint) it identified [Footnote 35: PRDEIR/SDEIS, Appx. 22C, p. A-4.], the RDEIR/SDEIS modeled only 11,368 discrete receptors [Footnote 36: Determined as discrete UTM coordinates from Excel workbook BDCP_Compiled_Calculations.xlsx' provided by ICF International.]. Thus, the RDEIR/SDEIS failed to assess health risks for a total of 1,506 sensitive receptors within the 2 kilometer buffer area of construction emission sources (outside of the construction footprint) and who knows how many inside the construction footprint. I note that the DEIR/DEIS did not exclude receptors within 3,000 feet of the construction footprint [Footnote 37: DEIR/DEIS, Appx. 22C, p. 12. ("For each alternative, the number of sensitive receptor locations evaluated using the AERMOD model was reduced using the following approach. First, receptor locations were removed if located within an alternative's construction footprint. Then, any receptor locations beyond 2 kilometers from the construction boundary were also removed from AERMOD. Two kilometers represents the maximum distance from construction areas where pollutant concentrations would potentially generate significant impacts.")].</p> <p>There is simply no reason to exclude existing sensitive receptors inside of or within 3,000 feet of the construction footprint as these sensitive receptors exist and will experience the highest health risks associated with Project construction emissions. These sensitive receptors have a right to know how their health would be impacted.</p> <p>As an example, Table 2 shows two locations which were excluded from the RDEIR/SDEIS's assessment of health risks and which be exposed to significant cancer risks, i.e., cancer risks in excess of the BAAQMD's [Bay Area Air Quality Management District] 10 in one million significance threshold.</p> <p>Thus, the PRDEIR/SDEIS fails as an informational document under CEQA and NEPA. I note that not one of the consulted air districts recommended not assessing health risks within the construction footprint, and all air districts specifically recommended evaluating health risks for nearby receptors. Further, by eliminating this large number of sensitive receptors from the analysis, they are not even afforded the minimal benefits of Mitigation Measure AQ-16, which proposes to "provide individuals residing in areas where construction activities associated with the BDCP would create DPM concentrations in excess of air district cancer risk thresholds the opportunity to relocate either temporarily during the construction period or permanently, at the discretion of the affected individuals [Footnote 38: PRDEIR/SDEIS, Mitigation Measure AQ-16, p. 22-84]."</p>	
2622	80	ATT 11: Table 2: Location of sensitive receptors within BAAQMD [Bay Area Air Quality Management District] with significant cancer risk due to emissions from construction of Alternative 4/4Aa	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	81	The PRDEIR/SDEIS determines carcinogenic health risks from inhalation of diesel particulate matter ("DPM") based on methodology developed by the Office of Environmental Health Hazard Assessment ("OEHHA") for the preparation of health risk assessments. Based on OEHHA's 2015 Guidance Manual [Footnote 39: OEHHA, Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for	Construction activities primarily occur in rural areas that are not in the immediate vicinity of schools. In addition, for school locations modeled, the cancer risks for school child exposures would not be greater than 1 in a million. Therefore, the methodology is consistent with OEHHA guidelines in the use of the fraction of time at home (FAH) factors.

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		<p>Preparation of Health Risk Assessments, February 2015; http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf], inhalation cancer risk due to exposure to diesel particulate matter is calculated as follows:</p> <p>Cancer risk= Cair × [inhalation cancer risk for unit concentration exposure]</p> $= \text{Cair} \times \{ \{ \text{BR/BW} \} \times \text{A} \times \text{EF} \times 10^{-6} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH} \}$ <p>where</p> <p>Cair = concentration of DPM in air (µg/m3)</p> <p>{BR/BW} = breathing rate normalized to body weight (L/kg/day)</p> <p>A = inhalation absorption factor (unitless)</p> <p>EF = exposure frequency (unitless)</p> <p>10⁻⁶ = microgram to milligram and liter to cubic meter conversion</p> <p>CPF = DPM cancer potency factor (mg/kg/day)⁻¹ = 1.1</p> <p>ASF = age sensitivity factor (unitless)</p> <p>ED = exposure duration (years)</p> <p>AT = averaging time (years)</p> <p>FAH = fraction of time spent at home (unitless)</p> <p>The PRDEIR/SDEIS calculates inhalation cancer risk from exposure to diesel particulate matter emissions from construction based on a unit concentration exposure (1 µg/m3) multiplied by the respective modeled concentrations of diesel particulate matter in air for the various alternatives and scenarios. At first glance, the revised health risk assessment presented in PRDEIR/SDEIS Appendix 22-3C [Footnote 40: See PRDEIR/SDEIS, Appx. 22-3C, p. 18] appears to follow OEHHA's 2015 Guidance Manual; however, review of the spreadsheets supporting the health risk assessment shows that the PRDEIR/SDEIS does not appear to incorporate OEHHA's recommendation to use a more conservative fraction of time at home (FAH) of 1 for all child age groups (3rd trimester, 0<2 years, and 2<16 years) if a school is located within the 1×10⁻⁶ (or greater) isopleth (1 in one million (or greater) [Footnote 41: OEHHA 2015 Guidance Manual, footnote to Table 8.4, p. 8-5.]). The PRDEIR/SDEIS's health risk assessment does not indicate whether any schools were modeled with a cancer risk of 1×10⁶ or greater, which would require recalculation and increase cancer risk estimates for all sensitive receptors within that isopleth. Figure 7 illustrates conceptually which sensitive receptors would be affected.</p> <p>Accounting for the more conservative FAH of 1 for all sensitive receptors within the 1×10⁻⁶ cancer risk isopleth, the DPM unit concentration (1 µg/m3) cancer risk increases from 610 in one million to 785 in one million (see attached Tables A-1 and A-2 [Tables not attached]), or by a factor of 1.29 [Footnote 42: (785/610) = 1.287]. Thus, the PRDEIR/SDEIS may substantially underestimate cancer risks for areas where schools are</p>	

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		located within the 1×10^{-6} cancer risk isopleth. Because the PRDEIR/SDEIS did not provide isopleth maps, it is unclear how many areas may be affected by this methodological error.	
2622	82	ATT 12: Figure 7: Conceptual map for area with school within 1×10^{-6} cancer risk isopleth requiring re-calculation of cancer risk for all sensitive receptors inside 1×10^{-6} cancer risk isopleth based on FAH=1 (area dotted red)	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	83	<p>The PRDEIR/SDEIS determines the significance of health hazards due to localized PM10 and PM2.5 concentrations in ambient air based on 24-hour and annual concentration thresholds of significance established or recommended by the affected air districts (Impacts AQ-9 through AQ-12). Only three of the four air districts have developed specific health-based concentration thresholds for incremental increases of PM10 and PM2.5 in the ambient air due to Project emissions, the SMAQMD [Sacramento Metropolitan Air Quality Management District], the BAAQMD [Bay Area Air Quality Management District], and the SJVAPCD [San Joaquin Unified Air Pollution Control District]; the YSAQMD [Yolo-Solano Air Quality Management District] considers a violation of an ambient air quality standard for PM10 and PM2.5 to be significant [Footnote 43: See PRDEIR/SDEIS, Appx. 22C, Table 6].</p> <p>Because modeled 24-hour and annual concentrations of PM10 and PM2.5 in the YSAQMD are below the respective ambient air quality standards for all alternatives, the PRDEIR/SDEIS concludes that localized particulate matter concentrations would not result in significant human health impacts. This discussion fails to take into account the background concentrations of PM10 and PM2.5. The question is not whether Project PM10 and PM2.5 emissions by themselves would result in a violation of an ambient air quality standard but rather whether the Project's contribution of PM10 and PM2.5 concentrations in addition to existing background conditions would result in a new violation or contribute significantly to an existing violation of an ambient air quality standard.</p> <p>Table 3 [ATT: 17]summarizes modeled PM10 and PM2.5 concentrations for Alternative 4/4A in the YSAQMD, background concentrations in the YSAQMD, and applicable ambient air quality standards.</p> <p>As shown, Project construction emissions would contribute to existing violations of the 24-hour PM10 CAAQS and the 24-hour PM2.5 NAAQS. The lead agencies must determine whether these contributions to existing violations are significant. Since the YSAQMD has jurisdiction over part of the Sacramento Valley Air Basin, it makes sense to use the SMAQMD's incremental significance threshold for assessing the significance of these pollutant concentration increases. As shown, the maximum modeled 24-hour concentration of PM10 in the YSAQMD for Alternatives 4/4A is 2.5 $\mu\text{g}/\text{m}^3$ equivalent to the SMAQMD's incremental significance threshold of 2.5 $\mu\text{g}/\text{m}^3$ and should, thus, be considered a significant contribution to existing violations of the state ambient air quality standard for 24-hour PM10 in the YSAQMD's airshed and will impede the air district's progress towards compliance with the CAAQS.</p> <p>For other alternatives, this finding is even more pronounced. For example, the maximum modeled 24-hour concentration of PM10 in the YSAQMD for Alternatives 1C, 2C, and 6C is 8.7 $\mu\text{g}/\text{m}^3$, which exceeds the SMAQMD's incremental significance threshold of 2.5 $\mu\text{g}/\text{m}^3$ by a factor of more than 3 [Footnote 44: PRDEIR/SDEIS, Appx. A, Chapter 22,</p>	<p>The application of localized PM10 and PM2.5 thresholds are based on the guidance of the districts, and applied in the districts' respective jurisdictions. As discussed in the Appendix 22C Bay Delta Conservation Plan/California WaterFix Health Risk Assessment for Construction Emissions, the districts recommend applying the localized PM10 and PM2.5 thresholds to the project contributions, and not to the background plus project contributions to ensure the effects of the alternatives are identified in the analysis.</p> <p>Thresholds are applied in each district's jurisdiction per individual district recommendations. As recommended by the YSAQMD, the YSAQMD thresholds are applied to receptors within the district's jurisdictional boundaries.</p>

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		Table 22-51].	
2622	84	ATT 13: Table 3: Modeled PM10 and PM2.5 concentrations for Alternatives 4/4A in YSAQMD [Yolo-Solano Air Quality Management District] compared to NAAQS [National Ambient Air Quality Standards], CAAQS [California Ambient Air Quality Standards] and SMAQMD [Sacramento Metropolitan Air Quality Management District] incremental significance threshold	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	85	The PRDEIR/SDEIS only provides a health risk assessment for the construction phase of the Project; however, the operational phase of the Project would also generate emissions of diesel particulate matter. For example, maintenance of the water conveyance facilities would require diesel-powered backhoes, dump trucks, cranes, loaders, and water trucks. Further the water conveyance facilities would have backup generators on site [Footnote 45: For example, PRDEIR/SDEIS, pp. 3-4, 3-19, 3-36, 3-50, 23-70, 3C-36, and 3C-38]. Diesel-fired backup generators have to be tested on a regular basis to ensure that they are available in case of a grid outage. Emissions from these testing events, which would occur over the lifetime of the Project, can be substantial. I recommend that the lead agencies model health risks from Project operation and maintenance and add them to the health risks from Project construction.	Operational activities would include maintenance and other associated project activities. These activities would involve relatively minor construction equipment use and would not occur on a daily basis at one particular location. Potential health risk impacts from these activities are discussed in Impact AQ-25, and mitigation measures AQ-24 and AQ-25 are provided to reduce potential significant impacts. In addition, stationary sources such as pumps and backup generators would comply with applicable district health risk rules and regulations associated with stationary source permitting policies.
2622	86	The PRDEIR/SDEIS relies on two approaches to mitigate significant air quality and greenhouse gas impacts: a) Environmental Commitments that are included in various plans (Construction Equipment Exhaust Reduction Plan, DWR Construction Best Management Practices to Reduce Greenhouse Gas Emissions, Fugitive Dust Control) and b) air district-specific Mitigation Measures (AQ-1a, AQ-1b, AQ-3a, AQ-3b, AQ-4a, AQ-4b, AQ-9, AQ-16, AQ-21, AQ-24, and AQ-27) for impacts that were found to be significant despite implementing the Environmental Commitments. While substantially improved over the measures presented by the DEIR/DEIS, the Environmental Commitments fail to ensure that Project construction emissions would not exceed estimated levels and the proposed Mitigation Measures fail to ensure that significant Project construction emissions would be reduced to less than significant levels. Moreover, there does not appear to be any mechanism for enforcement of Environmental Commitments.	Please refer to Master Response 19 for further discussion regarding climate change and GHG emissions. As described in Appendix 3B, the intention of identifying environmental commitments and other best practices in the manner it has been done in the EIR/EIS was to assure the reader that the Lead Agencies will not subsequently determine that such measures are infeasible and in fact assume full responsibility for their enforcement. These environmental commitments are included in the California WaterFix Mitigation Monitoring and Reporting Program (MMRP) to ensure they are implemented as project commitments. See also Master Response 22, Mitigation, Environmental Commitments, Avoidance and Minimization Measures and Alternative-Specific Environmental Commitments.
2622	87	The PRDEIR/SDEIS's emission estimates assume that all off-road heavy-duty engines greater than 50 horsepower would have emission rates equivalent to model year 2013 [Footnote 46: For example, PRDEIR/SDEIS, pp. 3-4, 3-19, 3-36, 3-50, 23-70, 3C-36, and 3C-38]. Yet, this is not required by the Construction Equipment Exhaust Reduction Plan; instead, it requires that "equipment used to construct project facilities achieve fleet-wide average criteria pollutant emissions rates for equipment greater than 50 horsepower that are equivalent to the use of a model year 2013 fleet [Footnote 47: PRDEIR/SDEIS, Appx. 22A, p. 22A-16.]. This requirement does not ensure that Project construction emissions will not exceed the PRDEIR/SDEIS's estimates. Specifically, a fleet-wide average emission rate does not ensure that fleet-wide daily and annual emissions do not exceed estimated levels because it does not take into account the level of activity (e.g., hours of operation) for each equipment nor the number of equipment operating during a specific phase, year, or Project component construction. For example, during the site grading phase when only a small number of equipment operates on site, scrapers operating at a high level of activity could substantially	As discussed in Appendix 22A, model year 2013 emission factors were obtained from the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Construction Mitigation Calculator. The mitigation calculator provided factors specific to each equipment type and horsepower. Criteria pollutant and greenhouse gas emissions were then modeled by multiplying the 2013 emission factors by the number of equipment and hours of operation identified in the fleet inventory. Since the underlying emission factors are based exclusively on a model year 2013 engine, the resulting emissions estimate is representative of a model year 2013 fleet. As noted in Appendix 3B, the model year 2013 average may be achieved through a variety of different control strategies, including Tier 3 or 4 equipment, engine electrification, or diesel particulate filters. There may be microvariations in emissions levels throughout the day depending on the mix of operating equipment. However, the performance standard of a model year 2013 fleetwide average must be attained on a daily and annual basis to satisfy the environmental commitment. The Exhaust Reduction Plan requires the Project proponents to quantitatively demonstrate, through equipment-specific modeling, that the 2013 fleet-wide average has been achieved by the selected equipment and aftermarket controls. It is also important to note that while the emissions modeling was based on the latest technical modeling procedures and engineering assumptions, actual emissions levels when the project is constructed

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		increase emissions above those estimated based on Tier 3 equipment because only a small number of construction equipment could “offset” these higher emissions. This could result in substantially higher daily emissions and, thus, substantially higher short-term impacts on air quality than estimated by the PRDEIR/SDEIS.	may differ from the estimates presented in Chapter 22. Recognizing this fact, the EIR/EIS emissions analysis utilized worst-case, conservative assumptions to characterize emissions impacts. Accordingly, there is a high degree of confidence that actual emissions levels and required offsets will be lower than what are presented in the EIR/EIS.
2622	88	The PRDEIR/SDEIS’s emission estimates rely upon and the Construction Equipment Exhaust Reduction Plan requires the use of marine vessels with EPA certified Tier 3 or newer engines and the use of diesel tunneling locomotives with EPA certified Tier 4 or newer engines [Footnote 48: PRDEIR/SDEIS, Appx. 3B, p. 3B-35]. The PRDEIR/SDEIS contains no discussion of the availability of such engines and, thus, the feasibility of this measure.	Marine vessels would be required for construction of the Clifton Court Forebay and intakes, which would occur between 2020 and 2029. Advanced engine tiers (e.g., Tier 3) for marine vessels were phased in by the U.S. Environmental Protection Agency between 2009 and 2014. Consultation with tunneling locomotive engine manufacturers confirms Tier 4 engines will be available at the time of tunneling construction.
2622	89	<p>I [Dr. Petra Pless] previously commented on the DEIR/DEIS’s improper deferral of developing mitigation measures [Footnote 49: 2014 Pless DEIR/DEIS Comments, Comment IV.1]. The PRDEIR/SDEIS did not rectify this problem but instead continues to defer development of the following mitigation measures into the future:</p> <p>Mitigation Measures AQ-1a, AQ-1b, AQ-3a, AQ-3b, AQ-4a, and AQ-4b: Undertake a “good faith effort” to enter into a contract with the respective affected air district to develop a mitigation program that would mitigate and offset emissions to net zero for emissions in excess of General Conformity</p> <p>de minimis thresholds (where applicable) and to quantities below applicable CEQA threshold for other pollutants [Footnote 50: According to the PRDEIR/SDEIS, p. 22-289, “the phrase “for other pollutants” is intended to apply to other alternatives, where associated impacts to other pollutants may exceed thresholds other than Nox.”] or develop an alternative or complementary mitigation program that would achieve the same;</p> <p>Mitigation Measure AQ-19: Prepare a land use sequestration analysis;</p> <p>Mitigation Measure AQ-21: Develop and implement a GHG mitigation program to reduce construction related GHG emissions to net zero; and</p> <p>Mitigation Measure AQ-24: Develop an air quality mitigation plan (“AQMP”) to ensure air district regulations are incorporated into future conservation measures and associated project activities.</p> <p>In order to find that significant impacts would be reduced to a less than significant level, the feasibility and efficacy of mitigation measures must be evaluated and mitigated emissions must be quantified. Here, the PRDEIR/SDEIS does neither. Instead, the PRDEIR/SDEIS simply assumes that its proposed mitigation measures would achieve their stated purpose.</p>	<p>Comments made on the 2013 DEIR/DEIS have been addressed in the FEIR/FEIS as required by CEQA and NEPA.</p> <p>Mitigation measures such as those presented in the comment are permissible as they provide performance standards which must be met in order to satisfy the requirement and mitigate the impact to the level identified. Details of mitigation plans such as air quality plans can be modified throughout the process so that they can reflect best-available technology and allow for flexibility in how the performance standard can be met. Additionally, allowing for flexibility in how performance standards are met can allow for input from various agencies on how best to achieve the mitigation goals. See also Master Response 22, Mitigation, Environmental Commitments, Avoidance and Minimization Measures and Alternative-Specific Environmental Commitments.</p> <p>The 2013 Draft EIR/EIS Chapter 22, Appendix A Chapter 22 (Air Quality and Greenhouse Gasses), and RDEIR/SDEIS Section 4.3.18 evaluates criteria pollutant emissions associated with the construction of each alternative. The proposed project would be implemented in a manner intended to minimize the potential for adverse health effects, such as those mentioned. There are numerous mitigation measures intended to reduce air quality effects to as low a level as feasible. As described in Section 22.2.1.1, the United States Environmental Protection Agency (EPA) has established de minimis thresholds to define levels at which pollutants would not impede a region’s ability to achieve air pollution goals outlined in their State Implementation Plan (SIP). Construction of the proposed project would exceed the applicable de minimis threshold for nitrogen oxides (NOX). The project will fully offset construction-related NOX emissions to net zero through implementation of Mitigation Measures identified in the EIR/EIS. With respect to human health impacts, the Air Quality and Greenhouse Gasses Chapters and Sections identified above include a health risk assessment (HRA) evaluating health impacts to all sensitive receptors, which include residences, schools, hospitals, places of worship, daycare facilities, parks, or any other facilities where people are susceptible to air pollutants. In addition, as potential impacts to human health are construction-related, construction emissions and exposure of sensitive receptors to construction-related emissions will cease once construction activities have ended.</p>
2622	90	In order to mitigate the significant impacts on air quality resulting from ozone precursor emissions during Project construction in the SMAQMD [Sacramento Metropolitan Air Quality Management District] /Sacramento Valley Air Basin, the BAAQMD [Bay Area Air Quality Management District] /San Francisco Bay Area Air Basin, and the SJVAPCD [San Joaquin Valley Air Pollution Control District] /San Joaquin Valley Air Basin, the PRDEIR/SDEIS proposes Mitigation Measures AQ-1a, AQ-3a, and AQ-4a, which are intended to reduce emissions to net zero (0) for emissions in excess of General Conformity de minimis thresholds and to quantities below the BAAQMD’s applicable	The project proponents undertook a multi-year consultation process with the four Plan Area air districts to confirm sufficient emissions reduction credits were available to offset project-generated emissions to net zero, consistent with Mitigation Measures AQ-1, AQ-3, and AQ-4. Please refer to Appendix 22E for copies of the air district coordination. The letters, which were drafted by the expert agencies that manage the offset programs, serve to justify the feasibility of Mitigation Measures AQ-1, AQ-3, and AQ-4. As noted in the letters, DWR and the air districts are committed to working together to reduce air pollution generated by construction of the water conveyance facility, consistent with the requirements outlined in the mitigation

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		<p>CEQA thresholds of significance. Each of these mitigation measures requires that the DWR undertake a “good faith effort” to enter into a development mitigation agreement with the respective air districts in order to reduce criteria pollutant emissions through the creation of offsetting reductions of emissions occurring within the respective air basins. The PRDEIR/SDEIS identifies the preferred means of undertaking such offsite mitigation as the payment of offsite mitigation fees [Footnote 51: Draft EIR/EIS, p. 22-236]. These “mitigation measures” as proposed are inadequate.</p> <p>As discussed, the PRDEIR/SDEIS improperly defers analysis of the feasibility of its proposed mitigation measures to achieve the stated goals of reducing emissions to less than significance. Over the several years it took to develop the PRDEIR/SDEIS, the lead agencies could (and should) have developed a mitigation plan in cooperation with the respective air districts and quantified the emission reductions that can potentially be achieved. In fact, the SJVAPCD commented specifically:</p> <p>As stated in the District’s comment letter issued on July 5, 2013 for the Administrative Draft EIR/EIS the District would like to reiterate its</p> <p>recommendation. Rather than expressing a non-enforceable commitment to a “good faith effort” to mitigate criteria pollutants, the District recommends that DWR commit to entering into a development mitigation contract prior to finalizing the EIR/EIS. This would allow DWR to fully disclose to the public the extent of the actual mitigation proposed. Therefore the project proponent or DWR should engage in discussion with the District to adopt a voluntary Emission Reduction Agreement (VERA) prior to the finalization and certification of the environmental document.</p> <p>...</p> <p>The District recommends the mitigation for the BDCP be carried out via Mitigation Measure 4a (i.e. entering into a VERA with the District) and thus the District recommends that the applicant commit to entering into a VERA instead of committing into a good faith effort to do so [Footnote 52: SJVAPCD, Letter to Ryan Wulff, NMFS, Project: Draft Environmental Impact Report/Environmental Impact Statement for the Bay Delta Conservation Plan, District CEQA Reference No: 20130329 and 20140155, June 12, 2014, pp. 2-3.].</p> <p>Instead, the PRDEIR/SDEIS proposes contingency Mitigation Measures AQ-1b, AQ-3b and AQ-4c in case DWR should be unable to enter into what they regard as satisfactory agreements with the respective air districts or enter into an agreement with the respective air districts but find themselves unable to meet the performance standards. These contingency mitigation measures identify a number of potential off- site projects to reduce emissions in the respective air basins including:</p> <ul style="list-style-type: none"> — Alternative fuel, low-emission school buses, transit buses, and other vehicles. — Diesel engine retrofits and repowers. — Locomotive retrofits and repowers. — Electric vehicle or lawn equipment rebates. — Electric vehicle charging stations and plug-ins. 	<p>and required by local air district rules and regulations. See also response to comment 2511-48.</p> <p>Mitigation Measures AQ-1, AQ-3, and AQ-4 acknowledge that their implementation depends on consultation with air district staff and third party participation, and as such, the project proponents will make a good faith effort to enter into contracts with all required parties. The performance standard of achieving net zero ROG and NOx emissions, however, have also been outlined in the Mitigation Monitoring Report Protocol (MMRP) and will be considered a condition of project approval.</p> <p>While use of a voluntary Emission Reduction Agreement (VERA) is DWR’s preferred method for mitigating air quality impacts in the San Joaquin Valley, the environmental document includes Mitigation Measure AQ-4b to provide additional flexibility and environmental protection. The measure is not intended to supersede a VERA with the SJVAPCD. Rather, it is identified as a complementary approach to ensure emissions are offset according to the performance standards established by the environmental analysis. If necessary, additional reductions may be achieved under Mitigation Measure AQ-4b through DWR-sponsored projects that do not overlap with programs covered by District incentive programs. As noted in Mitigation Measure AQ-4b, all offsite reductions must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionally. In other words, the reductions would not happen without the financial support of purchased offset credits. This requirement ensures that any funded projects through Mitigation Measure AQ-4b would not overlap with existing federal, state, or local emissions reduction programs.</p>

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		<p>— Video-teleconferencing systems for local businesses.</p> <p>— Telecommuting start-up costs for local businesses [Footnote 53: For example, RDEIR/SDEIS, Appx. 22C, pp. 22-301 to 22-302 for Alternative 4 and SJVAPCD].</p> <p>Most of these projects would overlap with CARB’s [California Air Resource Board] and the air districts’ existing programs such as the California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (“HVIP”) HVIP [Footnote 54: HVIP; http://www.californiahvip.org/default.aspx.]; the SJVAPCD’s ChargeUp! Program [Footnote 55: SJVAPCD, ChargeUp!; http://valleyair.org/grants/chargeup.htm.], Clean Green</p> <p>Yard Machines program [Footnote 56: SJVAPCD, Clean Green Yard Machines; http://valleyair.org/grants/cgym.htm.], Drive Clean! Rebate program [Footnote 57: SJVAPCD, Drive Clean! Rebate Program; http://www.valleyair.org/grants/driveclean.htm.], E-Mobility program [Footnote 58: SJVAPCD, E-Mobility; http://www.valleyair.org/grants/emobility.htm.], Hybrid Voucher program [Footnote 59: SJVAPCD, Hybrid Voucher Program; http://valleyair.org/grants/hybridvoucher.htm.], Off-Road Replacement program [Footnote 60: SJVAPCD, Off-road Replacement; http://valleyair.org/grants/offroadreplacement.htm.], Ag-pump Replacement program [Footnote 61: SJVAPCD, Ag-pump Replacement; http://valleyair.org/grants/agpump.htm.], Forklift program [Footnote 62: SJVAPCD, Forklift Replacement; http://valleyair.org/grants/forklift.htm.], Tractor Replacement program [Footnote 63: SJVAPCD, Tractor Replacement Program; http://valleyair.org/grants/tractorreplacement.htm.], Off-road Repowers program [Footnote 64: SJVAPCD, Off-road Repowers; http://valleyair.org/grants/offroadrepowers.htm.], Proposition 1B: Goods Movement program [Footnote 65: SJVAPCD, Proposition 1B: Goods Movement; http://valleyair.org/grants/prop1b.htm.], Locomotive program [Footnote 66: SJVAPCD, Locomotive Program; http://valleyair.org/grants/locomotive.htm.], and Class 5 & 6 On-Road Trucks program [Footnote 67: SJVAPCD, Class 5 & 6 On-Road Trucks; http://valleyair.org/grants/onroadtrucks.htm.], to name just a few. In other words, the contingency mitigation measures rely on the same programs that would be incorporated if the DWR entered into development mitigation programs with the air districts, except they would not be under their oversight and it is doubtful that they would be effective.</p> <p>The SJVAPCD, for example, points out that measures developed outside of the air district’s oversight cannot be relied upon to achieve the intended results:</p> <p>On the contrary, mitigation efforts performed by others, outside the District’s oversight, have generally come up far short in quantity of emissions reductions generated, and in verifiability of those reductions, leaving the CEQA Lead Agency vulnerable to legal action [Footnote 68: SJVAPCD, Letter to Ryan Wulff, NMFS, Project: Draft Environmental Impact Report/Environmental Impact Statement for the Bay Delta Conservation Plan, District CEQA Reference No: 20130329 and 20140155, June 12, 2014, pp. 2-3.].</p> <p>Other agencies have required project proponents to enter into agreements before certification of project or even during review. For example, the Hydrogen Energy California Project, a proposed power generation and fertilizer production facility in the San Joaquin Valley currently under review before the California Energy Commission, has</p>	

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		entered into a VERA with the San Joaquin Valley Air Pollution Control District (“SJVAPCD”) for about \$1.2 million to mitigate 16.7 tons/year of Nox [Nitrogen Oxides] emissions [Footnote 69: SJVAPCD, Hydrogen Energy California Power Plant Project, Mitigation Agreement 20130092 and Voluntary Emission Reduction Agreement 20130026; available at http://www.energy.ca.gov/sitingcases/hydrogen_energy/documents/others/2013-04-26_SJVUAPCD_Mitigation_Agreement_TN-70496.pdf . (Previously submitted as Exhibit 38 to 2014 Pless DEIR/DEIS Comments.)). The funding provided under the VERA was required by the SJVAPCD to satisfy CEQA mitigation requirements and will support the air district’s Emission Reduction Incentive Program which, for example, provides assistance to replace older agricultural equipment.	
2622	91	I suggest that the PRDEIR/SDEIS for the Project be recirculated to provide one complete document that revises all sections and incorporates all updated analyses rather than incorporating by reference the numerous files that make up the DEIR/DEIS, PRDEIR/SDEIS, and errata. It is virtually impossible for the public to understand this highly complex document by having to refer back to previous documents and across multiple appendices and sections. Reorganization, a table of contents in every chapter, an indication of which alternative is addressed on every page, and improved formatting would go a long way to making this document better serve its intended purpose, i.e., to inform the public of the environmental impacts of the BDCP/CWF. I realize that an environmental document that deals with a project as complex as the BDCP/CWF is necessarily complicated, however, it does not have to be this byzantine.	To assist reviewers, the Lead Agencies provided a “Document Review Road Map” at the beginning of the RDEIR/SDEIS. Chapter 1, Section 1.3, of the RDEIR/SDEIS describes the contents of the document and provides references to the locations where readers may find specific discussions and analyses. Table 1-2 in the RDEIR/SDEIS identifies the exact portions of the Draft EIR/EIS that are modified in the RDEIR/SDEIS. To avoid presenting thousands of pages of unchanged content, the Lead Agencies did not provide the entire Draft EIR/EIS within the RDEIR/SDEIS. Because the entire Draft EIR/EIS was not presented a second time, the RDEIR/SDEIS contains cross-references to the earlier document. The Final EIR/EIS contains the full contents of the Draft EIR/EIS and RDEIR/SDEIS without references to earlier documents. See Master Response 38 for further discussion of document organization.
2622	92	ATT 14: Table of air quality cancer risks.	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	93	ATT 15: Table of air quality cancer risks.	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	94	ATT 16: Mean wind speeds in October, 2015 at Black Diamond, California.	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	95	<p>SCS Engineers (SCS) has reviewed the greenhouse gas (GHG) analysis prepared for the proposed Bay Delta Conservation Plan/California WaterFix Alternative 4A (Project). The GHG analysis was performed to demonstrate that the GHG emissions from the proposed Project would result in “no net increase” in GHG emissions and therefore be less than significant for purposes of the California Environmental Quality Act (CEQA). SCS has performed many GHG analyses for purposes of permitting, mandatory reporting, verification, CEQA and other requirements. The resumes of Patrick Sullivan and John Henkelman are provided as an attachment.</p> <p>The documents reviewed include the following:</p> <ul style="list-style-type: none"> • Bay Delta Conservation Plan RDEIR/SDEIS, July 9, 2015 (RDEIR/S) • California Department of Water Resources Climate Action Plan, May 2012 <p>C O N S T R U C T I O N G H G E M I S S I O N S</p> <p>Table 22-111 states that the Project will result in the emission of GHG more than three million metric tons of carbon dioxide equivalent (CO₂e) from construction. This quantity is equivalent to several years of operational emissions, and greater than GHG significance thresholds in the air quality districts where the Project will occur. The</p>	<p>The lead agencies do not agree with the commenter that Mitigation Measure AQ-21 is inadequate. Rather, the lead agencies consider the measure to be a state-of-the-art roadmap for achieving carbon neutrality for the construction of major public works facilities. Mitigation Measure AQ-21 measure outlines an extensive GHG Mitigation Program to reduce construction-related GHG emissions to net zero. The mitigation identifies 13 potential strategies. Since construction of the project, as mitigated to achieve net carbon neutrality, would not cause net increases in GHG emissions, the measure is consistent with California GHG reduction goals. Moreover, several of the strategies identified by Mitigation Measure AQ-21 would facilitate implementation of statewide GHG programs and legislation, such as the Assembly Bill 32 Scoping Plan and Renewables Portfolio Standard (RPS). All selected strategies must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionality (i.e., the reductions would not happen without the financial support of purchased offset credits or other mitigation strategies). Accordingly, reductions achieved by projects funded under Mitigation Measure AQ-21 cannot be “sold again” to mitigate other projects.</p> <p>As noted in Mitigation Measure AQ-21, the project proponents will develop a mechanism for quantifying, funding, implementing, and verifying emissions reductions associated with the selected strategies. The GHG Mitigation Program must be developed in consultation with the study area air districts (BAAQMD, SMAQMD, SJVAPCD, and YSAQMD), California Air Resources Board, U.S. Environmental Protection Agency, and California Energy Commission. The Project Proponents will work with the identified agencies, as applicable, to determine the nature and form of the components of the GHG Mitigation Program, and to ensure all selected strategies meet the requirements of Mitigation Measure AQ-21, including verifiability</p>

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		<p>RDEIR/S states these GHG emissions are equal to 633,000 typical passenger cars. These three million metric tons of GHG emissions represent more than a half of a percent of the total statewide GHG emissions goal for 2020 from a single project.</p> <p>Mitigation Measure AQ-21 (MM AQ-21) proposed the mitigation of these GHG emissions through the implementation of a GHG Mitigation Program. However, MM AQ-21 is flawed and does not sufficiently require consistency with California GHG reduction goals.</p> <p>E L E M E N T S O F M M A Q - 2 1</p> <p>The RDEIR/S concludes that the Project would result in the generation of 3 million metric tons of CO₂e without mitigation and that any increase would be significant. To reduce GHG emissions to below significant levels, the RDEIR proposes MM AQ-21. This mitigation measure requires the Project proponents to develop and implement a GHG mitigation program to reduce GHG emissions to net zero.</p> <p>MM AQ-21 requires that proponents develop a mechanism to quantify, fund, implement, and verify emission reductions associated with the strategies used to reduce GHG emissions. Reductions are required by MM AQ-21 to be quantifiable, verifiable, enforceable, and additional (i.e. they would not occur without support of purchased offset credits). As part of MM AQ-21, the Project proponents will prepare annual reports stating the GHG emissions from construction, elements of GHG reduction project funding, emission reductions achieved, cumulative reductions, and the total emission reductions remaining to reduce GHG emissions to net zero.</p> <p>MM AQ-21 also outlines strategies and the RDEIR discusses the reduction potential of these strategies. One of the strategies is the purchase of carbon offsets from existing standards or from independently developed protocols. The existing standards listed in the RDEIR include GHG reduction strategies approved by the California Air Resources Board (CARB) for inclusion as part of the Cap and Trade (C&T) Program under Assembly Bill 32 (AB32). The mitigation measure also states it could potentially use offset credits from “Other-California Based Offsets,” “United States Based Offsets,” and “International Offsets (e.g., clean development mechanisms [under the Kyoto Treaty]).”</p> <p>G H G O F F S E T S B A C K G R O U N D</p> <p>GHG offsets are a critical element of the MM AQ-21, based on which the GHG evaluation indicates the Project would result in net zero GHG emissions. The concept behind a GHG offset is that a project developer creates GHG emission reductions above and beyond what is considered to be “business as usual” (BAU), meaning that the GHG reduction would not have occurred in the absence of the GHG reduction project. For a GHG reduction offset to be generated for use in the CARB C&T program, the reduction must be real, additional, quantifiable, permanent, verifiable, and enforceable. The GHG reduction registries that may create GHG offsets under the C&T program, Climate Action Reserve [Footnote 1: Climate Action Reserve Program Manual (CAR October 2011)] (CAR), the American Carbon Registry [Footnote 2: American Carbon Registry Standard v4.0 (ACR January 2015)] (ACR), and the Verified Carbon Standard [Footnote 3: VCS</p>	<p>and enforceability. These requirements have been outlined in the Mitigation Monitoring Report Protocol (MMRP) and are considered a condition of project approval.</p> <p>With respect to the use of carbon offsets (strategy-9), procurement of carbon offsets is one of 13 strategies the project proponents have at their discretion to mitigate construction generated emissions. The purpose of the GHG Mitigation Program is to implement a suite of strategies that optimize total costs and community co-benefits. Accordingly, it is unlikely the project proponents will rely exclusively on any one strategy, including strategy-9, to address construction impacts. Moreover, if carbon offsets are pursued, they could be purchased through state, national, and/or international markets. The project therefore would not impede implementation of the Cap and Trade program or have “significant [statewide] market impacts”.</p> <p>As noted in Mitigation Measure AQ-21, the project proponents will conduct annual reporting to verify and document that selected strategies achieve sufficient emissions reductions to offset construction-related emissions to net zero. The annual report will identify construction emissions for the reporting year, projects selected to offset those emissions, actual emission reductions achieved, and funds provided. Accordingly, the measure appropriately defines the boundaries that will be used to document and verify implementation of Mitigation Measure AQ-21. Additional details will also be developed as part of the MMRP.</p> <p>With respect to use of DWR’s Climate Action Plan (CAP), the project proponents have analyzed operational emissions consistent with Chapter 12 of the CAP. Since the action alternatives would result in additional SWP energy demands in excess of 15 gigawatt hours per year, required consultation with DWR’s SWP Power and Risk Office has occurred, and modifications to the Renewable Power Procurement Plan (REPP) to accommodate the action alternatives have been identified to ensure that covered project activities do not conflict with DWR’s ability to achieve the GHG reductions outlined in the CAP. As discussed in Chapter 22, power purchased through the REPP would be from renewable resources and not from fossil fuel based power plants. For these reasons, the operational emissions from both increased SWP pumping and project maintenance are found to be less than significant and no mitigation beyond compliance with the CAP is required. Through this demonstration of consistency and compliance with the CAP, DWR properly relies on the analysis it provides for the purposes of a CEQA cumulative GHG impacts analysis. Please see Master Response 19 for additional information.</p> <p>In addition to potential GHG impacts from increased SWP pumping, the EIR/EIS also evaluates potential indirect emissions from displaced hydropower to existing CVP customers. It is currently unknown what type of power source (e.g., renewable, natural gas) would be substituted for CVP electricity. However, potential indirect emissions that may result if previous CVP electricity users acquire energy from a source that results in GHG emissions are presented in Chapter 22, Air Quality and Greenhouse Gases. These emissions would result from decisions made by dozens of independent electricity users, which are beyond the control of Reclamation or any of the other Lead Agencies. Accordingly, the EIR/EIS concludes that potential indirect GHG emissions generated by increased CVP pumping would be adverse.</p>

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		<p>Program Guide (October 2013)] (VCS), also adhere to similar principles when creating their GHG offset protocols.</p> <p>The “Real” requirement for eligible offsets means that reductions must result from demonstrable action and the methodology used to quantify that reduction must account for appropriate GHG emission sources, sinks, and reservoirs. “Real” assures that GHG emissions generated by GHG offset projects is accounted for and that projects emitting more GHG than they reduce do not generate offsets.</p> <p>Offset “additionality” means that the GHG reduction activity must produce a result better than BAU. The activity cannot be the normal practice. For example, destruction of ozone depleting substances (ODS) by governments is common practice but that destruction is not commonplace for commercial or industrial facilities. Thus, destruction of ODS is not additional when the ODS is sourced from a government but it is additional when the ODS comes from a company facility.</p> <p>Quantifiable, verifiable, and enforceable assure that the GHG reduction can be measured, that a third party can confirm the quantification, and that CARB can hold a party liable for performing the GHG offset activity if necessary. These principles provide assurance that GHG reductions are calculated accurately and the supporting data have been reviewed by CARB and a third party verifier.</p> <p>The principles of real, additional, quantifiable, permanent, verifiable, and enforceable are critical to achieving the goal of reducing GHG in the atmosphere. The need for these assurances is highlighted by problems with some markets and programs, such as the Clean Development Mechanism (CDM) and Chicago Carbon Exchange (CCX), which have suffered from a lack of confidence in the legitimacy of the generated GHG reduction offsets.</p> <p>CARB currently allows GHG reduction credits for forest projects, livestock projects, ozone depleting substance (ODS) projects, and mine methane capture (MMC). CARB has proposed the adoption of a rice cultivation project type. The livestock, ODS, and MMC projects achieve GHG reduction through the destruction of gases with a high potential for global warming (methane or ODS). For forest projects, the carbon reduction occurs by setting aside forested land where trees remove carbon from the atmosphere and store it as wood and plant material.</p> <p>When the GHG offset developer wishes to make the offsets available for purchase on the market, the developer uses a third-party verifier to confirm that the project meets program requirements and that reductions have been accurately quantified. The offset registry (CAR, ACR, or VCS) then issues the offsets to the developer. If the protocol was one of those eligible under the C&T regulation, those offsets are traded in the CARB offset market and used for regulatory compliance under the C&T regulation. If those GHG offsets are not generated under a C&T protocol, as apparently allowed by the inclusion of credits sourced from “Other-California Based Offsets,” “United States Based Offsets,” and “International Offsets,” those offsets are traded through environmental offset brokers. Non-C&T GHG offsets can be retired at the request of the offset holder to remove those offsets from the market, thereby finalizing the GHG reduction.</p> <p>FLAWS IN USE OF OFFSET CREDIT STRATEGY</p> <p>SCS agrees that the use of the AB32 offset credits from the C&T program would yield</p>	

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		<p>real GHG reductions that are consistent with California GHG policies, such as the AB 32 GHG Scoping Plan, most recently updated in 2014; however, there is no such guarantee that other California, United States, or International offsets used by the Project proponent would be consistent with California GHG policies and goals under AB32.</p> <p>To be consistent with state GHG policy, the offsets should meet California GHG reduction goals and be required to be real, additional, quantifiable, permanent, verifiable, and enforceable. The offsets purchased to meet mitigation requirements should also be thereafter retired and removed from circulation. As written, MM AQ-21 also allows the credits to be sold again, allowing those same offsets to be used again as mitigation on other projects, resulting in double-counting of potential reductions.</p> <p>Though MM AQ-21 requires that the GHG offsets be obtained from a registry that demonstrates that the offset will result in real, additional, quantifiable, permanent, verifiable, and enforceable GHG offsets, since the language allows the GHG offsets to be sold after acquisition, the measure does not provide any assurance that the Project GHG emissions will be net zero or less than significant. Furthermore, by allowing the Project proponent to develop its own protocol, MM AQ-21 could allow for the use of GHG credits from projects that are inconsistent with CARB GHG policies or fail to meet the goals of quantifiable, verifiable, enforceable, and additional reductions. MM AQ-21 must include standards for determining that all GHG offsets from outside the C&T program are consistent with goals under AB32 such as the use of only registry- approved protocols that have been adopted by CARB or third party verification to registry standards by an accredited GHG verifier, including verification that reductions are consistent with CARB policy. Also, all offsets used must be retired to ensure the reductions are permanent.</p> <p>Finally, offset credits in the C&T program are intended for use as part of regulatory compliance. They are not intended to be used as part of a measure to reduce project-level GHG emissions. If all GHG emissions from construction were to be offset using compliance offsets, it would remove ten percent of the available credits from the market. The impact of removing such a large fraction of the available offset credits from the market is unknown, but would be likely to have significant market impacts.</p> <p>PROJECT BOUNDARIES ARE NOT RIGOROUS AND ARE POORLY DEFINED</p> <p>MM AQ-21 does not sufficiently define the boundaries (time and location) that will be used to determine GHG emission reductions from mitigation measures such as Strategy 10, the development of biomass waste digestion and conversion facilities. SCS does not believe that such strategies are consistent with CARB policies toward AB32. The CAR has had a protocol for GHG emission reductions from composting and waste digestion since 2010, but CARB chose not to adopt those protocols into the C&T offset program. SCS believes they were not adopted because they are not consistent with CARB policies since they generate offsets based on GHGs that would have been generated at a future date.</p> <p>ANALYSIS OF GHG FROM ELECTRICITY USE IS INSUFFICIENT AND POORLY DEFINED</p> <p>The RDEIR/S states that the Project will create the demand for an additional 1,405 gigawatts- hours (GWh) of additional electricity demand. This power will have to be</p>	

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		<p>obtained by</p> <p>Department of Water Resources (DWR) and is greater than the annual generation of many power plants (e.g. single or double turbine natural gas power plants, which typically generate less than a 1,000 gigawatts per year). The RDEIR/S indicates that the DWR has developed a Climate Action Plan (CAP). That CAP projects an increase in GHG emissions of more than a 500,000 metric tons of CO₂e when the Project pumps begin operation in 2024. This increase in emissions is well above the GHG emissions trajectory in the CAP and RDEIR and exceeds the designated GHG emissions reduction trajectory by 260,000 metric tons of CO₂e.</p> <p>The RDEIR indicates that the DWP entity-wide emissions would decrease to below the GHG emissions reduction trajectory by 2041, and the 2050 GHG reduction goal would be met. The RDEIR concludes that because entity-wide GHG emissions are still projected to meet 2050 reduction goals, and because the implementation would not affect SWR's established reduction goals, GHG emissions are not significant, and no mitigation is required.</p> <p>The conclusion that the Project would not result in significant GHG emissions is not reasonable in light of the GHG emissions resulting from the electricity demand from massive pumps included in the Project. The power used to pump water must be generated somewhere by some facility or combination of facilities. Typically, this generation is from fossil fuels, resulting in significant GHG emissions from combustion. Even in the case of obtaining carbon-free power</p> <p>hydro, wind, solar), DWR's use of that carbon-free power removes it from the California energy grid where it can no longer be used to offset other GHG emissions. That carbon-free power is no longer available and other entities will have to obtain power from carbon-emitting sources, indirectly but foreseeably creating a GHG emission increase. Since the energy requirements of the Project exceed the generation capacity of many power plants, the Project effectively adds GHG emissions from power plants.</p> <p>Finally, the CAP does not create enforceable conditions. Without enforceable conditions, there is no guarantee that the CAP will result in no net GHG emissions. Thus, there are no monitoring or enforcement conditions for Project GHG emissions to ensure that this reduction will actually occur and will not simply be displaced by increases elsewhere in the utility grid.</p>	
2622	96	ATT 17: Resume of Patrick S. Sullivan, CPP, REPA, Air quality reviewer for Local Agencies of the North Delta.	This comment describes an attachment to the comment letter. Please see above responses to comments.
2622	97	ATT 18: Resume of John Henkelman, air quality reviewer for Local Agencies of the North Delta	This comment describes an attachment to the comment letter. Please see above responses to comments.
2623	1	The California Water Fix appears to be designed to require additional flows into the Delta that would directly reduce available water supplies, both surface and groundwater, for the north state's economy and environment. Unfortunately, the California Water Fix and its environmental document do not identify or sufficiently address these impacts. This is particularly a problem with the pending change petition process before the State Water Board, where the petitioners must demonstrate that "the change will not operate to the injury of any legal user of water" and fish and	The Final EIR/EIS includes model results for Alternative 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS. These results indicate that the Proposed Project (Alternative 4A) would either not affect or slightly increase deliveries to CVP and SWP water contractors located north of the Delta as compared to the No Action Alternative. Under the alternatives, senior water rights holders would continue

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		wildlife will not be affected.	to receive the same amount of water as under the No Action Alternative. It should be noted that water deliveries to CVP and SWP water contractors would be reduced under the No Action Alternative as compared to the Existing Conditions due to climate change, sea level rise, and projected population growth that would occur with or without the project.
2623	2	The operations, although not adequately described in the documents, seem to pose a threat to our [North State Water Alliance] ability to serve water for various north state beneficial purposes-both now and into the future.	Please refer to response to Comment 2623-1. Please also see Final EIR/EIS, Appendix 1A, Primer on California Water Delivery Systems and the Delta.
2623	3	California Water Fix does not demonstrate that it can meet the biological needs of covered salmonid and pelagic fish species and is more likely to harm these species than contribute to their recovery.	The California WaterFix is a federal action that is or will be undergoing all of the required permitting activities. For the ESA, it will be in consultation with the USFWS and NMFS for take coverage for listed species. There is no requirement for a federal action to contribute to recovery of species. Please see Chapter 11, Fish and Aquatic Species, of the FEIR/FEIS for more information on the projected effects of the new preferred alternative, Alternative 4A, to salmonid species. For additional information on permitting, please see Master Response 45.
2623	4	The California Water Fix Project is a "Covered Action" under the Delta Plan and must demonstrate consistency with the Delta Plan. For the reasons described in our comments, the Project, including the RDEIR/SDEIS, is inconsistent with the Delta Reform Act's co-equal goals for the Delta and numerous key Delta Plan policies because it fails to use the best available science; fails to properly define adaptive management; and will increase adverse effects to aquatic life. Thus a finding of consistency cannot be made. As the [North State Water] Alliance has consistently stated, California needs to improve its water supplies, not just improve water conveyance across regions. The Alliance believes that the California Water Fix, as currently described, does not solve the state's water supply reliability problem, does not further the co-equal goals, and has the potential to cause significant impacts to the north state.	The EIR/EIS was prepared in a manner to comply with the 2009 Delta Reform Act, as described in Appendix 3I of the EIR/EIS. Please see Master Response 31 regarding compliance with the Delta Reform Act.
2623	5	NSWA [North State Water Alliance] provided extensive comments on the Draft EIR/Draft EIS (DEIR/DEIS) for the BDCP, including detailed technical critiques by experts in the areas of hydrologic modeling and water supply impact assessment, and pelagic and anadromous fish. (See July 29, 2014 NSWA Comments on BDCP, Implementing Agreement and DEIR/DEIS.) The concerns raised in NSWA's 2014 comments were not addressed in the supplemental or revised analyses included in the RDEIR/SDEIS, including the new evaluation of Alternatives 4A, 2D and 5A. Comments remain unaddressed in the RDEIR/SDEIS. The RDEIR/SDEIS continues to rely on the same flawed hydrologic model to analyze the new alternatives and no operations plan has been provided in or for the new Project or RDEIR/SDEIS. More unaddressed comments are described later in these comments. Because no changes were made to the Project or RDEIR/SDEIS that would address the vast majority of NSWA's concerns, to the extent new alternatives, including Alternative 4A, are similar to the previously proposed BDCP CM1, and to the extent the RDEIR/SDEIS relies on the modeling conducted for the BDCP, NSWA's prior comments apply to the Cal WaterFix Project and RDEIR/SDEIS, and NSWA reasserts its prior comments here and incorporates them by reference as comments on the RDEIR/SDEIS and Cal WaterFix Project alternatives.	As explained in the Executive Summary of the RDEIR/SDEIS, all of the comments received during the Draft EIR/EIS 2013–2014 public review period were considered in the development of the RDEIR/SDEIS. The RDEIR/SDEIS does not include responses to comments on the Draft EIR/EIS, though some revisions have been made in response to comments received on the Draft EIR/EIS. Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/DEIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Response 42 regarding treatment of public comments. Please see Master Response 30 regarding the hydrologic modeling approach and availability and application of newer versions of the models.

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2623	6	NSWA's [North State Water Alliance] hydrologic experts, MBK Engineers, provided evidence and analysis that demonstrated that the BDCP hydrologic model, which was the foundation of the DEIR/DEIS impact analysis, was seriously flawed and had inaccurate and incomplete data and coding problems, reliance on an outdated version of CALSIM, and substantially underestimating Delta exports and overestimating Delta outflow, which resulted in a misleading and incomplete impact analysis.	Responses to Comments on the Draft EIR/EIS that were submitted by North State Water Alliance are presented in this Final EIR/EIS. Those responses address the issues that North State Water Alliance identified based upon their report prepared by MBK Engineers. Based upon those responses, the CALSIM II model was not modified; however, several appendices have been added to the Final EIR/EIS to present additional information that indicates that the modifications suggested by MBK Engineers would not result in a difference in the comparison of action alternatives to the Existing Conditions or No Action Alternative in this EIR/EIS. Please see Master Response 30 regarding the hydrologic modeling approach and availability and application of newer versions of the models.
2623	7	NSWA [North State Water Alliance] commented that the failure to include a defined operational plan for the proposed new North Delta Diversion made it impossible to understand the proposed project or its effects on flows, water quality and water supply.	Section 3.6.4.2 in the FEIR/EIS includes information on north and south Delta operational criteria for all BDCP/CWF alternatives. Table 3-34, specifically, describes operating criteria (included in the modeling) at the north Delta diversions. The Chapter 5 appendices include detailed information on specific assumptions included in the EIR/EIS hydrological modeling. Impacts to flow, water quality, and water supply can be found in Chapters 6, 8, and 5, respectively. Please see Master Response 30 regarding the hydrologic modeling approach and availability and application of newer versions of the models. With regards to water quality, please see Master Response 14. With regards to water supply, please see Master Response 35. With regards to operational criteria, please see Master Response 28.
2623	8	<p>The RDEIR/SDEIS is poorly organized, requiring a reviewer to toggle back and forth among at least three different extremely lengthy portions of the combined environmental document (the RDEIR/SDEIS, Appendix A, and various charts and figures) in order to review it. This failure to provide a cohesive analysis so impedes public review and comment of the RDEIR/SDEIS that it violates CEQA and NEPA informational and readability requirements. When information is scattered throughout the document in a haphazard way, as here, the true impacts of the project are obscured, and it is impossible for the Lead Agency (here, DWR) to fulfill the requirement for a good faith analysis. "Information scattered here and there in EIR appendices, or a report buried in an appendix, is not a substitute for a good faith reasoned analysis." (California Oak Foundation v. City of Santa Clarita (2005) 133 Cal.App.4th 1219, 1239; see also Santa Clarita Organization for Planning the Environment v. County of Los Angeles (2003) 106 Cal.App.4th 715, 723-24 (report on SWP water availability, which was "buried in an appendix" to the EIR, could not overcome challenge that EIR failed to properly analyze impact of SWP water availability on project).) Likewise, NEPA requires that an EIS be "organized and written so as to be readily understandable by governmental decision makers and by interested non-professional laypersons likely to be affected by actions taken under the EIS." (Oregon Env'tl. Council v. Kuzman (9th Cir. 1987) 817 F.2d 484, 494.) While technical material included in an appendix may be exempted from the "readability requirement," an agency may not avoid its obligation to provide a clear assessment of a project's environmental impacts simply by placing complicated information or analyses in an appendix. (Id. at p. 494.)</p> <p>Although the original BDCP DEIR/DEIS contained significant flaws (including many still unaddressed in the RDEIR/SDEIS), the RDEIR/SDEIS suffers an even more fundamental problem: it is poorly organized, difficult to navigate, and relies almost entirely on lengthy appendices and internal cross-references to support its analysis. This violates CEQA's requirement that data "be presented in a manner calculated to adequately inform the public and decision makers, who may not be previously familiar with the details of the project." (Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412, 442.)</p> <p>A representative example of the problems with the RDEIR/SDEIS's analysis is the</p>	Please see Master Response 38 which addresses the length and complexity of the DEIR/EIS and RDEIR/SEIS. The Draft EIR/EIS, the RDEIR/SDEIS, and the Final EIR/EIS attempt to balance readability, the need for accurate and thorough technical analyses of the numerous complex issues involved for each resource potentially affected by the project, and responses to public and agency requests for information.

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		<p>following discussion related to water quality impacts: The RDEIR/SDEIS states, at Appendix B, p. 83, that modeling results "indicate that the incremental changes for Alt 4A (H3) and Alt 4A (H4) when compared to the No Action Alternative are trending similar to A4 (H3) and A4 (H4), at both the ELT [Early Long Term timeframe] and LLT [Late Long Term timeframe]." This discussion reflects the RDEIR/SDEIS's Band-Aid approach to impact analysis and resulting failure to appropriately model the effects of the actual Project now being proposed, relying instead on inferences gleaned from a sensitivity analysis. The number of dizzying cross references to various operating scenarios and baselines, combined with the wholly unclear phrase "trending similar," is a prime example of the RDEIR/SDEIS's failure to present information in a manner calculated to adequately inform the public and decision makers. The RDEIR/SDEIS's failure to present information in a manner that actually informs the public requires DWR to withdraw the document and start over with an entirely new and self-contained draft EIR that can be understood by decision makers and members of the public.</p>	
2623	9	<p>NSWA [North State Water Alliance] and others, including the Delta Independent Science Board (ISB), commented previously on the numerous errors and omissions in the BDCP and DEIR/DEIS's modeling of Bay Delta hydrology. The RDEIR/SDEIS fails to correct these problems. NSWA also commented on the DEIR/DEIS's failure to adequately analyze impacts to endangered and threatened Sacramento River fish from the North Delta Diversion. Expert reports evaluating the RDEIR/SDEIS demonstrate that the same questions and concerns about the impacts of the previously preferred project apply to the new alternatives, including Alternative 4A.</p> <p>CEQA requires that an EIR analysis and impact determinations be based on substantial evidence. CEQA "[c]ase law defines "substantial evidence" supporting an agency's decision as "relevant evidence that a reasonable mind might accept as adequate support for a conclusion" [citation] or "evidence of "ponderable legal significance . . . reasonable in nature, credible, and of solid value" ' " [citation]." (Banker's Hill, Hillcrest, Park West Community Preservation Group v. City of San Diego (2006) 139 Cal.App.4th 249, 261, fn. 10.) For the reasons discussed in this letter, the technical analyses supporting the RDEIR/SDEIS do not meet this standard; their flaws are so substantial that they invalidate the RDEIR/SDEIS analyses and impact determinations based on these technical analyses.</p>	<p>Please see Master Response 30 regarding the hydrologic modeling approach.</p> <p>The Lead Agencies strived to use the best available science throughout the effects analysis. The use of specific scientific data and findings was often vetted with fisheries managers to ensure it was the best available. A variety of data were obtained for the proposed project 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 topics relevant to the proposed project; unpublished quantitative data from within the Plan Area and from outside of the Plan Area; qualitative data or personal communication with topical experts; and expert opinion if no other sources were available.</p> <p>A full description of the methodology of the Net Effects analysis, including justification for the qualitative approach, can be found in Chapter 5, Section 5.2.7.10, Approach for Determining Net Effects on Covered Fish Species, and Section 5.5, Effects on Covered Fish. As indicated in Section 5.2.7.10, "The [BDCP net effects] conclusions represent qualitative judgments of the effects of the BDCP that are grounded in the detailed quantitative and qualitative analyses in the appendices... BDCP net effects conclusions are necessarily qualitative and synthesize results from the more detailed (and often quantitative) analyses found in the appendices to this chapter. While qualitative, the net effects conclusions are derived from a transparent and structured approach. This approach is based on conceptual models that describe the logic and assumptions embedded within the effects analysis."</p> <p>Additionally, the official public review process for the proposed project provides an opportunity for formal public comment on the proposed project and project alternatives. Public and agency comments on the public draft have led to further refinement of the proposed project, as evidenced in the RDEIR/SDEIS and Final EIR/EIS.</p> <p>To the extent that the DEIR/EIS and the RDEIR/SDEIS in places include qualifying language indicating a lack of absolute certainty with respect to particular conclusions, such qualifications reflect the intellectual honesty of the authors who have done their best to reach supportable conclusions but who felt compelled to acknowledge the limitations on the tools and evidence available to them as they conducted their analysis. Contrary to the commenter's suggestion, such candor does not violate the law. Under CEQA "[a]bsolute perfection is not required"; courts look "for adequacy, completeness, and a good faith effort at full disclosure." (Sequoyah Hills Homeowners Assn. v. City of Oakland (1993) 23 Cal.App.4th 704, 712; State CEQA Guidelines, § 15151.)</p>
2623	10	<p>The NSWA [North State Water Alliance] retained MBK Engineers, one of the most respected engineering firms in California and one with extensive experience in analyzing</p>	<p>Responses to Comments on the Draft EIR/EIS that were submitted by North State Water Alliance are presented in this Final EIR/EIS. Those responses address the issues that North State Water Alliance identified</p>

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		<p>the operations of the Central Valley Project (CVP) and the State Water Project (SWP), to evaluate the hydrologic modeling that serves as the foundation for the environmental analysis in the RDEIR/SDEIS. MBK also reviewed and prepared technical comments on the prior BDCP project and DEIR/DEIS. As described in the technical memorandum included as Exhibit B [ATT2] to these comments, MBK found that the modeling used for the RDEIR/SDEIS is fundamentally flawed, in two major ways. (Ex. B, MBK Engineers, Technical Comments on the Bay Delta Conservation Plan/California Water Fix Partially Recirculated Draft EIR/Supplemental Draft EIS, October 28, 2015 (Supplemental MBK Report).)</p> <p>First, the modeling that was done does not accurately reflect the project now being proposed. Instead, the modeling that was used is the same modeling that was used for the BDCP DEIR/DEIS that was released for public review in December 2013. That modeling suffered from a number of flaws, none of which has been corrected. Further, the Cal WaterFix Project is substantially different from the previous Bay-Delta Conservation Plan project, so even if the BDCP modeling had been performed correctly, that modeling would not apply to the current project. For example, the BDCP anticipated that there would be 25,000 acres of tidal marsh created by 2025, which would substantially ameliorate salinity in the Delta. The Cal WaterFix Project, which relies on the BDCP modeling, only includes 59 acres of tidal marsh.</p> <p>Second, the Cal WaterFix Project does not include any type of definite proposed project operations. The RDEIR/SDEIS does not specify how much water would be diverted at the North Delta Diversion, under which conditions, during which seasons, etc. Nor does the Project specify where the large quantities of water needed for spring outflow would be obtained, or even how much water would be acquired in specific years. All such detail is dismissed under the rubric of "adaptive management" without providing any guidance on how the adaptive management is to proceed, who will participate in that management, or even a description of the goals of adaptive management. These omissions make it impossible to draw any conclusions about what the effects of the Project might be on the environment or on legal users of water in the Sacramento Valley, the northern Delta or elsewhere.</p>	<p>based upon their report prepared by MBK Engineers. Based upon those responses, the CALSIM II model was not modified; however, several appendices have been added to the Final EIR/EIS to present additional information that indicates that the modifications suggested by MBK Engineers would not result in a difference in the comparison of action alternatives to the Existing Conditions or No Action Alternative in this EIR/EIS.</p> <p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p> <p>The operational assumptions are presented in Chapter 3 of the Final EIR/EIS, including objectives for adaptive management. The text in the Final EIR/EIS has resulted in several changes in the text in the RDEIR/SDEIS, including the text referred to in this comment related to acquisition of water for spring outflow in Alternative 4A. This text has been modified in the Final EIR/EIS to not include acquisition of water related to spring outflow criteria. The model results presented in the Final EIR/EIS do not include water acquisition methods.</p> <p>Please see Master Response 30 regarding the hydrologic modeling approach and availability and application of newer versions of the models. Master Response 28 provides an overview of the operational criteria for Alternative 4A and a comparative discussion of operations modeling to actual operations.</p>
2623	11	<p>Fisheries biologist Dave Vogel, who previously reviewed the BDCP and accompanying DEIR/DEIS, continues to conclude that the Project's potential adverse impacts to anadromous salmonids could be catastrophic. (Ex. C [ATT3], Vogel, D., Comments on the Bay-Delta Conservation Plan/California WaterFix Public Review Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) (October 20, 2015).) Mr. Vogel's detailed review of the RDEIR/SDEIS primarily focused on the potential effects of the Project Alternative 4A on Sacramento River basin anadromous salmonids. Mr. Vogel concludes that the RDEIR/SDEIS contains a deeply flawed analysis of the potential effects and impacts of Alternative 4A on anadromous fisheries including, but not limited to, the following key deficiencies:</p> <p>--Many major specific design features and critical operational criteria for Alternative 4A have not been determined. That information is critically necessary to adequately analyze environment impacts of the Project. The RDEIR/SEIS is severely deficient in this regard.</p> <p>--The confusing organization and poor readability of the RDEIR/SDEIS make it exceedingly difficult to review the document and provide constructive comments. Mr.</p>	<p>The following response has been partitioned into eleven sub-responses.</p> <p>Design Features: Several design features have yet to be finalized and will continue to be optimized to minimize adverse effects on covered species. The process of design has been and will continue to be subject to extensive collaborative discussions with the fish agencies. A variety of preconstruction studies are proposed to aid in refinement of the fish screen design, based on the studies recommended by the Fish Facilities Technical Team in 2011. Master response 28 provides an overview of the operational criteria for Alternative 4A and a comparative discussion of operations modeling to actual operations.</p> <p>Organization of RDEIR/SEIS: The organizational structure of the document is a function of the large number of layers of analysis and complexity of the project, with multiple species, life stages, locations, impacts, and impacts. The project proponents have decided that this is the best organization possible in light of these complexities.</p> <p>Benefits: The authors used the best available scientific information regarding benefits and adverse effects. The use of specific scientific data and findings was often vetted with fisheries managers to ensure it was the best available. A variety of data were obtained for the proposed project 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 topics relevant to the proposed project; unpublished quantitative</p>

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		<p>Vogel notes that the Delta ISB also found this RDEIR/SDEIS deficiency to be highly problematic.</p> <p>--The RDEIR/SDEIS continues to overstate potential benefits to fish, and no credible supporting evidence is provided.</p> <p>--The RDEIR/SDEIS: (1) has not corrected serious deficiencies and errors in the fish models used to evaluate Project alternatives, (2) continues to propagate flawed assumptions and oversimplification of juvenile salmonid behavior and adverse impacts caused by the three north Delta intakes, (3) lacks the necessary technical information on fish screen design and operational criteria, (4) has not addressed the anticipated high salmon mortality at the north Delta intakes and in areas downstream from the intakes, and (5) overstates purported benefits of proposed predator control and nonphysical fish barriers without supporting details and scientific justification.</p> <p>--Misuse or lack of use of the best available science.</p> <p>--Improper reliance on "adaptive management" without describing how future problems may be resolved through such management.</p> <p>--The best available scientific information indicates that Alternative 4A would contribute considerably to significant cumulative adverse impacts to salmon.</p> <p>These fundamental errors identified by Mr. Vogel must be corrected before the RDEIR/SDEIS can be used to accurately characterize the Project's effects on anadromous salmonids.</p>	<p>data from within the Plan Area and from outside of the Plan Area; qualitative data or personal communication with topical experts; and expert opinion if no other sources were available.</p> <p>A full description of the methodology of the Net Effects analysis, including justification for the qualitative approach, can be found in Chapter 5, Section 5.2.7.10, Approach for Determining Net Effects on Covered Fish Species, and Section 5.5, Effects on Covered Fish. As indicated in Section 5.2.7.10, "The [BDCP net effects] conclusions represent qualitative judgments of the effects of the BDCP that are grounded in the detailed quantitative and qualitative analyses in the appendices... BDCP net effects conclusions are necessarily qualitative and synthesize results from the more detailed (and often quantitative) analyses found in the appendices to this chapter. While qualitative, the net effects conclusions are derived from a transparent and structured approach. This approach is based on conceptual models that describe the logic and assumptions embedded within the effects analysis."</p> <p>Fish Models: The models used have been developed by fisheries biologists and hydrologic and hydrodynamic engineers and were deemed to be the best available tools at the time of analysis. Please see Master Response 30 regarding the hydrologic modeling approach and availability and application of newer versions of the models.</p> <p>Assumptions Regarding North Delta Intakes: Both near-field (entrainment/impingement/predation) and far-field effects (flow-survival relationships) were included in the analyses, based on the best available information.</p> <p>Fish Screen Design: Design of fish screens is in progress and will be the subject of adaptive management during implementation. Screens are being designed modularly to allow for maximum flexibility in modification as necessary. There will be several pre- and post-construction surveys to aid in minimizing effects during construction and operation of screens.</p> <p>Salmon Mortality at the North Delta Diversions: An analysis assessing the potential mortality of salmon at the north Delta intakes was provided in Chapter 11, Fish and Aquatic Species. Please see this chapter for details of the assessment and findings.</p> <p>Benefits of Predator Control: The analysis for Impact AQUA-49 Effects of Localized Reduction of Predatory Fish on Chinook Salmon 22 (Winter-Run ESU) (Environmental Commitment 15), for example, concluded that because of the uncertainty in this measure, there would be no demonstrable effect. This is not an overstatement of benefits, but an acknowledgement of the uncertainty in localized reduction of predatory fishes.</p> <p>Benefits of Nonphysical Barriers: The analysis relied on the latest available information, which suggests these barriers would be effective at Georgiana Slough, for example. Please see Chapter 11, Fish and Aquatic Species, in particular with respect to Alternative 4A, for available information. Research on this topic is ongoing and will be used to inform design and implementation of the barriers.</p> <p>Use of Best Available Science: The authors believe that they used the best available science at the time of analysis.</p> <p>Best Available Science: The authors believe that they used the best available science at the time of analysis.</p>
2623	12	Robert Latour, a Professor of Marine Science at the Virginia Institute of Marine Science, of the College of William & Mary, previously prepared comments on the BDCP and the	As explained in the Executive Summary of the RDEIR/SDEIS, all of the comments received during the Draft EIR/EIS 2013–2014 public review period were considered in the development of the RDEIR/SDEIS. The

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		<p>DEIR/DEIS, which were included with the July 29, 2014 NSWa's [North State Water Alliance] comments on the BDCP and the DEIR/DEIS. Professor Latour has reviewed the pertinent sections of the RDEIR/SDEIS and prepared comments concerning the potential impacts of the new proposed Project on delta smelt and longfin smelt. A copy of these comments is enclosed with this letter. (Ex. D [ATT4], Latour, R. PhD., Technical review of portions of the revised draft Environmental Impact Report and supplemental draft Environmental Impact Statement (RDEIR/SDEIS) for the Bay-Delta Conservation Plan (BDCP), October 28, 2015.)</p> <p>As discussed in Professor Latour's new comments, the RDEIR/SDEIS does not address his prior comments, and the deficiencies in the BDCP and the Draft EIR that were described in his prior comments now apply to the proposed Cal WaterFix Project. Professor Latour's new comments also describe several deficiencies in the RDEIR/SDEIS's analyses of the impacts of this proposed project on delta smelt and longfin smelt.</p>	<p>RDEIR/SDEIS does not include responses to comments on the Draft EIR/EIS, though some revisions have been made in response to comments received on the Draft EIR/EIS. Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Response 42 regarding treatment of public comments.</p>
2623	13	<p>The CEQA Guidelines provide that when experts disagree about an EIR's data or methodology, the EIR should summarize the main points of disagreement. (CEQA Guidelines, §15151.) When the EIR's discussion and analysis is not modified to incorporate the suggestions made in comments on the draft document, the EIR must acknowledge the conflict in opinions and explain why they have been rejected, supporting its statements with relevant data. (Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Commissioners (2001) 91 Cal.App.4th 1344, 1367, 1371.) An EIR that fails to explain major discrepancies in critical data or fails to resolve the conflict with substantial evidence is legally inadequate. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260.)</p> <p>Here, qualified experts (including the Delta ISB, MBK Engineers, Dave Vogel and Robert Latour) provided detailed comments constituting substantial evidence that show why and how the DEIR/DEIS's hydrologic modeling and fisheries analyses were flawed and inadequate to support the DEIR/DEIS's analyses and impact determinations, and thus to support adequate public participation and agency decision making. These expert comments raised issues of such significance regarding the foundational assumptions, data and methodology used in the DEIR/DEIS as to merit discussion in a revised and recirculated Draft EIR/EIS. The RDEIR/SDEIS does not address these expert criticisms of the DEIR/DEIS.</p> <p>By deferring any discussion of these issues to the Final EIR/EIS, the lead agencies have effectively precluded informed public participation on some of the most important aspects of the environmental review documents. Given the magnitude of the criticisms levied at the DEIR/DEIS data and methodologies, and the fact that the same errors appear to have been repeated in the RDEIR/SDEIS (see Exhibit B [ATT2]), it would be an abuse of discretion for the lead agencies to fail to directly address the key expert criticisms in the RDEIR/SDEIS so the public and decision makers could understand and weigh the agencies' views and supporting evidence in their evaluation of the RDEIR/SDEIS.</p>	<p>Responses to comments on the Draft EIR/EIS that were submitted by North State Water Alliance are presented in this Final EIR/EIS. Those responses address the issues that North State Water Alliance identified based upon their report prepared by MBK Engineers. Based upon those responses, the CALSIM II model was not modified; however, several appendices have been added to the Final EIR/EIS to present additional information that indicates that the modifications suggested by MBK Engineers would not result in a difference in the comparison of action alternatives to the Existing Conditions or No Action Alternative in this EIR/EIS. Please see Master Response 30.</p> <p>Please see response to comment 10.</p>
2623	14	<p>A finite project description is the "sine qua non of an informative and legally sufficient EIR." (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 193.) In contrast, a "curtailed, enigmatic or unstable project description draws a red herring across the path of public input." (County of Inyo, 71 Cal.App.3d at 197-98.) The RDEIR/SDEIS's project description lacks the information necessary for members of the public or the agency to</p>	<p>The lead agencies believe the description of CM-1, has been described with enough detail to support a project-level assessment of the construction and operation of CM-1 under each alternative, including Alternative 4A. Master Response 2 provides additional discussion of program-level and project-level environmental impact assessments and why the assessment of Alternative 4A was conducted at the project-level. Please also see Final EIR/EIS, Appendix 3A, Identification of Water Conveyance Alternatives,</p>

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		<p>evaluate Project impacts. This deficiency is significant, as "only through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives." (City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438, 1454.)</p>	<p>Conservation Measure 1.</p> <p>Although the commenter has accurately quoted from case law the general principle that a legally adequate Project Description is key to an adequate EIR, the Lead Agencies do not agree that the Project Description in the EIR/EIS is legally inadequate. Although the commenter's specific contentions of inadequacy are addressed in separate responses, it is worth noting that "[t]he description of the project ... should not supply extensive detail beyond that needed for evaluation and review of the environmental impact[.]" (State CEQA Guidelines, § 15124.) "A general description of a project element can be provided earlier in the process than a detailed engineering plan and is more amenable to modification to reflect environmental concerns." (Dry Creek Citizens Coalition v. County of Tulare (1999) 70 Cal.App.4th 20, 28.) "The 'general description' requirement for the technical attributes of a project is consistent with the other CEQA mandates to make the EIR a user-friendly document." (Ibid.) "The EIR must achieve a balance between technical accuracy and public understanding." (Ibid.)</p> <p>The only mandatory components of a Project Description in an EIR are the following:</p> <p>(a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.</p> <p>b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.</p> <p>(c) A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.</p> <p>(d) A statement briefly describing the intended uses of the EIR.</p> <p>(1) This statement shall include, to the extent that the information is known to the Lead Agency,</p> <p>(A) A list of the agencies that are expected to use the EIR in their decision making, and</p> <p>(B) A list of permits and other approvals required to implement the project.</p> <p>(C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.</p>
2623	15	<p>One of the most significant problems with the RDEIR/SDEIS is its failure to define proposed Project operations, especially the amounts of spring outflow and the quantity and timing of water diverted at the North Delta Diversion, as well as how the CVP and SWP would be operated if the Project were to be approved. Each of these operational aspects is critical to understanding the Project's environmental effects.</p> <p>One of the key elements of Alternative 4A is additional spring outflow in order to meet the needs of threatened and endangered fish species. However, the RDEIR/SDEIS does not describe the quantity, the timing or the source of water for this additional outflow. MBK Engineers aptly characterized the problem with regard to the RDEIR/SDEIS's information about spring outflow:</p> <p>"This description [on page 4.1-13 of the RDEIR/SDEIS] implies that the spring outflow will be bounded between zero when meeting existing outflow requirements contained in</p>	<p>The incremental changes in Delta outflow under Alternative 4A compared to baseline conditions are a function of both the facility and operations assumptions, including north Delta intakes capacity of 9,000 cfs, OMR flow requirements, Fall X2 requirements, and the reduction in water supply availability due to increased north of Delta urban demands, sea level rise, and climate change (the last three assumptions, plus Fall X2 requirements, are included in both the No Action Alternative (ELT) and Alternative 4A, but not in Existing Conditions). Results for the range of changes in Delta outflow under Alternative 4A are presented in more detail in Appendix 5A, BDCP/California WaterFix EIR/S Modeling Technical Appendix. Changes in long-term average Delta outflow under Alternative 4A (ELT) as compared to the No Action Alternative (ELT) and Existing Conditions are shown in Figures 5-37 through 5-39 and Tables 5-10 through 5-12 in Chapter 5.</p> <p>Changes in Delta outflow under Alternative 4A, late-fall and winter outflows remain similar or show minor reductions in Alternative 4A (ELT) compared to No Action Alternative (ELT) and are slightly higher relative to</p>

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		<p>D-1641, and between 9,200 and 44,500 cubic feet per second (cfs) as defined in Table 3-24 of the BDCP Draft EIR/EIS. While the existing outflow requirements in D-1641 are well defined and understood in terms of source, quantity, and timing, the upper bound on this additional required spring outflow is not." (Supplemental MBK Report at pp. 2-3.)</p> <p>It is impossible to understand the Project's operations because spring outflows (one of the most important parameters of Project operations) could vary between zero and 44,500 cfs. The RDEIR/SDEIS states only,</p> <p>"the proposed project includes spring outflow criteria, which are intended to be provided through acquisition of water from willing sellers. If sufficient water cannot be acquired for this purpose, the spring outflow criteria will be accomplished through operations of the SWP and CVP to the extent an obligation is imposed on either the SWP or CVP under federal or applicable state law." (RDEIR/SDEIS, Section 4.1.2.2, p. 4.1-6.)</p> <p>Essentially, this statement says DWR will -- from some source or sources yet to be determined -- acquire a quantity of water to be determined, which will be used in some manner to be determined, with effects that will surely be beneficial to the environment. This does not represent the good faith analysis required by CEQA. In particular, because both the CVP and the SWP have contractors - including many members of the NSWA [North State Water Alliance] -- who would not benefit from the implementation of Cal WaterFix, it is impossible to tell how the increase spring outflow criteria would affect those contractors when all the RDEIR/SDEIS says is that those criteria would be met "through operations of the SWP and CVP." This omission precludes NSWA members from having any reliable understanding of what California WaterFix's water-supply impacts would be.</p>	<p>Existing Conditions. In the spring months, outflow would remain similar under Alternative 4A (ELT) as compared to No Action Alternative (ELT), and would be slightly reduced compared to Existing Conditions. In the fall months, outflow under Alternative 4A would increase relative to Existing Conditions, and as compared to the No Action Alternative (ELT), would be similar because of Fall X2 requirements in wet and above-normal years.</p> <p>Please see Master Response 30. Master Response 28 provides additional information regarding the operational criteria for Alternative 4A. Master Response 32 provides a discussion of upstream water rights. Nothing in the proposed project would alter current regulatory requirements that protect the beneficial use of water, including upstream water rights.</p>
2623	16	<p>One of the key changes from the current conditions is the proposed construction of the North Delta Diversion near Hood and the use of that diversion to avoid adverse impacts to fisheries in the Delta. The addition of a second point of diversion means that the CVP and SWP operators must determine when water will be diverted from which point of diversion and in what quantities. The RDEIR/SDEIS, however, states only that the proposed Project operations "include a preference for south Delta pumping in July through September to provide limited flushing for improving general water quality conditions and reduced residence times." (RDEIR/SDEIS p. 4.1-6.) As with the discussion of spring outflow criteria, this general statement begs the questions needed for a good faith environmental analysis: to what extent will the preference be exercised, how much of a preference is there, in which year types, how much flushing and measured at what points in the Delta, for which water quality objectives and what degree of reduction in residence times. Without answers to these (and other) questions, there is insufficient information about the Project to allow for the environmental analysis required by CEQA and NEPA.</p>	<p>The action alternatives, as presented in the DEIR/DEIS and the RDEIR/SDEIS, assume use of a portion of Sacramento River inflow to maintain south Delta water quality in summer months, as described in this comment. In the Final EIR/EIS, the CALSIM II model code was modified to simulate the proposed project, Alternative 4A, to explicitly provide a preference for use of the south Delta intakes for up to 3,000 cfs during July through September to minimize potential water quality degradation in the south Delta channels. No specific intake preference is assumed beyond 3,000 cfs. Operations will be determined so as to meet the regulatory requirements imposed upon the proposed project.</p>
2623	17	<p>The RDEIR/SDEIS properly recognizes that the Delta environment is likely to change over time and so proposes an adaptive management program to address those changes. However, as MBK Engineers described, "[p]roviding no description of the likely range of changes in the other criteria that may occur under the Adaptive Management Process is another area wherein the project description lacks sufficient detail for analysis of potential environmental effects." (Supplemental MBK Report [ATT2] at p. 4.)</p> <p>Key omissions in the RDEIR/SDEIS regarding the Project's adaptive management</p>	<p>The collaborative science effort is expected to inform operational decisions within the ranges established by the biological opinion and 2081b permit for the proposed project. However, if new science suggests that operational changes may be appropriate that fall outside of the operational ranges evaluated in the biological opinion and authorized by the 2081b permit, the appropriate agencies will determine, within their respective authorities, whether those changes should be implemented. An analysis of the biological effects of any such changes will be conducted to determine if those effects fall within the range of effects analyzed and authorized under the biological opinion and 2081b permit. If NMFS, USFWS, or CDFW determine that impacts to listed species are greater than those analyzed and authorized under the biological opinion and</p>

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		<p>program are: (i) the lack of any description of how the iterative planning process will occur, and (ii) the key criteria for changing Project operations: how often Project operations will be modified (e.g., hourly, daily, weekly, monthly, annually, or on an "as needed" basis); whether the criteria for modifying Project operations will include water quality at diversions located in the Delta or be limited to the needs of fish species; and many other important questions. Despite the lack of information about these critical aspects of Project operations, the RDEIR/SDEIS states that it is assumed that the adaptive management process "would not, by itself, create or contribute to any new significant effects." (RDEIR/SDEIS, p. 4.1-18.) CEQA requires that an EIR be based on substantial evidence. Substantial evidence is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion . . ." (CEQA Guidelines, § 15384(a).) Substantial evidence must include "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." (CEQA Guidelines, §, 15384(b.) The lack of facts about the adaptive management process results in a lack of substantial evidence to support the RDEIR/SDEIS's determination that the Project's adaptive management program would not create or contribute to any significant effects.</p> <p>The lack of information about the adaptive management program also means that the public cannot determine who will be involved in the adaptive management program (e.g., could any water user in California be involved, could the Delta Counties be involved, or will the key stakeholders be limited to hearing about the results of a closed-door meeting between the Lead Agencies?). These all are fundamental questions about how adaptive management will function and its ability to address adverse environmental effects if and when they occur. Due to the omission of this information, the REIR/SDEIS fails in its fundamental purpose to "demonstrate to an apprehensive citizenry that the agency has . . . analyzed and considered the ecological implications of its action." (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68, 86.)</p>	<p>2081b permit, consultation may need to be reinitiated and/or the permittees may need to seek a 2081b permit amendment. Likewise, if an analysis shows that impacts to water supply (and/or water quality) are greater than those analyzed in the EIR/EIS, it may be necessary to complete additional environmental review to comply with CEQA or NEPA.</p> <p>As it relates to real-time operations (RTO), the proposed project includes specific NDD operating criteria to minimize and avoid impacts to listed fish species moving through the Delta and past the north Delta intakes. RTO will be a key component of NDD operations, and will likely govern operations for the majority of the winter and spring periods. Adjustments in operations at the NDD will consider risk to fish species near the intakes, hydrological conditions, water supply, and other Delta conditions. Biological monitoring both upstream and downstream of the NDD will help inform and improve operations to further minimize effects to migrating fish species. For more information on real-time operations and NDD operating criteria, please see Chapter 3.</p> <p>The lead agencies disagree that the CSAMP is primarily a tool to maximize water export deliveries and water quality. The CSAMP will have an extensive biological component focused on avoiding potential project impacts and maximizing benefits to listed species (e.g. reducing entrainment effects, improved interior Delta flow conditions and routing of fish species, successful habitat restoration, improving overall Delta habitat conditions...etc.). The CSAMP will support the proposed project by helping to address scientific uncertainty where it exists, and as it relates to the benefits and impacts of the construction and operations of the new water conveyance facility and existing CVP and SWP facilities. The collaborative science effort (which will also coordinate/collaborate with existing science programs such as the Interagency Ecological Program) will build on the progress being made by the existing CSAMP that was established to make recommendations on the science needed to inform implementation of or potential changes to the existing BiOps for the SWP and CVP operations, and proposed alternative management actions. The CSAMP process and its Collaborative Adaptive Management Team (CAMT) rely on the Delta Science Program to provide independent peer review of both science proposals and products. New information gained under the CSAMP can be applied to management decisions and actions in the future. See Chapter 3 for more information on the CSAMP structure and decision making process.</p> <p>As described in Chapter 2 of the FEIR/EIS, the proposed project is being developed to improve the ecosystem of the Delta by reducing the adverse effects to certain listed species, and improving water supply reliability of the CVP and SWP. Construction and operations of the proposed project will be consistent with applicable environmental standards and regulations, including the USFWS 2008 and NMFS 20098 Biological Opinions, and D1641 standards to protect Bay-Delta water quality.</p> <p>Please refer to Master Response 33 and Chapter 3 in the FEIR/EIS for a description of the Collaborative Science and Adaptive Management Program (CSAMP) that will be implemented under the proposed project, Alternative 4A. Please also refer to Master Response 30.</p>
2623	18	<p>To the extent that the RDEIR/SDEIS attempts to define a project for analysis, it does not analyze the project being proposed for adoption. An EIR that describes one project but analyzes another does not meet CEQA's basic objectives of promoting informed decision-making. (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d at 197 (EIR's "incessant shifts among different project descriptions.vitiate the city's EIR process as a vehicle for intelligent public participation."); accord, Western Placer Citizens for an Agriculture & Rural Environment v. County of Placer (2006) 144 Cal.App.4th 890, 898 (the project analyzed must be consistent with the project description, "[t]he defined project and not some different project must be the EIR's bona fide subject.")</p> <p>There are several areas where the mismatch between the project as analyzed and the project proposed is so substantial as to call into question the entire impact analysis.</p>	<p>The lead agencies respectfully disagree with the commenter's statement that the RDEIR/SDEIS is inadequate. The lead agencies believe that the BDCP and EIR/EIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>The incremental changes in Delta outflow under Alternative 4A compared to baseline conditions are a function of both the facility and operations assumptions, including north Delta intakes capacity of 9,000 cfs,</p>

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		Three changes between the project described in the DEIR/DEIS and the new Cal WaterFix are of particular importance: (i) tidal wetlands, (ii) the salinity control point (Emmaton vs. Three Mile Slough), and (iii) the Head of Old River barrier. First, the modeling runs used for the RDEIR/SDEIS (which are the same model runs as were used for the BDCP DEIR/DEIS) assumed that there would be at least 25,000 acres of tidal marsh by 2025 and 65,000 acres of tidal marsh by 2060. By contrast, the actual project currently being proposed only includes 59 acres of tidal marsh. This difference is quite important; tidal marsh habitat has a beneficial effect on salinity in the Delta. Thus, MBK concluded that it would be "inappropriate to assume that ALT 4A in the RDEIR/SDEIS would have the same effects on Delta water quality, tidal energy, and CVP/SWP operations as a project that includes nearly 25,000 acres more tidal wetlands restoration." (Supplemental MBK Report [ATT2] at p. 5.)	OMR flow requirements, Fall X2 requirements, and the reduction in water supply availability due to increased north of Delta urban demands, sea level rise, and climate change (the last three assumptions, plus Fall X2 requirements, are included in both the No Action Alternative (ELT) and Alternative 4A, but not in Existing Conditions). Results for the range of changes in Delta outflow under Alternative 4A are presented in more detail in Appendix 5A, BDCP/California WaterFix EIR/S Modeling Technical Appendix. Changes in long-term average Delta outflow under Alternative 4A (ELT) as compared to the No Action Alternative (ELT) and Existing Conditions are shown in Figures 5-37 through 5-39 and Tables 5-10 through 5-12 in Chapter 5. In addition, Chapter 8, Water Quality, has been updated to reflect the most recent CALSIM modeling conducted for Alternative 4A. Master Response 14 provides a discussion of how water quality modeling was conducted for Alternatives 4A, including treatment of tidal restoration and Yolo Bypass enhancements. Please also refer to Master Response 30.
2623	19	The modeling runs used by the RDEIR/SDEIS, which were prepared for the BDCP DEIR/DEIS, calculate compliance with salinity water quality objectives mandated by D-1641 at Three Mile Slough. By contrast, the revised Project and RDEIR/SDEIS now contemplates compliance with the same salinity requirement at Emmaton, which is located substantially downstream from Three Mile Slough. Compliance at Three Mile Slough requires less outflow than compliance with the same salinity requirement at Emmaton. Given that RDEIR/SDEIS analysis assumed compliance would occur at Three Mile Slough but the revised Project now contemplates compliance with the salinity standards at Emmaton, all of the assumptions of outflow needed to meet salinity standards that underlay the DEIR/DEIS modeling are underestimated. Given the importance of those salinity standards, this change makes it difficult, if not impossible, for any party to understand the true effects of the proposed Project on salinity.	The Final EIR/EIS includes DSM2 model results related to salinity for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. Chapter 8 Water Quality has been updated to assess the water quality impacts of moving the compliance point to Emmaton. Master Response 14 provides a discussion of how water quality modeling was conducted for Alternative 4A.
2623	20	The Head of Old River barrier ("HORB") is an important facility that determines, in significant part, salinity in the central and southern Delta. As described in the Supplemental MBK Report [ATT2] at page 4, the Project assumes that the HORB would be adjusted as part of the adaptive management plan, but "[t]hese potential adjustments and environmental effects are not analyzed in the RDEIR/SDEIS."	Modeling for the proposed project, Alternative 4A, was conducted for Operational Scenario H3+, a point that generally falls between Alternative 4 Scenarios H3 and H4 operations, as the initial conveyance facilities operational scenario. As specified in Chapter 3, Description of Alternatives, Section 3.6.4, the Delta outflow criteria under Scenario H for Alternative 4A would be determined by the Endangered Species Act and California Endangered Species Act Section 2081 permits, and operations to obtain such outflow would likely be between Scenarios H3 and H4. Modeling results for Scenarios H3 and H4 using the 2010 CALSIM II model are shown in Appendix 5E, Supplemental Modeling Requested by the State Water Resources Control Board Related to Increased Delta Outflows, Attachment 1, of the EIR/EIS. In addition, following the initial operations, the adaptive management and monitoring program could be used to make long-term changes in initial operations criteria to address uncertainties about spring outflow for longfin smelt and fall outflow for delta smelt, among other species. Future conveyance facilities operational changes may also be made as a result of adaptive management to respond to advances in science and understanding of how operations affect species. Conveyance facilities would be operated under an adaptive management range represented by Boundary 1 and Boundary 2 (see Section 5E.2 of Appendix 5E for additional information on Boundary 1 and Boundary 2). Impacts as a result of operations within this range would be consistent with the impacts discussed for the alternatives considered in this EIR/EIS. As shown in Appendix 5F, water supply modeling results for H3+ are within the range of results for Scenarios H3 and H4, and are consistent with the impacts discussed in the RDEIR/SDEIS. Please refer to Master Response 30.
2623	21	The RDEIR/SDEIS used a baseline condition that does not include the Fall X2 flows currently mandated by the Biological Opinions that govern the operation of the CVP and the SWP. The effect of that choice is to make the baseline condition appear to be more	Please see Master Response 1 regarding how Fall X2 was treated under the NEPA and CEQA baseline conditions.

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		saline than it actually is, so that the potential impacts of the Project appear to be significantly smaller than they would be with an appropriate baseline. See RDEIR/SDEIS, p. 4.1-42.	
2623	22	<p>Many avian species use the Sacramento Valley's irrigated croplands and managed wetlands as winter and breeding habitat. The croplands, especially small grains, along with publically and privately managed wetlands, provide crucial habitat in the Pacific Flyway, particularly in areas such as the Central Valley where only a fraction of historic wetlands remain. The habitat values created by these lands are described in detail in the Central Valley Joint Venture 2006 Implementation Plan (www.centralvalleyjointventure.org/science). In its comments on the DEIR/DEIS, NSWA [North State Water Alliance] expressed concerns about the potential for the North Delta Diversion to adversely affect the Sacramento Valley's water supplies, and the potential for adverse effects to Sacramento Valley waterfowl and the Pacific Flyway from the reduction in diversions of water that support avian habitat values on both irrigated cropland and wetlands. This includes both direct diversions of water to support these values, as well as tailwater from other agricultural uses and managed wetlands. Mark Petrie with Ducks Unlimited describes these impacts in detail in his comments for the November 14, 2012 State Water Resources Control Board (SWRCB) workshop on the Bay-Delta Plan (http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/doccomments111312/mark_petrie.pdf.) These comments and concerns remain unaddressed in the RDEIR/SDEIS.</p>	<p>The Final EIR/EIS includes model results for Alternative 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS. These results indicate that the Proposed Project (Alternative 4A) would either not affect or slightly increase deliveries to CVP and SWP water contractors located north of the Delta as compared to the No Action Alternative. Under the alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative.</p> <p>The proposed project would not affect upstream water rights. It aims to allow the federal and state water projects to deliver more reliable water supplies, in a way less harmful to fish. The project does not increase the amount of water to which DWR holds water rights or for use as allowed under its contracts. The CALSIM II modeling performed for conveyance facility operations takes into account projected future demand for water supply in areas upstream of the Delta (as part of the future No Action baseline) prior to calculating Proposed Project diversion estimates to ensure that no area-of-origin protections or upstream water rights are affected by project conveyance facilities. Please see Appendix 5A of the FEIR/FEIS for additional modeling details. Please see Master Response 26 regarding area of origin issues.</p> <p>Master Response 32, provides additional information regarding upstream water rights.</p>
2623	23	<p>The project proponents have fundamentally altered the nature of the proposed project from the BDCP described in the DEIR/DEIS (preferred Alternative 4) to the California WaterFix Project described in the RDEIR/SDEIS (new preferred Alternative 4A). The new proposed project is a significant departure from the original Draft BDCP. The prior proposed project was a Habitat Conservation Plan under the federal Endangered Species Act. The California WaterFix significantly departs from the BDCP, eliminating the habitat conservation portion of the project, and the objective of restoration of the Delta ecosystem, and retaining just the proposed North Delta diversion and conveyance project. These changes are so significant that the Project no longer qualifies for inclusion into California's Delta Plan. (Cal. Water Code, §85320.) These fundamental changes alter both the purpose and impacts of the Project to such a significant degree that the combined DEIR/DEIS -- the BDCP DEIR/DEIS plus the Cal Water Fix RDEIS/SDEIS -- is not adequate, and the lead agencies must analyze a reasonable range of alternatives to the new Project as part of the revised analyses necessary to satisfy CEQA and NEPA.</p> <p>The new "project" involves the following major changes from the original proposal evaluated in the DEIR/DEIS:</p> <ul style="list-style-type: none"> i. Elimination of 25,000 acres of habitat restoration; ii. Change in method of diversion from pumping to gravity, including change from above-ground pumping structures; and iii. Major modifications of disclosed operating conditions, including potentially substantial increases in spring Delta outflows. 	<p>The lead agencies respectfully disagree with the commenter's statement that the RDEIR/SDEIS is inadequate. The lead agencies believe that the BDCP and EIR/EIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Fifteen alternatives and 3 additional subalternatives were analyzed in the EIR/S and the RDEIR/SDEIS respectively. Four major alignments have been included in the EIR/S: Through-Delta, East of the Sacramento River, West of the Sacramento River, and a Tunnel under the Delta. Many additional proposals by public and private individuals and organizations have also been evaluated and described in Chapter 3 of the BDCP EIR/S and Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1. Regarding development of alternatives for the EIR/EIS, a description of the process the Lead Agencies followed to develop and screen alternatives is provided in Master Response 4.</p>

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		<p>Because of these major changes, the combined DEIR/DEIS - the BDCP DEIR/DEIS plus the California Water Fix RDEIS/SDEIS - would violate the fundamental CEQA rule that a project description must be "accurate, stable and finite." (San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App. 4th 645, 655.) In essence, the RDEIR/SDEIS analyzes a different project than the BDCP DEIR/DEIS, a project that contains a much smaller amount of the restoration that was intended to offset the environmental impacts of the only project that California Water Fix now proposes. As a result, the combined DEIR/DEIS and RDEIR/SDEIS is internally inconsistent in describing the actual project and what it will do. This sort of internally inconsistent project description results in an EIR failing in its purpose of allowing interested parties to understand and weigh a project's environmental consequences, thus violating CEQA. (San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App. 4th 645, 654-657.) The combined DEIR/DEIS and RDEIR/SDEIS cannot be sufficient because it effectively analyzes two very different projects.</p>	
2623	24	<p>Not only do the major changes to the Project fundamentally alter its purpose, but they also represent wholesale changes in the assumptions underlying the DEIR/DEIS modeling and mitigation. Due to the scope of the changes, and change in essential premise from the previously proposed BDCP project, the California WaterFix -- considered in isolation -- constitutes an entirely new proposed project. The RDEIR/SDEIS evaluates only two alternatives to that project - Alternatives 2D and 5A. Of these alternatives, Alternative 5A is plainly infeasible because it proposes diversion of up to 15,000 cfs, an almost 75 percent increase over historic deliveries that could never occur under existing and reasonably foreseeable environmental regulations and that most certainly would not avoid or substantially lessen any of the significant effects of the preferred alternative 4A. (CEQA Guidelines, § 15126.6, (a), (f).) Other than the required No Action Alternative, that leaves only one alternative, Alternative 2D, which proposes diversion of up to just 3,000 cfs. The Project proponents would almost certainly deem Alternative 2A to be infeasible due to the low return on the massive investment associated with such small increase in water supply reliability. NEPA guidance explains that the range of alternatives "include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." (Council on Environmental Quality, Memorandum For Federal NEPA Liaisons, Federal, State, and Local Officials and Other Persons Involved in the NEPA Process (March 16, 1991), ¶ 2a.)</p> <p>Because the only two alternatives to the new preferred project included in the RDEIR/SDEIS would not avoid or substantially lessen any of the proposed Project's significant impacts, or are not practical or feasible from the technical and economic standpoint and using common sense, the RDEIR/SDEIS does not satisfy CEQA and NEPA requirements that an EIR/EIS analyze a reasonable range of alternatives. The RDEIR/SDEIS must be revised to evaluate realistic alternatives capable of avoiding or substantially lessening the significant impacts of the massive proposed North Delta Diversion that now constitutes the California WaterFix Project, including defined and viable reduced diversion alternatives. (See Friends of the Eel River v. Sonoma County Water Agency (2003) 108 Cal.App.4th 859 (invalidating EIR for project to increase Russian River diversions on grounds that EIR should have considered alternatives that would reduce dependence on diversions with significant environmental impacts).</p>	<p>The lead agencies believe that the alternatives included in the DEIR/EIS, RDEIR/SEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives. Master Response 4 addresses the alternatives development process and legal adequacy.</p>
2623	25	<p>The numerous flaws in the DEIR/DEIS and RDEIR/SDEIS, including the lack of essential information about the Project's effects on upstream and Delta water supplies and</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of</p>

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		impacts to threatened and endangered fish species, render the document inadequate to meet the needs of the state responsible agencies and federal agencies with permitting jurisdiction over the Project. The specific bases for this concern have been stated previously in the July 2014 comments of NSWA [North State Water Alliance] and many others, and additional evidence and analysis supporting this comment is included in Exhibits B [ATT2] through D [ATT4].	NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS Chapters 5-8 of 2013 Draft EIR/EIS provide information regarding the potential impacts of the action alternatives on water supply, surface water, groundwater and water quality. Potential impacts to endangered fish species are discussed in Chapter 11 of the 2013 Draft EIR/EIS. These same resources are evaluated for the sub-alternatives 4A, 2D and 5A in the 2015 RDEIR/SDEIS in Section 4.
2623	26	As a CEQA responsible agency, the SWRCB must rely on the Project EIR when considering the water rights changes necessary to implement the Project. The RDEIR/SDEIS cannot support the SWRCB's required findings for the Project's pending petitions to change water rights (including the finding under Water Code section 1702 that the changes "will not operate to the injury of any legal user of the water involved"), because Project effects on upstream hydrology, and the continued abilities of upstream water users to exercise their water rights, have not been adequately evaluated. For these reasons, the RDEIR/SDEIS does not support a finding that the Project-related water rights changes will not operate to the injury of any legal user of water. Similarly, because of substantial errors and omissions, the analysis of impacts to threatened and endangered fish species (detailed in Exhibits C [ATT3] and D [ATT4]) does not satisfy the legal requirement that water rights changes not adversely affect fish and wildlife. These same flaws render the RDEIR/SDEIS inadequate to support issuance of a Clean Water Act section 404 permit for the proposed diversion structures, or other required state and federal permits. The RDEIR/SDEIS thus is inadequate to support the subsequent approvals required to implement the Project.	A CEQA responsible agency can rely upon the CEQA document prepared by the CEQA lead agency or prepare their own environmental analysis prior to their decision. At this time, the Final EIR/EIS is anticipated to be completed prior to the State Water Resources Control Board decision on the Change of Point of Diversion petition or issuance of a Clean Water Act 401 certification for the section 404 permit to be issued by the U.S. Army Corps of Engineers. The Final EIR/EIS includes model results for Alternative 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS. These results indicate that the Proposed Project (Alternative 4A) would either not affect or slightly increase deliveries to CVP and SWP water contractors located north of the Delta as compared to the No Action Alternative. Under the alternatives, the same amount of water will be available to senior water rights holders as under the No Action Alternative. Master Response 32, provides additional information regarding upstream water rights and the processes in place to protect those water right holders, which can be relied upon by the State Water Resources Control Board in conjunction with the water rights hearing it is holding.
2623	27	Like the DEIR/DEIS, the RDEIR/SDEIS fails to provide sufficient meaningful information about the proposed Project's adverse effects and omits consideration of many impacts of concern to residents of the Sacramento Valley. Rather, the RDEIR/SDEIS continues to provide an overly optimistic assessment of Project effects on water supply, water quality, fish and wildlife that is not based on the best available science. The RDEIR/SDEIS relies on flawed technical studies and incomplete data and omits essential information, violating CEQA and NEPA requirements that it actually inform the public and decision makers about the California WaterFix Project's potential environmental impacts. In fact, the Delta ISB [Independent Science Board] found the RDEIR/SDEIS "sufficiently incomplete and opaque to deter its evaluation and use by decision-makers, resource managers, scientists and the broader public." (September 30, 2015 letter to R. Fiorini et al from Delta Independent Science Board Re. Review of environmental documents for BDCP/California WaterFix at p. 1, accessed at http://deltacouncil.ca.gov/docs/final-delta-isb-comments-partially-recirculated-draft-environmental-impact-reportsupplemental .) The Delta ISB cited fundamental flaws in the RDEIR/SDEIS including, but not limited to, "overall incompleteness through deferral of content to the Final EIR/EIS . . . ; specific incompleteness in treatment of adaptive management, habitat restoration, levees and long-term effects; and inadequacies in presentation." (Id. at p. 4.) As a result of these overwhelming structural, organizational and content flaws, the Delta ISB concluded that the RDEIR/SDEIS "fails to adequately inform weighty decisions about public policy." (Id.)	For responses to comments related to the Delta Independent Science Board's letters, please refer to comment letters BDCP 1448 and/or RECIRC 2546. Contrary to those comments, the Lead Agencies believe the information, environmental analyses and proposed mitigation measures presented in the EIR/EIS meet the requirements of CEQA and NEPA for public disclosure of potential effects of the project and alternatives. Please see Master Response 46 regarding recirculation. No further recirculation is considered warranted.

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		<p>Due to the fundamental changes in the Project since publication of the DEIR/DEIS, the significant changes needed to the underlying technical studies and analyses, and the extensive comment and criticism of these documents, further edits and revisions or partial recirculation of the current DEIR/DEIS or RDEIR/SDEIS will not satisfy CEQA and NEPA informational mandates. The state and federal lead agencies must start over and prepare a new draft EIR/EIS that addresses the numerous concerns and criticisms raised in its comments on the DEIR/DEIS and RDEIR/SDEIS and identifies reasonable alternatives to the project that is now proposed.</p>	
2623	28	ATT1: List of commenting parties for North State Water Alliance	This attachment does not include comments on the environmental analysis.
2623	29	ATT2: Report on Review of Bay Delta Conservation Program Modeling by MBK Engineers	The comments contained in this attachment have been addressed in response to comment letter coded "BDCP 1722". Please also refer to Master Response 30.
2623	30	<p>The RDEIR/SDEIS does not include an operations plan for use of the North Delta Diversion (NDD). An operations plan is necessary to understand and describe the conditions under which the NDD would be used in the context of State Water Project (SWP) and Central Valley Project (CVP) operations, and how SWP and CVP diversions would be prioritized between the existing points of diversion in the South Delta and the NDD. Without describing how the CVP and SWP would be operated with a NDD, it is not possible to analyze the changes in CVP and SWP operations that may occur with the NDD; therefore it is not possible to determine the environmental effects that would be caused by changes in CVP and SWP operations.</p> <p>The RDEIR/SDEIS describes the operation of the NDD as follows: "The proposed project operations include a preference for south Delta pumping in July through September to provide limited flushing for improving general water quality conditions and reduced residence times" (p. 4.1-6). These appear to be the only guidelines provided in the RDEIR/SDEIS that describe how the CVP and SWP operators would decide to either export water through-Delta at the existing South Delta diversions or at the NDD facility. This statement is insufficient to analyze NDD facility operations in conjunction with existing South Delta facilities. The following example illustrates this point.</p> <p>Inflows from upstream reservoir releases and Delta exports are frequently governed by water quality standards in State Water Resources Control Board (SWRCB) Decision 1641 (D-1641) from July through September. Compliance with water quality standards is achieved through the combination of Delta inflows and exports. When water quality standards govern Delta operations, increases in Delta inflows generally allow for increases in Delta exports from the South Delta facilities at less than a one-for-one ratio because Delta outflows must increase to maintain water quality as South Delta exports increase. This additional outflow is commonly referred to as the "carriage water cost" for any additional exports from the South Delta. However, if water quality standards are being met with specific Delta inflow and South Delta export amounts, and if either the CVP or SWP wants to increase Delta exports, there would be no carriage water cost if the water were exported at the NDD. Therefore, 100 percent of any additional Delta inflow could be exported from the NDD, creating a water supply benefit to using the NDD during this period. However, operating the NDD to create this water supply benefit would not be consistent with the RDEIR/SDEIS's stated operational guideline, which is to "improve general water quality conditions and reduce residence times." The RDEIR/SDEIS does not provide an adequate description of how the NDD facilities would be operated under this, or any other, condition. Nor does the RDEIR/SDEIS offer any</p>	<p>Master Response 28 provides an overview of the adequacy of the Alternative 4A operational analysis and a discussion of operations modeling and actual operations. Final EIR/EIS Chapter 3 Alternatives of the Final EIR/EIS has been updated to reflect operations under Alternative 4A. Section 3.3.1.2 Operational Components provides specific details on operations under Alternative 4A. In addition, Chapter 5 Water Supply includes and updated description of the hydrologic modeling conducted for Alternative 4A since the RDEIR/SEIS was completed.</p> <p>Master response 28 provides an overview of the operational criteria for Alternative 4A and a comparative discussion of operations modeling to actual operations.</p>

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		description of how diversions would be prioritized between the NDD and South Delta facilities outside the July through September period. An operations plan for the NDD must be defined before technical analyses of environmental effects can be performed.	
2623	31	<p>The RDEIR/SDEIS identifies Alternative 4A (ALT 4A) as the preferred alternative (p. 2-20). A component of ALT 4A is a requirement for additional Delta outflow in the spring (P. 4.1-9). However, the project description does not adequately describe the expected quantity, timing, or source of the additional spring outflow. It is not possible to analyze the potential environmental effects associated with providing additional spring outflow without more definition as to the source, quantity, and timing of the flow.</p> <p>According to the spring outflow section in RDEIR/SDEIS Table 4.1-2,</p> <p>"initial operations will provide a March-May average Delta outflow bounded by the requirements of Scenario H3, which are consistent with D-1641 standards, and Scenario H4, which would be scaled to Table 3-24 in Chapter 3, Section 3.6.4.2 of the Draft EIR/EIS . . ." (p. 4.1-9)</p> <p>This description implies that, when meeting the existing outflow requirements in D-1641, the additional spring outflow would be bounded between zero and 9,200 to 44,500 cubic feet per second (cfs), as defined in Table 3-24 of the BDCP Draft EIR/EIS. While the existing outflow requirements in D-1641 are well-defined and understood in terms of source, quantity, and timing, the upper bound on this additional required spring outflow is not.</p> <p>Regarding the source of the additional spring outflow, the RDEIR/SDEIS states:</p> <p>"the proposed project includes spring outflow criteria, which are intended to be provided through acquisition of water from willing sellers. If sufficient water cannot be acquired for this purpose, the spring outflow criteria will be accomplished through operations of the SWP and CVP to the extent an obligation is imposed on either the SWP or CVP under federal or applicable state law." (p. 4.1-6)</p> <p>The ALT 4A project description does not adequately describe the source of additional spring outflow, a necessary component for analyzing the environmental effects and, particularly, for determining what effects implementing California Water Fix would have on non-participating CVP and SWP contractors and other Sacramento Valley water users. Additional detail is required to identify willing sellers, to describe where sellers would be located, how sellers would provide the additional water, when sellers would be able to provide water, and to provide other similar information. This information must be provided before the potential environmental effects of providing additional spring outflow can be determined. These details must be provided because the environmental effects of making water available through land retirement, groundwater pumping, temporary crop idling, non-CVP/SWP reservoir releases, or water transfers are significantly different, may have different environmental effects and, possibly require different forms of mitigation. Where these environmental effects occur should also be described to ensure that the effects on local ecosystems and economies are disclosed.</p> <p>How California Water Fix would implement the increased spring outflow component of the preferred alternative must be better described to allow for analyses of environmental effects. The RDEIR/SDEIS's reliance on the effects being bounded by analyses of the BDCP ALT 4 H3 and H4 simulations leaves too much uncertainty</p>	<p>The text referred to in this comment has been modified in the Final EIR/EIS to not include acquisition of water related to spring outflow criteria. The model results presented in the Final EIR/EIS do not include water acquisition methods.</p> <p>A representation of potential sources of water for additional spring outflow has been modeled and is included in the detailed analysis presented in the RDEIR/SEIS and the California WaterFix Biological Assessment, as submitted in August 2016. Additional collaboration between DWR and DFW is ongoing regarding spring outflow and the needs of longfin smelt. Modeling suggests that this would have little effect on upstream watersheds because the differences are achieved by in-Delta export restrictions. Consideration of a broad range of potential spring outflows is also ongoing as part of the State Water Resources Control Board hearings for the proposed project, during which time the potential for injury to legal water users and other beneficial uses is considered and will be reflected in permit terms.</p>

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		concerning the breadth of operational and environmental effects and, likely omits numerous potential environmental impacts.	
2623	32	Agricultural water users are typically not irrigating during the entire March through May period. Therefore, there may not be sufficient water available from willing sellers to directly meet increased spring Delta outflow requirements through reductions in agricultural diversions. This may require additional releases of stored water from CVP and SWP reservoirs. This potential is partially acknowledged in the statement that Delta outflow would be provided from a combination of SWP and CVP operations if or when outflow is not available from willing sellers. However, this statement lacks the detail necessary to describe potential environmental effects within the CVP/SWP system. The proposed project should describe under what conditions additional spring outflow would be provided from the CVP, the SWP, or a combination of both projects. These details must be provided before potential environmental effects can be determined, because providing additional water from Shasta Reservoir would have different environmental effects than providing it from Trinity, Oroville or Folsom Reservoir, or through reductions in exports. Providing additional Delta outflow from either the CVP or SWP through any combination of additional reservoir releases or changes in Delta exports would affect the operations of both projects through the Coordinated Operations Agreement (COA). These factors must be considered, defined, and then analyzed before the potential environmental effects can be determined.	The text referred to in this comment has been modified in the Final EIR/EIS to not include acquisition of water related to spring outflow criteria. The model results presented in the Final EIR/EIS do not include water acquisition methods. The CALSIM II model assumptions are based on a reduction of SWP and CVP Delta exports to water contractors to achieve the spring Delta outflow objectives.
2623	33	<p>The RDEIR/SDEIS describes an Adaptive Management Process that may be used to adjust certain operational criteria, including spring Delta outflow requirements, NDD [North Delta Diversion] bypass flows, South Delta export operations including Old and Middle River (OMR) flow requirements, and Head of Old River Barrier (HORB) operations. The potential for adjustment in the operational criteria is contained in Table 4.1-2: "Adjustments to the criteria above [NDD bypass, South Delta exports, OMR, and HORB] and these outflow targets [spring Delta outflow] may be made using the Adaptive Management Process . . ." (p. 4.1-9).</p> <p>These potential adjustments and the environmental effects are not analyzed in the RDEIR/SDEIS. The RDEIR/SDEIS suggests that the range of the spring Delta outflow requirements would be bounded by two different scenarios, H3 and H4, which are evaluated in Table 4.1-1 of the BDCP Draft EIR/EIS (p. 4.1- 5). However, no attempt to quantify the range of effects associated with any of the other criteria is provided in the RDEIR/SDEIS.</p> <p>Evaluating a range of additional spring outflows without identifying their source, quantity, and timing does not adequately disclose the potential environmental effects associated with the Adaptive Management Process. Providing no description of the likely range of changes in the other criteria that may occur under the Adaptive Management Process is another area where the project description lacks sufficient detail for analysis of potential environmental effects.</p>	For more information on adaptive management and potential operations outside of scenarios H3 and H4, please see responses to comment 17. If changes to operations are recommended for the facilities listed by the commenter, additional environmental review may be required if these changes and subsequent impacts to water supply and/or biological resources are outside of the impacts and operations analyzed in the existing permits and environmental review documents (e.g. biological opinion, 2081(b), CEQA).
2623	34	As described above, the project description does not contain the specificity necessary to identify, analyze, and disclose the environmental effects of implementing the preferred alternative. Furthermore, the RDEIR/SDEIS's analyses performed to assess the environmental effects are inconsistent with the description of the project alternatives in the RDEIR/SDEIS. This inconsistency between the project description for the proposed, and ultimately the preferred, alternative and the analysis chosen for that alternative	The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to

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		<p>occurs because of reliance on model results and technical analyses conducted for the BDCP Draft EIR/EIS alternatives, notably BDCP Alternative 4 (BDCP ALT 4) Scenarios H3 and H4. The RDEIR/SDEIS states that "the Lead Agencies have determined that they may reasonably rely on the modeling conducted for Alternative 4 to accurately predict the environmental effects of Alternative 4A" (p. 4.1-43, line 17-19).</p> <p>BDCP Draft EIR/EIS alternatives, however, are fundamentally different in several key areas from the alternatives described in the RDEIR/SDEIS. These key areas are described in the following sections. To support their conclusion that model results for a project analyzed in the BDCP Draft EIR/EIS may be relied upon to "accurately predict" environmental effects for a different proposed project in the RDEIR/SDEIS, the Lead Agencies conducted a sensitivity analysis for the RDEIR/SDEIS. The sensitivity analysis and conclusions are described at the end of this section.</p>	<p>make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>The comment argues that the 2013 DEIR/DEIS and the RDEIR/SDEIS evaluate two different projects. The RDEIR/SDEIS document includes revisions to the DEIR/DEIS sections shown in strikethrough and underline format to clearly show the changes necessitated by the additional alternatives. Thus, while the RDEIR/SDEIS includes additional alternatives that were not included in the 2013 DEIR/DEIS, it does so in compliance with CEQA. Please see Master Response 4 for additional discussion regarding development of the project alternatives.</p> <p>Master Response 30 provides an overview of the modeling conducted for BDCP and CWF.</p>
2623	35	<p>The BDCP Draft EIR/EIS's ALT 4 assumed that 25,000 acres of tidal wetland restoration would be in place as part of the project in the Early Long Term (ELT), at approximately 2025, and that 65,000 acres of tidal wetland restoration would be in place in the Late Long Term (LLT), at approximately 2060. There was no tidal wetland restoration in the No Action Alternative (NAA). In the BDCP Draft EIR/EIS, it was assumed the restored tidal wetlands would influence Delta tidal fluctuations, salinity, and operations. Generally, when the Delta contained more fresh water and lower salinity, it was expected that less Delta outflow would be necessary to keep it fresh with the wetlands in place because the wetlands served as a bulwark against tidal intrusion. On the other hand, when the Delta contained more salt water, the opposite would be true. More Delta outflow would be necessary to flush salts out because of the retention capacity of the wetlands. In either case, the effect was expected to be significant enough that tidal wetland restoration needed to be represented in the CalSim II simulations of the BDCP project alternatives. Operationally, additional wetlands could result in a different balance of Sacramento River inflows and exports to meet D-1641 standards, which could result in changes in CVP and SWP reservoir releases, allocations, and deliveries.</p> <p>Depending on the location of the restored tidal wetlands, they could also buffer and reduce the tidal energy that carries salt water into the Delta. This is important when considering that operation of the NDD may reduce the volume of fresh water in the lower Sacramento River used to repel tidal energy and salt water intrusion. In this way, restoring tidal wetlands as part of BDCP ALT 4 reduced the additional salinity intrusion that would otherwise result from an NDD.</p> <p>The ALT 4A project description in the RDEIR/SDEIS includes 59 acres of tidal wetland restoration (p. 4.1- 5), or 0.2 percent of the area included at the ELT in the BDCP Draft EIR/EIS. This area would likely be too small to have a significant effect on Delta water quality, tidal energy, or CVP/SWP operations. However, CalSim II modeling performed for the BDCP Draft EIR/EIS was assumed to represent the operation of the ALT 4A for the RDEIR/SDEIS and was compared to an NAA that did not include any tidal wetland restoration. It is inappropriate to assume that ALT 4A in the RDEIR/SDEIS would have the same effects on Delta water quality, tidal energy, and CVP/SWP operations as the BDCP alternative that would have included nearly 25,000 acres more tidal wetland restoration. The RDEIR/SDEIS's modeling for ALT 4A does not reflect the reality of ALT 4A's significantly reduced amount of restored wetlands.</p>	<p>The Final EIR/EIS includes model results specifically for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C. Alternatives 2D, 4A, and 5A only include a small area of wetlands restoration based upon mitigation requirements for construction of the conveyance facilities. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p> <p>Please see response to comment 18.</p>

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2623	36	<p>BDCP ALT 4 would have relaxed the Sacramento River agricultural water quality compliance point contained in D-1641 from Emmaton to Threemile Slough, a location approximately 3 miles upstream of Emmaton. The project description of ALT 4A in the RDEIR/SDEIS removes the relaxation of this water quality compliance point and leaves compliance at Emmaton, as specified in D-1641 (p. 4.3.4-23). Changing the water quality compliance location to Threemile Slough would require less fresh water flow from the Sacramento River to comply with the water quality standard because Threemile Slough is located further from Suisun Bay and the Pacific Ocean. The change in location for the water quality standard would likely affect the balance between exports and Sacramento River inflow necessary for compliance. Additionally, because meeting a water quality standard at Threemile Slough can be done with less Sacramento River flow, it could allow higher diversions at the NDD facility, or lower releases from upstream reservoirs. Therefore, it is inconsistent and inappropriate for the RDEIR/SDEIS to state that the operational effects in the modeling results for BDCP ALT 4 which includes moving the water quality compliance point, are the same as ALT 4A in the RDEIR/SDEIS, which does not include moving the compliance point.</p>	<p>The Final EIR/EIS includes model results specifically for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C. Alternatives 2D, 4A, and 5A include the assumptions that the D-1641 compliance point is located at Emmaton. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p>
2623	37	<p>BDCP ALT 4 included habitat restoration in the Yolo Bypass. One component of the restoration was installation of operable gates on Fremont Weir at the northern end of the Yolo Bypass to allow for more frequent flooding of the bypass. The operable gates would be opened when Sacramento River flows at Freeport exceed 25,000 cfs, and would divert as much as 6,000 cfs of Sacramento River flow into the Yolo Bypass, depending on the stage of the river. Therefore, opening the Fremont Weir gates would result in up to 6,000 cfs less flow at Freeport.</p> <p>The ALT 4A project description in the RDEIR/SDEIS removes the Fremont Weir gates from the alternative because they are now considered to be included in the NAA (p. 4.1-23). However, the CalSim II modeling performed for the BDCP Draft EIR/EIS, which included the Fremont Weir gates, is assumed to represent the operation of ALT 4A for the RDEIR/SDEIS and is compared to an NAA that did not include the Fremont Weir gates. It is inconsistent and inappropriate for the RDEIR/SDEIS to attempt to determine the operational impacts of ALT 4A by comparing BDCP ALT 4, which includes the operable gates, to an NAA that does not include the gates. However, unlike the first two inconsistencies described above, this change will likely have lesser impacts on key operational parameters such as reservoir storage, exports and Delta outflow, since the gates would be opened during high-flow events when the system would likely be in a surplus condition.</p>	<p>Alternative 4A and the No Action Alternative both include diversions into the Yolo Bypass at Fremont Weir. Therefore, there would be no changes in the Sacramento River flows downstream of the Fremont Weir due to this diversion, as shown in the modeling results for Alternative 4A and the No Action Alternative presented in Appendix 5A, Section C, of the Final EIR/EIS.</p>
2623	38	<p>The RDEIR/SDEIS attempts to address the inconsistencies identified above with a sensitivity analysis as described in the RDEIR/SDEIS's Appendix B. In this sensitivity analysis, BDCP ALT 4 is modified to remove the tidal wetland restoration, water quality compliance point relaxation, and Fremont Weir operable gates. No additional modifications were made to the BDCP ALT 4 CalSim II model, including any updates to the model since the analysis was done for the BDCP Draft EIR/EIS (p. B-3).</p> <p>Appendix B is comprised of three pages of text and 613 pages of figures and tables of results from CalSim II. The conclusions from the sensitivity analysis are summarized in a single paragraph on page B-3.</p> <p>"As shown in the figures Alt4A (H3) and Alt4A (H4) CALSIM II results are generally similar to A4_H3 and A4_H4, respectively. The results indicate that the incremental changes for</p>	<p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p> <p>Master Response 1 provides information on the NEPA and CEQA baselines. FEIR/EIS Appendix 5F provides a comparison of the modeling conducted for the FEIR/EIS for Alternatives with the modeling results conducted for the RDEIR/SEIS. For the Final EIR/EIS (FEIRS), new modeling was conducted for the No Action Alternative and the three RDEIR/SDEIS sub-alternatives at ELT with modeling assumptions matching the description of the alternatives, to confirm the reported RDEIR/SDEIS CEQA/NEPA determinations. The updated modeling is reflected in the analysis of Alternatives 4A provided in the Final EIR/EIS.</p>

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		<p>Alt4A (H3) and Alt4A (H4) when compared to the No Action Alternative are trending similar to A4_H3 and A4_H4, at both ELT and LLT."</p> <p>It is not reasonable or defensible to rely upon the results of modeling performed for the BDCP Draft EIS/EIR, which considered a project with different physical and operational effects, to accurately predict the environmental effects of a different project compared to a different no project/no action alternative as defined in the RDEIR/SDEIS because CalSim II model results are "generally similar" and "trending similar." Environmental effects should be determined through a project-specific analysis of the potential effects on species and resources. These non-specific conclusions do not provide sufficient information for the public to understand the basis for the RDEIR/SDEIS's conclusions about the significance of project effects. Project-related changes in flows and hydrodynamics can have a significant effect to aquatic species, water quality and beneficial uses of water, and it should not be assumed that environmental effects are the same because model results are "generally" or "trending" similar.</p> <p>Lastly, the RDEIR/SDEIS includes an acknowledgement that the project description is inconsistent with the analysis.</p> <p>"Nevertheless, there is notable uncertainty in the results of all quantitative assessments that refer to modeling results, due to the differing assumptions used in the modeling and the description of Alternative 4A and the No Action Alternative (ELT)." (pp. 4.3.4-1 to 4.3.4-2)</p> <p>In our opinion, this statement may suggest that preparers of the RDEIR/SDEIS recognized the weakness in the assumption that model results of a fundamentally different project could be compared to a different NAA than described in the RDEIR/SDEIS to "accurately predict" the environmental effects of the proposed project.</p>	<p>BDCP EIR/EIS modeling assumed climate change and sea level rise as part of the No Action Alternative, the proposed project, and all other action alternatives. The climate and sea level input assumptions were consistent in both the No Action Alternative and the action alternatives. Therefore, when comparing action alternative modeling results to the No Action Alternative results, any discerned effects would be due to the changes proposed under the action alternatives. Draft BDCP EIR/EIS Alternative 4 H3 modeling was consistent with the assumptions for that Alternative, which included NDD and tidal habitat restoration (CM2). The Partially Recirculated Draft EIR/Supplemental Draft EIS includes analysis of operations under Alternative 4 without habitat restoration assumptions. BDCP EIR/EIS relies on the CALSIM II and DSM2 models from 2010 to maintain consistency and comparability across the alternatives. In the final EIR/EIS, Alternative 4A was evaluated with both 2010 version of the CALSIM II model and the 2015 version of the CALSIM II model. It also should be noted that the CALSIM II results cannot be used to project specific conditions, and must be used in a comparative analysis to determine changes in conditions under two scenarios (e.g. action alternatives as compared to the No Action Alternative).</p> <p>Modeling for Alternative 4A was conducted for Operational Scenario H3+, a point that generally falls between Scenario H3 and H4 operations, as the initial conveyance facilities operational scenario.</p> <p>As shown in Appendix 5F, modeling results for H3+ are within the range of results for Scenarios H3 and H4, and are consistent with the impacts discussed in the Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement.</p> <p>With regards to climate change and greenhouse gas emissions, please see Master Response 19.</p>
2623	39	<p>The following conclusion in the MBK Report's Executive Summary [ATT2] is applicable to the RDEIR/SDEIS:</p> <p>"The BDCP Model uses assumed future climate conditions that obscure the effects of implementing the BDCP. The future conditions assumed in the BDCP model include changes in precipitation, temperature, and sea level rise. The result of this evaluation is that the modeled changes in water project operations and subsequent environmental impacts are caused by three different factors: (1) sea level rise; (2) climate change; and (3) implementation of the alternative that is being studied.</p> <p>Including climate change, without adaptation measures, results in insufficient water needed to meet all regulatory objectives and user demands. For example, the BDCP Model results that include climate change indicate that during droughts, water in reservoirs is reduced to the minimum capacity possible. Reservoirs have not been operated like this in the past during extreme droughts and the current drought also provides evidence that adaptation measures are called for long in advance to avoid draining the reservoirs. In this aspect, the BDCP Model simply does not reflect a real future condition. Foreseeable adaptations that the CVP and SWP could make in response to climate change include: (1) updating operational rules regarding water releases from reservoirs for flood protection; (2) during severe droughts, emergency drought declarations could call for mandatory conservation and changes in some regulatory criteria similar to what has been experienced in the current and previous droughts; and (3) if droughts become more frequent, the CVP and SWP would likely</p>	<p>As described in Chapter 5, Water Supply, the EIR/EIS analyses assume continued implementation of regulatory requirements for the American River watershed in accordance with the requirements under the CEQA definition of Existing Conditions and under the NEPA definition of the No Action Alternative. Changes in the regulatory requirements would only occur following detailed analyses, including project-specific CEQA and NEPA analyses and ESA and CESA analyses. Following adoption of changes to the regulatory requirements by the State and federal governments, DWR and Reclamation would need to determine if changes in the SWP and CVP would be necessary. These changes are considered to be speculative and are not included in the No Action Alternative.</p> <p>The EIR/EIS evaluates long-term operation of the SWP and CVP over an 82-year long hydrologic period with extended wet periods and dry/critical dry periods. The evaluation is a comparative analysis to determine the incremental differences between conditions under the Alternatives 1 through 9 and conditions under the Existing Conditions and the No Action Alternative. The analyses were not conducted to identify specific values or to respond to short-term emergency situations, such as the ongoing drought. Separate engineering and environmental studies have been and will continue to be prepared when water quality criteria and other regulations are modified in emergencies. Please refer to Master Response 30.</p>

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		<p>revisit the rules by which they allocate water during shortages and operate more conservatively in wetter years. The modifications to CVP and SWP operations made during the winter and spring of 2014 in response to the drought supports the likelihood of future adaptations. The BDCP Model is, however, useful in that it reveals that difficult decisions must be made in response to climate change. But, in the absence of making those decisions, the BDCP Model results themselves are not informative, particularly during drought conditions. With future conditions projected to be so dire without the BDCP, the effects of the BDCP appear positive simply because it appears that conditions cannot get any worse (i.e., storage cannot be reduced below its minimum level). However, in reality, the future condition will not be as depicted in the BDCP Model. The Reviewers recommend that Reclamation and DWR develop more realistic operating rules for the hydrologic conditions expected over the next half-century and incorporate those operating rules into any CalSim II Model that includes climate change. (p. 4)"</p> <p>The CVP's and SWP's operations during the current drought confirm this comment. Operations have been modified to meet human and environmental needs to the extent possible, and preserve some water in reservoir storage to continue to do so if drought condition persist. Modeling assumptions for the RDEIR/SDEIS and simulated operations with climate change are not consistent with recent operations.</p>	
2623	40	<p>The following conclusion in the MBK Report is applicable to the RDEIR/SDEIS:</p> <p>"CalSim II is continuously being improved and refined. As the regulatory environment changes and operational and modeling staff work together to improve the model's capability to simulate actual operations, the model is continually updated. The BDCP Model relied upon a version of CalSim II that dates back to 2009, immediately after the new biological opinions (BiOps) from the NMFS and the United States Fish and Wildlife Service (USFWS) significantly altered the operational criteria of the CVP and SWP. In the last 4 to 5 years, DWR, Reclamation, and outside modeling experts have worked together to improve the model. Changes include better (more realistic) implementation of the new BiOps and numerous fixes to the code. Since CalSim II is undergoing continual improvements, there will always be "vintage" issues in that by the time a project report is released, the model is likely slightly out of date. However, in this case – with the major operational changes that have occurred in the new regulatory environment – many issues have been identified and fixed in the last 4 to 5 years that have a significant effect on model results. CalSim II modeling for the DWR 2013 Delivery Reliability Report contains numerous modeling updates and fixes that significantly alter results of the BDCP Model. A key modeling revision in the 2013 DWR modeling was fixing an error regarding artificial minimum instream flow requirements in the Sacramento River at Hood. An "artificial" minimum instream flow requirement had been specified; the requirement is artificial in that it does not represent a regulatory requirement, but rather is a modeling technique to force upstream releases to satisfy Delta needs." (p. 14)</p>	<p>Please refer to Master Response 30. Modeling for the EIR/EIS has been based on the Existing Conditions, No Action Alternative, and Alternative 1 models developed in April – May of 2010 (2010 models), which were the state-of-the-art at the time, and formed the basis for universal assumptions in the other action alternatives in the EIR/EIS. However, in August 2011 several model improvements were identified by the water agencies, fishery agencies, and the modeling community. The identified improvements were compiled, and the Existing Conditions, No Action Alternative, and Alternative 1 models were updated in coordination with DWR, Reclamation and USFWS. This update was performed to verify if the compiled model improvements altered the incremental changes between the BDCP Alternative 1 and the Existing Conditions and the No Action Alternative relative to the 2010 models. The findings from the 2011 update showed that the incremental differences between Alternative 1 and the Existing Conditions and the No Action Alternative remained consistent with the 2010 modeling. Therefore, the action alternatives modeled since 2011 continued to rely on the 2010 modeling, allowing consistency and comparability throughout the BDCP EIR/EIS. Similarly, when Alternative 4A was modeled using the 2013 baseline, the incremental changes in the operational results for Alternative 4A as compared to the No Action Alternative were similar to the prior incremental results between the 2010 modeling for the No Action Alternative and Alternative 4A. It should be noted that the modeling used in the EIR/EIS must be used in a comparative manner and not to define absolute values.</p>
2623	41	<p>The following conclusion in the MBK Report is applicable to the RDEIR/SDEIS:</p> <p>"Operating rules used in the BDCP Model, specifically regarding Alternative 4, result in impractical or unrealistic CVP and SWP operations. Reservoir balancing rules cause significant drawdown of upstream reservoirs during spring and summer months while targeting dead pool level in San Luis from September through December resulting in artificially low Delta exports and water shortages. CVP allocation rules are set to</p>	<p>Please refer to Master Response 30. In Alternative 4A, the availability of the additional export capacity in the winter and spring months compared to the No Action Alternative allows capturing winter and spring excess flows and filling of the San Luis Reservoir to a greater extent than under the No Action Alternative. This also changes the release patterns from the upstream reservoirs. However, the end-of-May and end-of-September storage conditions are similar to the No Action Alternative under Alternative 4A.</p> <p>The San Luis Reservoir rule curve is an input to CALSIM II which provides a target storage each month that is</p>

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		<p>artificially reduce south of Delta allocations during wetter years resulting in underestimates of diversions at the NDD [North Delta Diversion] and the SDD [South Delta Diversion]. Operating rules for the Delta Cross Channel Gate do not reflect how the gates may be operated in "With Project" conditions. Operational logic is coded into the CalSim II model to simulate how DWR and Reclamation would operate the system under circumstances for which there are no regulatory or other definitive rules. This attempt to specify (i.e., code) the logic sequence and relative weighting so that a computer can simulate "expert judgment" of the human operators is a critical element to the CalSim II model. In the BDCP version of the CalSim II model, some of the operational criteria for water supply allocations and existing facilities such as the Delta Cross Channel and San Luis Reservoir are inconsistent with real-world conditions." (p. 18)</p> <p>Because the RDEIR/SDEIS evaluates Alternative 4A, which is based on Alternative 4, these conclusions now apply to the RDEIR/SDEIS.</p>	<p>dependent on the South-of-Delta allocation and upstream reservoir storage. The rule curve allows CALSIM II to emulate judgement of the operators in balancing the north-of-Delta and south-of-Delta storage conditions. In the absence of any other operating criteria controlling the upstream reservoir releases or the Delta exports, different San Luis Reservoir rule curves can result in differences in upstream reservoir release patterns, and Delta exports. Assumed San Luis Reservoir rule curve could differ depending on the available export capacity during winter and spring months, and the need to protect upstream carryover storage in the fall months.</p> <p>For the No Action Alternative simulation, the San Luis Reservoir rule curve is managed to maximize filling during summer and fall months when the Delta export pumping is less constrained to minimize situations in which south-of-Delta shortages may occur due to lack of storage or exports. Under the action alternatives with the north Delta diversion, the CALSIM II San Luis Reservoir rule curve was modified in expectation that the new north Delta diversion facility would allow capturing winter and spring excess flows and filling of the San Luis Reservoir to a greater extent than the No Action Alternative. Additional modifications to the rule curve were included to preserve upstream carryover storage conditions while minimizing south-of-Delta shortages in the fall months. Under Alternative 4A, the San Luis Reservoir storage conditions are also affected by the restrictive south Delta export operations in October.</p> <p>It is recognized that future projects could change the San Luis Reservoir rule curve or assumptions related to Delta Cross Channel operations. However, these future actions would require engineering and environmental analyses that would consider the potential changes to the existing and planned infrastructure at the time of those studies. Changes in these assumptions would be speculative and are not included in the No Action Alternative in this EIR/EIS. Changes in these assumptions also are not necessarily consistent with the project objectives or purpose and need for the lead agency, and are not included in the action alternatives. With regards to project objectives and need, please see Master Response 2.</p>
2623	42	<p>MBK and Steiner previously commented on the lack of definition for the additional spring outflow requirement contained in the BDCP Draft EIR/EIS. The following conclusion in the MBK Report Executive Summary is applicable to the RDEIR/SDEIS, which now includes additional spring outflow as an element of Alternative 4A:</p> <p>The effects of many critical elements of the BDCP cannot be analyzed because those elements are not well-defined. The Reviewers recommend that the BDCP be better defined and a clear and concise operating plan be developed so that the updated CalSim II model can be used to assess effects of the BDCP.</p> <p>The High Outflow Scenario (HOS) requires additional water (Delta outflow) during certain periods in the spring. The BDCP Model places most of the responsibility for meeting this new additional outflow requirement on the SWP. However, the SWP may not actually be responsible for meeting this new additional outflow requirement. This is because the Coordinated Operations Agreement ("the COA") would require a water allocation adjustment that would keep the SWP whole. Where one project (CVP or SWP) releases water to meet a regulatory requirement, the COA requires a water balancing to ensure the burden does not fall on only one of the projects. The BDCP Model is misleading because it fails to adjust project operations, as required by the COA, to "pay back" the water "debt" to the SWP due to these additional Delta outflow requirements. Unless there is a significant revision to COA, the BDCP Model overstates the impacts of increased Delta outflow on the SWP and understates the effects on the CVP.</p> <p>Furthermore, after consulting with DWR and Reclamation project operators and managers, the Reviewers conclude that there is no apparent source of CVP or SWP water to satisfy both the increased Delta outflow requirements and pay back the COA</p>	<p>Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A/California WaterFix. Alternative 4A has been developed in response to public and agency input. Please refer to Master Response 30.</p> <p>Under Alternative 4 H4, the SWP would provide the additional Delta outflow outside of COA (as described in Appendix 5A, Section B, CALSIM II and DSM2 Modeling Simulations and Assumptions in the Draft BDCP EIR/EIS). This increase would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results.</p>

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		<p>"debt" to the SWP without substantially depleting upstream water storage. It appears, through recent public discussions regarding the HOS, that BDCP anticipates additional water to satisfy the increased Delta outflow requirement and to prevent the depletion of cold water pools will be acquired through water transfers from upstream water users. However, this approach is unrealistic. During most of the spring, when BDCP proposes that Delta outflow be increased, agricultural water users are not irrigating. This means that there is not sufficient transfer water available to meet the increased Delta outflow requirements and therefore, additional release of stored water from the reservoirs would be required. Releasing stored water to meet the increased Delta outflow requirements could potentially impact salmonids on the Sacramento and American River systems due to reductions in the available cold water pool. (p. 5)</p>	
2623	43	<p>The following conclusion in the MBK Report is applicable to the RDEIR/SDEIS:</p> <p>When south Delta exports are low due to regulatory limits, and upstream reservoirs are making releases to meet the instream flow objectives at Rio Vista, operators have the ability to close the Delta Cross Channel (DCC) in order to reduce the required reservoir releases (by closing the DCC a greater portion of water released from the reservoirs stays in the Sacramento River to meet the Rio Vista requirements). As long as the Delta salinity standards are met, operators have indicated that they would indeed close the DCC in this manner (as was done in October and November 2013). In the BDCP Model, the DCC is not closed in this manner. The net result is that the BDCP Model overestimates outflow under such circumstances typically occurring in October.</p> <p>The overestimated outflow leads to incorrect conclusions regarding the effects of BDCP. For instance, an actual increase in fall outflow could be beneficial for the endangered fish species delta smelt (USFWS, 2008). Therefore, by overestimating outflow in October, the BDCP studies likely overestimate the benefit to delta smelt (Mount et al., 2013). Similarly, an actual increase in fall outflow would reduce salinity in the western Delta, which could be beneficial for in-Delta diverters; therefore, overestimating outflow in October artificially reduces salinity, incorrectly reducing the net impacts on in-Delta diverters. (p. 17)</p>	<p>Please refer to Master Response 30. The Delta Cross Channel assumptions in the CALSIM II model are consistent between the No Action Alternative and action alternatives in the EIR/EIS. As discussed in this comment, the criteria for Sacramento River flows at Rio Vista in October would become more critical with action alternatives that include north Delta intakes. Under the future operations, there would be a balance between operations of Delta Cross Channel closure to minimize effects on upstream reservoir storage and water quality criteria. Operations under proposed project (Alternative 4A) would increase Delta outflow due to Old and Middle River criteria which will improve water quality as compared to the No Action Alternative. It is recognized that assumptions were used for the impact analysis in the EIR/EIS based upon modeling analyses; and that the real-time operations would provide more flexibility than the CALSIM II monthly-model time step. However, the incremental differences that could occur under the No Action Alternative conditions and Alternative 4A would be similar with different CALSIM II model assumptions in the No Action Alternative conditions and Alternative 4A.</p>
2623	44	<p>The following conclusion in the MBK Report is applicable to the RDEIR/SDEIS:</p> <p>San Luis Reservoir (SLR) is an off-stream reservoir located south of the Delta and jointly owned and operated by CVP and SWP. The reservoir is used to store water that is exported from the Delta when available and used to deliver water to CVP and SWP Contractors when water demands exceed the amount of water that can be pumped from the Delta. The decision of when to move water that is stored in upstream reservoirs, such as Shasta, Folsom, or Oroville, through the Delta for export to fill SLR is based on the experience and expert judgment of the CVP and SWP operators.</p> <p>CalSim II attempts to simulate the expert judgment of the operators by imposing artificial operating criteria; the criteria are artificial in the sense that they are not imposed by regulatory or operational constraints but rather imposed as a tool to simulate expert judgment. One such artificial operating criteria is the SLR target storage level: CalSim II attempts to balance upstream Sacramento Basin CVP and SWP reservoirs with storage in SLR by setting artificial target storage levels in SLR, such that the CVP and SWP will release water from upstream reservoirs to meet target levels in SLR. The artificial target storage will be met as long as there is ability to convey water (under all</p>	<p>Please refer to Master Response 30. One of the goals for the EIR/EIS impact analysis modeling is to maintain similar end-of-May and end-of-September carryover storage conditions as simulated under the No Action Alternative. In the action alternatives with the north Delta diversion facility, the availability of the additional export capacity in the winter and spring months compared to the No Action Alternative allows capturing winter and spring excess flows and filling of the San Luis Reservoir to a greater extent than under the No Action Alternative. This also changes the release patterns from the upstream reservoirs. However, the end-of-May and end-of-September storage conditions are similar to the No Action Alternative under Alternative 4A. The effects of modified release patterns and changes in the storage conditions on the river temperatures are evaluated in Chapter 11, Fish and Aquatic Resources, in the EIR/EIS.</p> <p>The San Luis Reservoir rule curve is an input to CALSIM II which provides a target storage each month that is dependent on the South-of-Delta allocation and upstream reservoir storage. The rule curve allows CALSIM II to emulate judgement of the operators in balancing the north-of-Delta and south-of-Delta storage conditions. In the absence of any other operating criteria controlling the upstream reservoir releases or the Delta exports, different San Luis Reservoir rule curves can result in differences in upstream reservoir release patterns, and Delta exports. Assumed San Luis Reservoir rule curve could differ depending on the available export capacity during winter and spring months, and the need to protect upstream carryover storage in the</p>

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		<p>regulatory and physical capacity limits) and as long as water is available in upstream reservoirs. SLR target storage criteria are also sometimes described in section 4.2 as the "San Luis rule-curve."</p> <p>In the BDCP Model, CVP and SWP reservoir operating criteria for Alternative 4 H3 ELT differ from the corresponding without project scenario (e.g. NAA-ELT). The difference in criteria and result is primarily driven by changes to the artificial constraint used to determine when to fill SLR: the SLR target storage. In Alternative 4 H3 ELT, SLR target storage is set very high in the spring and early summer months, and then reduced in August and set to SLR dead pool from September through December. This change in SLR target storage relative to the no action alternative causes upstream reservoirs to be drawn down from June through August and then recuperate storage by cutting releases in September. This change to the artificial operating criteria SLR target storage causes changes in upstream cold water pool management and affects several resource areas.</p> <p>In addition to changes in upstream storage conditions, changes in SLR target storage cause SLR storage to drop below a water supply concern level (300,000 acre-feet) in almost 6 out of every 10 years under ELT conditions and more than 7 out of every 10 years under LLT conditions for Alternative 4 H3. When storage in SLR drops below this 300,000 acre-foot level, algal blooms in the reservoir often cause water quality concerns for drinking water at Santa Clara Valley Water District. The change in SLR target storage also causes SLR levels to continue to drop and reach dead pool level for the SWP in 4 out of every 10 years and also dead pool level for the CVP in 1 out of every 10 years under the ELT conditions.</p> <p>Reaching dead pool level in SLR creates shortages to water users south of the Delta. Although some delivery shortages are due to California Aqueduct capacity constraints, the largest annual delivery shortages are a result of inappropriately low SLR target storage. Average annual Table A shortages due to artificially low SLR storage levels increased from 3 TAF in the NAA-ELT scenario to 35 TAF in the Alt4-ELT scenario. Such shortages occurred in 2% of simulated years in the NAA- ELT scenario and 23% of years in the Alt4-ELT scenario. In addition to the inability to satisfy Table A allocations, low storage levels cause loss of SWP Contractors' Article 56 water stored in SLR. Average annual Article 56 shortages were 43 TAF in the Alt4-ELT scenario because of low San Luis storage and 5 TAF in the NAA-ELT scenario. Low San Luis storage causes Article 56 shortages in 27% of simulated years in the Alt4-ELT scenario as compared to 5% of simulated years in the NAA-ELT. Another consequence of low storage levels in SLR is a shift in water supply benefits from Article 21 to Table A.</p> <p>In summary, the operational assumptions for SLR are unrealistic in Alternative 4 because they create problems in upstream storage reservoirs and create shortages for south of Delta water users that would not occur in the real world. In reaching this conclusion, the Reviewers met with operators from CVP and SWP to review the BDCP Model results and discussed real-time operations. (p. 16)</p>	<p>fall months.</p> <p>For the No Action Alternative simulation, the San Luis Reservoir rule curve is managed to maximize filling during summer and fall months when the Delta export pumping is less constrained to minimize situations in which south-of-Delta shortages may occur due to lack of storage or exports. Under the action alternatives with the north Delta diversion, the CALSIM II San Luis Reservoir rule curve was modified in expectation that the new north Delta diversion facility would allow capturing winter and spring excess flows and filling of the San Luis Reservoir to a greater extent than the No Action Alternative. Additional modifications to the rule curve were included to preserve upstream carryover storage conditions while minimizing south-of-Delta shortages in the fall months. Under Alternative 4A, the San Luis Reservoir storage conditions are also affected by the restrictive south Delta export operations in October.</p>
2623	45	ATT3: Comments on the Bay Delta Conservation Plan/California WaterFix RDEIR/SDEIS by Dave Vogel, Natural Resource Scientists, Inc.	<p>Benefits: Regarding the overstatement of benefits, the lead agencies respectfully disagree that there is no credible evidence to support conclusions in the RDEIR/SDEIS. There are credible data sources that provide sound scientific evidence supporting the expected outcomes described in the text. The need for assumptions, mode limitations, and scientific uncertainty do not discount the fact that the best available science at the time was used in the analysis.</p> <p>The lead agencies also respectfully disagree that the analyses are flawed, and assumptions are unreasonable</p>

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			<p>and incorrect. The impact analyses presented in Alternative 4A provide ample evidence that the effects would not be detrimental to juvenile salmon. There are credible data sources that provide sound scientific evidence supporting the expected outcomes described in the text.</p> <p>Document Organization: The RDEIR/SDEIS focuses the readers on revisions made to new alternatives 4A (the NEPA and CEQA preferred alternative), 2D, and 5A. The organization and structure of the RDEIR/SDEIS is summarized in the Executive Summary Document Review Roadmap to assist readers in focusing on those portions of the document they are most interested in and aid in navigating the document. Because the RDEIR/SDEIS is a partial recirculation of the Draft EIR/EIS, only those portions of the Draft EIR/EIS that were modified were included in the RDEIR/SDEIS. For this Final EIR/EIS, the analysis from the RDEIR/SDEIS and Draft EIR/EIS have been combined to disclose the alternatives impacts into one synthesized document organized in the same format as the Draft EIR/EIS. To aid in understanding the Final EIR/EIS, including Chapter 11, Fish and Aquatic Resources, summary comparisons of alternatives have been added to the Executive Summary and at the beginning of each resource chapter. All of the impacts and relevant mitigation measures are summarized in Table ES-8, Summary of BDCP/California WaterFix EIR/EIS Impacts and Mitigation Measures.</p> <p>Previously Submitted Comments: As explained in the Executive Summary of the RDEIR/SDEIS, all of the comments received during the Draft EIR/EIS 2013–2014 public review period were considered in the development of the RDEIR/SDEIS. The RDEIR/SDEIS does not include responses to comments on the Draft EIR/EIS, though some revisions have been made in response to comments received on the Draft EIR/EIS. Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Response 42 regarding treatment of public comments.</p> <p>Terms: Regarding the confusion of terms “Conservation Measures” and “Environmental Commitments” in Alternative 4A, the correct term for Alternative 4A is “Environmental Commitment”. The terms are not interchangeable. The document was reviewed to ensure that this terminology was used for Alternative 4A. Without the commenter providing specific locations in the text, no further action can be taken in response to this comment.</p> <p>Location of Intakes: EIR/EIS Appendix 3F, Intake Location Analysis, details the process and steps used in identifying the proposed intake locations. Without further details, it is unknown why the commenter feels that the “intakes were sited in some of the worst locations”, considering that a team of engineers and resource experts spent multiple years refining the locations of intakes.</p> <p>Fish Screens: The term “State-of-the-Art” is used to describe fish screens at the north Delta diversions as the current design of the screens is based on the newest thinking and technology regarding fish screen performance. It is acknowledged in the text that the design is still in progress and will be the subject of adaptive management during implementation. Screens are being designed modularly to allow for maximum flexibility in modification as necessary. There will be several pre- and post-construction surveys to aid in minimizing effects during construction and operation of screens. The EIR/EIS fully discloses the uncertainty associated with the fish screen design.</p> <p>Salmon Losses: The commenter raises a number of important issues that reflect the uncertainty associated with the potential loss of salmon at the North Delta intakes. Among the main sources of uncertainty are a lack of knowledge of baseline predator densities in the reach and resulting predation rates, in addition to how these may change under the alternatives. The fixed predation loss of 5% per intake was assessed to be a conservative assumption because 5% loss at GCID was actually similar to the loss downstream of the GCID fish screen (although release of fish downstream first may have confounded the comparison of loss at</p>

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			<p>different locations in the GCID study area). The bioenergetics analysis presented in the BDCP focused on loss of Chinook salmon of 70 mm and greater as a result of predation by striped bass between 1 and 6 years old, which covers the range of striped bass piscivorous lengths described by Nobriga and Feyrer (2007). The focus on striped bass reflected the importance of this species as a predator; the estimates of density (number of predators per unit length of intake) were based on estimates from GCID, for which the identity of predators was not known (and therefore could have included other species), but were assumed for the analysis to be represented by striped bass. The importance of loss associated with the north Delta intakes is recognized in the preferred alternative (Alternative 4A, California WaterFix) and, similar to the HCP alternatives which have stressor reduction targets, there is a performance standard of survival to be $\geq 95\%$ of baseline survival in the reach where the north Delta intakes are proposed to be situated. Monitoring of this standard would occur, with adaptive management as necessary should monitoring indicate that the standard is not being met.</p> <p>Sweeping Velocities: The sweeping velocity criterion is a ratio of sweeping velocity to approach velocity. Although the approach velocity cannot exceed 0.33 ft/sec and the ratio of sweeping velocity to approach velocity cannot be less than 2, there is no minimum sweeping velocity required. As such, if the sweeping velocity in the river is, for example, 0.5 ft/sec, the approach velocity cannot exceed 0.25 ft/sec, so the pumping rate would be lowered to accommodate this ratio. The commenter is wrong that the intakes cannot accommodate sweeping velocities.</p> <p>Environmental Commitment 15: Environmental Commitment 15, Localized Reduction of Predatory Fishes, does assume predation could occur when the north Delta intakes are not operating. As the commenter notes, there is uncertainty related to predator control at the NDD and in other locations, which is acknowledged in the RDEIR/SEIS. The recent biological assessment for the California WaterFix (Alternative 4A) describes the preconstruction studies that would inform refined intake designs (including issues related to predation) and must be completed before the final intake design (see Table 3.4-17 in Chapter 3). Predatory fish density reduction at the north Delta intakes and Clifton Court Forebay (Environmental Commitment 15) would be undertaken as part of adaptive management for the preferred alternative (see Chapter 3 of the recent biological assessment), with specific mechanisms for implementation to be developed and associated permitting and environmental review occurring once these mechanisms have been defined.</p> <p>Environmental Commitment 16: Nonphysical Fish Barriers (NPB), the RDEIR/SDEIS openly disclosed that there is uncertainty regarding the effectiveness of NPBs. However, the information provided in the description of effects is based on the best available science from similar recent projects in the Delta demonstrating the effectiveness of NPBs in deterring juvenile Chinook salmon. The 2011 and 2012 studies of juvenile Chinook salmon and steelhead suggested that entry into Georgiana Slough could be reduced by $\sim 50\text{-}67\%$, although these studies used larger juveniles to allow acoustic tag technology to track movements in detail. Environmental Commitments 15 and 16 are as specific as possible at the current time given the uncertainties described in the EIR/EIS text, but they are based on scientific data in the same place, using the same technology, and regarding the same species.</p> <p>Bypass Flows: Regarding bypass flows downstream of the intakes, please see Chapter 11, Fish and Aquatic Species for analyses of all potential impacts to all species and life stages near the intakes. The lead agencies believe the potential effects to flows downstream of the intakes are adequately disclosed and described. Reduced flows in the vicinity of Georgiana Slough are included in several impact statements for all species that may be affected. The actual operations of the North Delta intakes are still under development. Therefore, the analysis assumes a range of operations within which actual operations would occur in the future.</p> <p>Transfer of Impacts: The underlying concept of operating a dual facility is that the proportion of water</p>

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			<p>exported during wetter conditions would be lower, despite a larger total amount of water exported. This would result in a lower amount of water being taken during drier conditions. This operational flexibility would benefit fish species and water supply because pumping would occur only when and where fish are not present and vulnerable to entrainment, impingement, and predation. Combined with a low potential for entrainment and impingement in the North Delta relative to the South Delta pumps, and predator control efforts under Environmental Commitment 16, there would be an overall reduced effect on Sacramento River Basin salmonids.</p> <p>Salmon Life Stages: Regarding differences between fry and larger salmon life stages used in fish models, the EIS/EIR acknowledges and discloses that there are limitations to the analyses given a lack of information on fry-sized individuals and a reliance on larger life stages. Data on the larger life stages was the best available scientific data and the lead agencies believe model outputs based on these data provide meaningful information, despite their limitations.</p> <p>Overstatement of Benefits: The lead agencies respectfully disagree that benefits are overstated, the analyses are flawed, and assumptions are unreasonable and incorrect. The impact analyses presented in Alternative 4A provide ample evidence that the effects would not be detrimental to juvenile salmon. There are credible data sources that provide sound scientific evidence supporting the expected outcomes described in the text.</p> <p>Impingement: The analysis of impingement at the north Delta for salmonids for each alternative can be found in Impacts AQUA-39, AQUA-57, AQUA-75, and AQUA-93.</p> <p>Salmon Migration: The analysis of effects on salmon migration downstream of the North Delta intakes for each alternative is provided in Impacts AQUA-42, AQUA-60, AQUA-78, and AQUA-96.</p>
2623	46	<p>ATT4: Technical review of portions of the revised draft Environmental Impact Report and supplemental draft Environmental Impact Statement (RDEIR/SDEIS) for the California WaterFix</p> <p>Prepared for: The Sacramento Valley Water Users Group by Robert J. Latour, Ph.D.</p>	<p>Previous Comments: Please see responses to your letter in BDCP 1597. As explained in the Executive Summary of the RDEIR/SDEIS, all of the comments received during the Draft EIR/EIS 2013–2014 public review period were considered in the development of the RDEIR/SDEIS. The RDEIR/SDEIS does not include responses to comments on the Draft EIR/EIS, though some revisions have been made in response to comments received on the Draft EIR/EIS. Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Response 42 regarding treatment of public comments.</p> <p>Integrating Work From Other Ecosystems: The lead agencies agree that, where available and appropriate, information from other ecosystems should be tapped to gain knowledge that is not available within the Bay-Delta ecosystem. As such, there are several citations used in the EIS/EIR from outside the Bay-Delta ecosystem. However, this ecosystem is often described as being unique among aquatic ecosystems with a unique set of complex challenges. Therefore, literature from the Bay-Delta ecosystem is used preferentially whenever possible. Uncertainty in conclusions, which inherently includes consideration of unforeseen effects, is clearly stated in the text.</p> <p>Focus on Fish Population Abundance: There are several analyses in the EIR/EIS and California WaterFix Biological Assessment (incorporated into the EIR/EIS by reference) that look at the effects described in the comment. For example, the Reclamation Salmon Mortality Model estimates survival of three life stage of Chinook salmon (pre-spawned eggs, fertilized eggs, and pre-emergent fry) based on water temperature. SALMOD assesses effects of flow on Chinook salmon spawning distribution through time and space, fecundity, redd area and superimposition, egg development rate, and juvenile growth rate. For more information about these models, please see the California WaterFix BA Attachment 5.D.1, Reclamation</p>

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			<p>Salmon Mortality Model, and Attachment 5.D.2, SALMOD.</p> <p>EIR/EIS Organization: Regarding the organization of the EIR/EIS as a list of impacts in isolation, the best way to address this is through the use of a life cycle model. The BDCP/CWF has reviewed all available life cycle models for all species (see BDCP HCP document Appendix 5G, Fish Life Cycle Models) and determined that only two could be used in this process – IOS and OBAN. Impacts are combined in summary tables to allow the reader to view all potential impacts across life stages as net effects. CEQA and NEPA do not require that a final ‘net effects’ conclusion be included; only that any significant impacts are identified.</p> <p>Turbidity Effects: The biotic (phytoplankton, zooplankton) portion of turbidity in the Delta is small relative to the abiotic portion (Ted Sommer, pers. comm.). Therefore, the increase in turbidity from construction, which is abiotic, would not cause bottom-up negative effects to delta smelt as the commenter cautions. In addition, the effects are temporary and localized, and would be minimized to the extent possible through environmental commitments. Please see Appendix 3B, Environmental Commitments, AMMs, and CMs, for more information</p> <p>Disturbance of Contaminated Sediments: Please refer to the California WaterFix (incorporated into the Final EIR/EIS by reference), Section 5.2.2.3.2, Disturbance of Contaminated Sediments, and Section 6.1.1.2.4, Disturbance of Contaminated Sediments, for more information on the complex dynamics of disturbed sediment contaminants.</p> <p>Underwater Noise: Regarding underwater noise, please refer to the California WaterFix Biological Assessment Section 6.1.1.2.5, Underwater Noise, for more information regarding the effects of construction-related noise on delta smelt.</p> <p>Fish Sampling: The best available data were used to predict spatial and temporal fish species presence near the intakes. Information on the locations and frequency of sampling in the beach seines and trawl monitoring cited by the commenter is readily available on the websites of the agencies that conducted the monitoring.</p> <p>Cofferdams: Regarding potential effects of cofferdams on delta smelt, the Final EIR/EIS fully discloses that in-water work has the potential to cause take of delta smelt through stranding (see Impact AQUA-1, sections titled “Fish Stranding” and “Fish Rescue and Salvage Plan”).</p> <p>Loss of Spawning, Rearing, or Migration Habitat: There is more certainty in the spawning location and behavior than the commenter indicates. We know that the majority of delta smelt synchronously migrated during the winter as noted in the comment. Sommer et al. (2009, 2011) found one additional life history strategy consisting of a small proportion of the population in which individuals appear to inhabit the Cache Slough area year-round. These individuals are not near the proposed intake locations and, therefore, expected to be minimally affected by the reduction in habitat. We know, based on the collection on young larvae, that delta smelt spawning takes place near this area. We know that few delta smelt individuals are caught in monitoring near the location of the intakes, but there may be more in the future as sea level rises. For more information on the spatiotemporal trends of delta smelt caught in monitoring, please see the California WaterFix BA, Section 6.1.3, Effects of Water Facility Operations on Delta Smelt.</p> <p>Predation at the North Delta Intakes: The recent biological assessment for the California WaterFix (Alternative 4A) describes the preconstruction studies that would inform refined intake designs (including issues related to predation) and must be completed before the final intake design (see Table 3.4-17 in Chapter 3).</p> <p>Delta Smelt Proportional Entrainment Analysis: The comment expresses concern about using proportions without a total population size. If the results are presented as a proportion lost, it would not matter what</p>

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			<p>the total population size is. Instead, this result would be valid regardless of the population size. As described in the text, this analysis is based on methods from the peer-reviewed scientific literature (Kimmerer 2011) and the 2008 biological opinion from the USFWS, which was reviewed by independent scientists. The second comment notes that an estimate of precision should be included in the results. The biological assessment for the California WaterFix (Alternative 4A) includes this estimate and, as shown in Figure 6.1-11 in the BA, there is large overlap between alternative and baseline, indicating that there is no statistical difference between the two.</p> <p>Delta Smelt Rearing Habitat Analysis: Regarding the use of Feyrer et al. 2011 in the delta smelt rearing habitat analysis, the Final EIR/EIS discusses limitations of the method, including, and in addition to, those noted in the comment. In addition, the California WaterFix Biological Assessment, Section 6.A.4.1 Abiotic Habitat Suitability (Feyrer et al. 2011), provides additional information about the scientific debate and uncertainty regarding this method.</p> <p>Longfin Smelt Distribution: The commenter is correct that there is very little overlap of the species' distribution with the proposed north Delta intakes (see the BDCP Public Draft Section 5.B.6.2.3.1, Occurrence near the Proposed North Delta Intakes, for a description of distribution in the intake area), and monitoring programs are sufficient to determine this. Please see the Figure 6.1-1 in the biological assessment of the California WaterFix for a map of survey station locations relative to the North Delta intakes. The commenter notes that many of the comments provided about delta smelt also apply to longfin smelt. The responses to these comments about delta smelt above would, therefore, also apply to longfin smelt.</p>
2624	1	<p>The following statement (or one very like it) should be added to the document at the appropriate location:</p> <p>Western [Area Power Administration]'s Proposed Federal Action:</p> <p>At DWR's request, Western began an evaluation of the feasibility of providing permanent and temporary transmission services to the proposed project. The "System Impact Study" (SIS) evaluates the effects to Western's transmission system if Western were to provide transmission service to DWR.</p> <p>A SIS typically includes the evaluation of capacity and reliability of the system. In this case, it includes potential effects of providing permanent and temporary transmission services to construction equipment (i.e., tunneling machines) as well as additional pump loads demanded by the proposed Alternatives 4 and 4A. If DWR decides to move forward with their request for transmission service from Western for these facilities, a Facilities Study will be completed to identify specific facilities and structures that may need to be constructed, upgraded, relocated, or modified to provide any requested transmission services.</p> <p>Western's Proposed Federal Action is to complete the SIS and Facilities Studies, and if requested, to support Reclamation's pending decision by performing the necessary construction, upgrades, relocations, or modifications of facilities and structures necessary, and to provide transmission service.</p>	<p>The comment was considered and the environmental document updated accordingly.</p>
2624	2	<p>Two acronyms for Western Area Power Administration are used throughout the document and appendices: "WAPA" and "Western." We prefer "Western" and this acronym should be used consistently throughout.</p>	<p>The Final EIR/EIS consistently uses WAPA as an abbreviation for Western Area Power Administration. The document does not use Western because there are numerous entities with the words West or Western in their names.</p>

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2624	3	Western [Area Power Administration] requests that its EIS number (DOE/EIS-0515) be placed on the cover page of the document.	WAPA's EIS number has been added to the cover sheet.
2624	4	<p>The proposed expansion of the Clifton Court Forebay will directly impact Western [Area Power Administration]'s existing Hurley-Tracy No. 1 and 2 double circuit 230-kilovolt (kV) transmission line (HUR-TRY 1&2), Tracy-Contra Costa/Tracy-Los Vaqueros 69-kV transmission lines (TRY-CC/LV Lines) and the Transmission Agency of Northern California's (TANC) Olinda-Tracy 500-Kv transmission line (TANC Line) as part of the California-Oregon Transmission Project. Western operates, maintains, and holds the land easement rights for this impacted segment of the TANC Line. When developing new transmission corridors, Western selects alignments that avoid crossing over or through open bodies of water unless required in order to span over rivers and/or canals. Reasonable access to maintain these transmission lines is critical to the operational reliability of Western's electric network and the TANC Line. An alignment of a Western transmission line over/through the proposed Clifton Court Forebay expansion is unacceptable to Western.</p> <p>If the proposed expansion of the Clifton Court Forebay is necessary as part of the BDCP, then the HUR-TRY 1&2, TRY-CC/LV Lines and TANC Line will need to be relocated/rerouted as required by Western and TANC. As these lines are part of the bulk electric system and critical to the reliability of the network, it should be noted that acquiring the necessary outages to relocate these lines may be limited or restricted under certain system operating conditions. Due to the close proximity of these lines and the critical role they serve in the reliability of the northern California bulk electric system, the planning associated with the relocation, design configuration, construction, and outage scheduling for these lines must be closely coordinated between Western and TANC. It is Western's preference to work directly with TANC to acquire the resources and perform these evaluations. The BDCP will enter into an agreement with Western which will include terms and conditions for advance funding and payment of all of Western's costs to relocate/reroute Western transmission lines.</p>	The lead agencies will coordinate with Western to minimize disruption to service and determine acceptable alignments for new and re-aligned transmission lines. Mitigation Measure UT-6: Relocate Utility Infrastructure in a Way That Avoids or Minimizes Any Effect on Operational Reliability, minimizes these effects. Existing corridors will be utilized to the greatest extent possible with the last priority being creating new corridors. Any utility relocation will be coordinated with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to communities, as required by California Water Code §11590 and associated agreements and any utility-specific guidelines such as WAPA's General Guidelines for the Use of Electric Transmission Line Rights-of-Way. Funding and payment will be coordinated and determined with the appropriate utility districts prior to beginning construction.
2624	5	For the proposed temporary and permanent transmission lines necessary to serve the BDCP temporary construction activities and ongoing BDCP pumping loads when the tunnels are placed in-service, Western [Area Power Administration] recommends an increase to the width of the proposed transmission line corridors from 150 feet to not less than 300 feet. Evaluating a wider corridor will allow for engineering flexibility during design and final alignment of the temporary construction and permanent easements that are expected to range between 100 and 150 feet for the transmission line segments.	<p>See Response to 2624-4. Project plans have not advanced yet to the point where engineering and design work are complete. Environmental review is typically conducted based on less complete plans, because complete engineering and design work is not required for impact assessment, and most project proponents are reluctant to invest in complete engineering and design work before they know that their projects have received the entitlements and permits needed to proceed towards construction. Please see Master Response 2 for further information regarding the level of detail provided in the EIR/EIS Analysis.</p> <p>The GIS footprint used in the Final EIR/EIS analysis assumes a transmission line corridor of 50 feet. However, if during the course of project design, flexibility is needed to slightly increase the corridor, the current analysis is anticipated to cover any of those impacts (the Draft EIR/EIS showed a transmission line corridor of 100 feet with no change to impacts). Chapter 3, Description of Alternatives, of the Final EIR/EIS, Section 3.6.1.6 and Appendix 3C, Construction Assumptions for Water Conveyance Facilities, describes in additional detail the assumptions used for this analysis.</p>
2624	6	Western [Area Power Administration] expects the lead federal agency for the EIS will be the lead federal agency for Section 106 National Historic Preservation Act compliance and all other consultation requirements required by the National Historic Preservation Act and all other laws, orders, and legislation regarding Native American consultation, including appropriate Government-to-Government consultation with federally recognized tribes. The lead agency for Section 106 requirements would be responsible	<p>The Bureau of Reclamation will be the lead federal agency for addressing Section 106 requirements.</p> <p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>

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		for all appropriate consultation with California State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation, and any other agency requirements. Western recommends that it be a signatory on any Programmatic Agreement and/or other appropriate agreements regarding Section 106 compliance for the BDCP. Western would review all cultural resource documents to ensure adequacy for Western's requirements as appropriate.	
2624	7	Western [Area Power Administration] recommends that the transmission line portion of the BDCP be included in the project Endangered Species Act (ESA) and Section 106 (NHPA [National Historic Preservation Act]) consultation and mitigation. If the transmission portion of the project is not sufficiently covered under the project ESA or NHPA consultation and mitigation, then it could cause delays and Western will need to complete additional ESA and NHPA consultation. If Western needs to relocate/reroute existing transmission lines to support the BDCP project, it is likely that Western would need to arrange for a separate ESA and NHPA consultation.	The transmission line portion of the project has not been finalized as the service provider has not been selected. ESA and NHPA consultations are ongoing and will be conducted prior to the determination of the final alignment for the transmission line. Please see Responses to Comments 2624-4 and 2624-6.
2624	8	One of the BDCP proposed soil spoils area is located in the vicinity of Western [Area Power Administration]'s TRY-CC/LV [Tracy-Contra Costa/Tracy-Los Vaqueros] Lines, towers 4/1 through 5/2, west of Clifton Court Forebay. Typically, the Western easement agreement restricts the landowner from piling or placing materials within the easement area. This restriction is needed to insure ground to conductor clearance of not less than 35 feet for the 69-kV circuits. In addition, 30 feet of unobstructed maintenance access is required around the towers.	The comment pertains to the BDCP/Alternative 4 evaluated in the 2013 Public Draft EIR/EIS. The proposed project and preferred alternative is now Alternative 4A/California WaterFix. Please refer to Response to Comment 2624-4 regarding agreements with Western.
2624	9	In general, plans for all tunnel crossings, spoil areas and any other use of Western [Area Power Administration]'s rights-of-way or easements shall be reviewed and approved by Western during the design phase and prior to construction.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. DWR will coordinate with Western regarding any activity within the ROW/easement.
2624	10	Western [Area Power Administration] requires an entity working in or around Western electrical power lines to abide and comply with the National Electric Safety Code and Occupational Safety and Health Administration (OSHA) standards. Equipment within a Western easement area shall not exceed (14) feet in height when the transmission line is energized.	The proposed project will be required to comply with all Cal-OSHA standards.
2624	11	During construction activities, BDCP must prevent or minimize the proliferation of dust from contaminating and building up on insulators of nearby Western [Area Power Administration] transmission lines.	Please see 3B.2.17 Fugitive Dust Control in Appendix 3B of the RDEIR/SDEIS for more information.
2624	12	All BDCP efforts must abide by Western [Area Power Administration]'s General Guidelines for the Use of Electric Transmission Line Rights-of-Way that can be found on our website at https://www.wapa.gov/regions/SN/Operations/Pages/right-of-way.aspx .	The Lead Agencies will coordinate early with the appropriate utility providers to ensure compliance with guidelines and regulations.
2624	13	Coordination with Western [Area Power Administration] throughout the NEPA process is appropriate and necessary to ensure that any action taken by Western to construct, remove, replace, install, acquire land, acquire easements, perform environmental reviews, etc. associated with the Western transmission system in support of the BDCP project is covered under the BDCP NEPA documentation (including required mitigation).	Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP. Alternative 4A has been developed in response to public and agency input. The EIR/EIS analyzes all alternatives, including Alternative 4A. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2625	1	Since 1945, California Waterfowl has been active in creating and maintaining managed wetlands habitats for migratory waterfowl, including ducks and geese. Because of the	The comment is noted and does not raise any issues related to the environmental analysis in the 2015

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		<p>loss of 95 percent of the historical wetlands in California, the remaining wetlands, two-thirds of which are in private ownership, have to be intensively managed to provide the optimum habitat value for migratory waterfowl. While not listed under the state or federal endangered species acts, migratory waterfowl are protected by legislation or treaty, including the North American Wetlands Conservation Act (NACWA) and the international Migratory Bird Treaty.</p> <p>The state and federal governments and private landowners such as farmers and duck clubs have invested millions of dollars in managed wetlands for the primary benefit of migratory waterfowl. These managed wetlands also benefit a variety of other bird species, as well as reptiles, fish, and mammals. They use natural and artificial water flows to flood wetlands, and then use developed infrastructure to hold and drain floodwaters as appropriate to provide food resources and suitable seasonal habitat.</p>	RDEIR/SDEIS or the 2013 DEIR/EIS.
2625	2	<p>In its previous comments, California Waterfowl recommended the adoption of Alternative 5, and objected to the adoption of Alternative 4. Although the new preferred alternative, Alternative 4A, removes many of the impacts that would have been caused by the previous Alternative 4, we are concerned that the analysis and mitigation of salinity impacts in the Suisun Marsh are insufficient. As stated in the comments of the Suisun Resource Conservation District, with which California Waterfowl agrees and incorporates into its comments by reference, the Recirculated EIR/EIS acknowledges that the project will cause increases in salinity in the Western Suisun Marsh, but does not adequately analyze or mitigate the impacts of the increase in salinity.</p> <p>Increases in salinity could, and most likely would, have severe impacts on the habitat values and food resources for migratory birds and other wetlands-dependent species in the Marsh. The loss of habitat would not only affect the migratory birds and other species as a public resource, but would negate the investments that California Waterfowl has made to improve the wetland habitat, as well as the state and federal governments and private landowners.</p> <p>The comments of the Suisun Resource Conservation District describe the deficiencies of the recirculated EIR/EIS in detail, as it relates to the Suisun Marsh. California Waterfowl adopts and incorporates those comments by reference. Due to the insufficiency of analysis and mitigation of salt-related impacts on wetlands on waterfowl habitat in the Suisun Marsh, California Waterfowl cannot support the adoption of Alternative 4A, and again urges adoption of Alternative 5.</p>	Regarding effects at Suisun Marsh, the modeling results provided in the RDEIR/SDEIS and cited in the comment are based on modeling that assumed no operation of the Montezuma Slough Salinity Control Gates. As explained in the RDEIR/SDEIS, Appendix A, Chapter 8, Water Quality, Impact WQ-11, the project description includes continued operation of the gates and modeling conducted for the Final EIR/EIS included the gate operation. The modeling results for EC in the Final EIR/EIS in Chapter 8, Water Quality, Impact WQ-11 show that EC levels in Suisun Marsh would not be substantially different from Existing Conditions or the No Action Alternative. See also Master Responses 4, 14, 17, and 22 for more information on development of alternatives, water quality, biological resources, and mitigation. Please also note that all comments received during the 2013 and 2015 public comment period are included in the FEIR/EIS. Please refer to the table of commenters to locate the letter of interest.
2626	1	<p>Save Our Sandhill Cranes was involved in numerous meetings during the preparation of the last iteration of the BDCP in an effort to improve mitigation and avoidance and minimization measures in the Stone Lakes area and on Staten Island. Throughout that process we were reminded that the BDCP would be providing huge benefits to crane conservation beyond the mitigations contemplated in CM 1. This is clearly not the case in the new iteration of California WaterFix and all we are left with is the huge tunnels project with inadequate mitigations for the impacts to Sandhill Cranes.</p>	<p>The commenter voices their concern that the preferred alternative is no longer part of the HCP/NCCP alternative which would provide more than 7,000 acres of habitat for the greater sandhill crane. Although no longer part of an HCP/NCCP alternative, the preferred alternative (Alternative 4A) has maintained the majority of the biological goals and objectives (Resource Restoration and Performance Principles in the preferred alternative) that were developed through the BDCP with the purpose of contributing to recovery of the subspecies. These include creating at least 595 acres of roosting habitat with associated upland habitat, all located within 2 miles of existing permanent roost sites (180 acres of which would occur within the Stone Lakes National Wildlife Refuge Project Boundary). In addition, the avoidance and minimization measures still apply including the avoidance of direct loss construction related loss of roost sites and avoidance and minimization of construction-related effects on roost sites. More stringent avoidance and minimization measures have also been developed which consider undergrounding new powerlines or using natural gas generators in lieu of transmission lines in high-risk zones of the greater sandhill crane winter use area. As described in the REIR/REIS, Alternative 4A substantially reduced the length of permanent and</p>

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			<p>temporary transmission lines as compared to the Draft BDCP, greatly reducing the likelihood of crane collisions. Under Alternative 4A, no permanent transmission lines would be constructed within the greater sandhill crane winter use area. In addition, no new transmission lines (permanent or temporary) would be constructed in the vicinity of Staten Island which is one of the most important wintering sites for greater sandhill cranes in the Delta. The primary difference between the preferred alternative and the HCP alternatives is a reduction in the amount of protected agricultural lands for foraging. However, this is a result of substantially reduced project impacts on foraging habitat as the acres of greater sandhill crane foraging habitat that would be protected under Alternative 4a are proportional to the acres that would be impacted by the project footprint.</p> <p>Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state’s long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan.</p> <p>Additional priority restoration projects will be identified through regional and locally-led planning processes. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta, as an effort lead by the Delta Conservancy. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will likely lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the Delta.</p>
2626	2	Save Our Sandhill Cranes wants to go on the record as agreeing with the concerns and issues brought up in the ECOS/Habitat 2020 and the Friends of Stone Lakes letters regarding the various iterations of the EIR/S (including the DEIR/DEIS and now the RDEIR/SDEIS). We are also in agreement with the concerns expressed in the Delta Independent Science Board letter, dated September 30, 2015, that identified scientific deficiencies in the California WaterFix recirculated DEIR/DEIS.	For responses to comments related to the Delta Independent Science Board’s letters, please refer to comment letters BDCP 1448 and/or RECIRC 2546. Please refer to the list of commenters and comment letter numbers to find responses to other letters submitted during the public comment periods.
2627	1	<p>TCCA [Tehama-Colusa Canal Authority] has reviewed the Bay Delta Conservation Plan/California Water (“BDCP/Fix”) Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (“Plan documents”) that were made available for Public Review, and provides the following comments in response to the new and recirculated documents. TCCA previously commented on the Bay Delta Conservation Plan and the accompanying Draft Environmental Impact Report/Environmental Impact Statement (“EIR/EIS”) that were released for public review in December of 2013. TCCA hereby incorporates by reference and restates all of our previously submitted comments to the original Plan documents into this set of comments (said comments are dated July 29, 2014).</p> <p>Further, TCCA hereby incorporates by reference and again joins both the previously submitted comments and additional comments submitted on this Plan documents by the North State Water Alliance (including all attachments and reports accompanying those comments as though full stated herein).</p>	The lead agencies acknowledge the commenters’ incorporation of previously submitted comments and comments submitted by the NSWA by reference. Please refer to the index of commenters to locate letters (including substantive attachments) submitted during the 2013 Draft EIR/EIS public review period and the 2015 RDEIR/SDEIS public review period and their responses.
2627	2	TCCA [Tehama-Colusa Canal Authority] must underscore several of the comments made in the North State Water Alliance comments, which are of particular importance to TCCA. First, TCCA is gravely concerned that the proposed operations of the BDCP/Fix will have the impact of draining north of Delta CVP reservoirs on a much more frequent	The proposed project would not affect upstream water rights. It aims to allow the federal and state water projects to deliver more reliable water supplies, and in a way less harmful to fish. The project does not increase the amount of water to which DWR holds water rights or for use as allowed under its contracts. The CALSIM II modeling performed for conveyance facility operations takes into account projected future

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		<p>basis than presently, thereby diminishing greatly the water supply reliability for both the Sacramento River Settlement Contractors and the TCCA water users. Water users in the Sacramento Valley are protected by California's "area of origin" statutes. The BDCP/Fix and the accompanying EIR/EIS are filled with statements to the effect that the BDCP/Fix will not interfere with these uses of water. TCCA requests that the BDCP/Fix conduct the necessary modeling, by utilization of the best available science, to redefine and reconfigure its proposed operations to address the impacts to upstream water supplies. Such legally required assurances do not exist, despite the voluminous documentation that has occurred as part of the Plan documents. The operations proposed by the BDCP/Fix must comport with water rights law and avoid both regulatory and water supply impacts to upstream water users and fish and wildlife concerns. Absent these assurances, TCCA cannot support the BDCP/Fix as currently formulated. Moreover, without such guarantees, TCCA believes that the State Water Resources Control Board will not be able to approve the changes in point of diversion needed to effectuate the BDCP/Fix, due to both the injury to other legal users of water, and due to impacts caused to fish and wildlife resources in the Sacramento Valley and the Delta.</p>	<p>demand for water supply in areas upstream of the Delta (as part of the future No Action baseline) prior to calculating Proposed Project diversion estimates to ensure that no area-of-origin protections or upstream water rights are affected by project conveyance facilities. Please see Appendix 5A of the FEIR/FEIS for additional modeling details.</p> <p>Please refer to Master Response 26 (Area of Origin) and Master Response 25 (Upstream Reservoir Effects) for additional information regarding effects on upstream operations.</p>
2627	3	<p>The resulting water supply shortages would have two direct negative impacts on north state agriculture and local economies. First, it would result in the greatly enhanced reliance on groundwater within the agricultural areas north of the Delta that would see a resulting reduction in their surface water supply. This impact could be magnified greatly in light of the newly enacted Groundwater Sustainability Management Act. Further, many areas within the TCCA [Tehama-Colusa Canal Authority] service area do not have reliable or adequate groundwater supplies. These factors would lead to significant economic impacts in the form of increased irrigation costs, following of significant acreage, the loss of investment in permanent crops and annual cropping opportunities, and the resulting third party economic impacts that would reverberate through the regional economy, where agriculture is the foundation. None of these groundwater or economic impacts are sufficiently identified or analyzed in the Plan documents.</p>	<p>The proposed project would not significantly impact local water supplies. While groundwater levels could be temporarily lowered in localized areas during the dewatering phases of construction, groundwater would return to pre-pumping levels over the course of several months following the dewatering phase. Mitigation has been proposed to maintain water supplies in areas affected by construction dewatering. Additionally, the lead agencies would relocate and/or replace wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses and would be adversely affected by project construction or operation. For additional information regarding proposed agricultural mitigation, please see Master Response 18.</p>
2627	4	<p>Any financing plan must adhere to the principle of "beneficiary pays." At present, this project lacks any details on dependable and/or viable plan to finance this Project. Of direct concern to TCCA [Tehama-Colusa Canal Authority] is the fact that Reclamation has indicated that the costs associated with providing water to south of Delta refuges would be treated as an operations and maintenance cost, and so would be invoiced to all federal contractors on an annual basis. TCCA objects strongly to this proposed charge, on the ground that the proposed tunnels (and their associated capital and operations and maintenance costs) are not needed in order to move water to south of Delta refuges. If it is Reclamation's desire to move such water through the proposed tunnels, then that charge is properly paid for by the proponents of the Project, not north of Delta federal water contractors who do not benefit from, and are not pursuing the implementation of, the BDCP/Fix.</p>	<p>Master Response 5 regarding the adequacy of the BDCP funding strategy. The EIR/EIS is not required to describe the cost of other mitigation measures. Please also note that the BDCP is no longer included in the preferred alternative, Alternative 4A. Reclamation has not determined any cost recovery strategy for California WaterFix (CWF). If Reclamation chooses to participate in CWF by utilizing the conveyance facilities that are constructed, then collecting operation and maintenance costs through a wheeling agreement is just one cost recovery strategy that Reclamation is exploring.</p>
2627	5	<p>The BDCP/Fix EIS/EIR has many fatal flaws that do not meet the statutory requirements of NEPA and/or CEQA. The primary and overwhelming shortcoming is the complete lack of an adequate project description. This shortcoming makes it impossible to provide comments on a project that is not readily identifiable. Not to be completely flippant, but when the project proponents figure out what exactly the project is, and how it will be operated, we will then be prepared to provide more tangible comments. Instead, we are left filling in the blanks and guessing at the project, its operations, and having to assume</p>	<p>Please refer to Master Response 2 for a discussion of the programmatic and project specific level of analyses contained in the EIR/EIS. Please also refer to Master Response 38 regarding the length and readability of the document.</p>

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		the impacts that are not sufficiently analyzed. As such, the document is wholly inadequate in meeting the requirements of NEPA and/or CEQA, not to mention concerns with its compliance with the Federal and California ESAs and California water rights law.	
2627	6	Shortcomings with the Plan documents include the following: The operations and baseline assumptions are not accurately or sufficiently portrayed or defined.	Operational effects on water supply, surface water, groundwater, water quality and fish and aquatic resources were estimated using CALSIM, DSM2 and other biological models. The approach and assumptions used in the modeled baseline conditions are presented in Appendix 5A of the EIR/EIS. Please also refer to Master Response 1 addressing the environmental baseline.
2627	7	Shortcomings with the Plan documents include the following: The description of the operations is vague and uncertain; The underlying impact analysis is wholly insufficient; The modeling and impact analysis relies on assumptions from the BDCP timeframe that are no longer valid or reliable in regard to the amount of restoration and other conservation measures that are no longer certain to occur; The decision tree/adaptive management process is completely undefined and inadequate for analysis; The modeling is reliant on outdated data; The analysis used the wrong version of the CALSIM model; The operations described are unrealistic and employ modeling gimmicks that cannot occur in the real world; The described operations rely on water from upstream users at times when that water is unavailable; [and] The documents fail to address or analyze the relied upon water transfers, that must be (yet have not been) voluntarily agreed to by upstream sellers to make this operation work.	Please refer to Master Responses 2 (Program versus project level analysis), Master Response 25 (Effects on Upstream Users), Master Response 30 (Modeling), Master Response 33 (Adaptive Management), and Master Response 43 (Water Transfers) for further discussion of the various issues raised by the commenter. The proposed project would not affect upstream water rights. It aims to allow the federal and state water projects to deliver more reliable water supplies, and in a way less harmful to fish. The proposed project does not increase the amount of water to which DWR holds water rights or for use as allowed under its contracts. The CALSIM II modeling performed for conveyance facility operations takes into account projected future demand for water supply in areas upstream of the Delta (as part of the future No Action baseline) prior to calculating Proposed Project diversion estimates to ensure that no area-of-origin protections or upstream water rights are affected by project conveyance facilities. Please see Appendix 5A of the FEIR/FEIS for additional modeling details. With regards to area of origin, please see Master Response 26.
2627	8	Shortcomings with the Plan documents include the following: The project is not economically viable.	Please refer to Master Response 5 regarding costs and implementation. As described in Chapter 16, Socioeconomics, under Alternative 4, Impact ECON-1, and construction employment is estimated to peak at 2,427 FTE jobs in year 3. Total employment (direct, indirect, and induced) would peak in year 12, at 8,673 FTE jobs. Direct agricultural employment would be reduced by an estimated 16 FTE jobs, while total employment (direct, indirect, and induced) associated with agricultural employment would fall by 57 FTE jobs. Because construction of water conveyance facilities would result in an increase in construction-related employment and labor income, this would be considered a beneficial effect.
2627	9	Shortcomings with the Plan documents include the following: The document is now so convoluted that it is hard to follow, confusing, misleading, and has so many errors and references to the wrong place or supporting documents that don't exist or can't be located that it is undecipherable at many times; Modeling underestimates exports and overestimates Delta outflow; [and]	For more information regarding the document's length and complexity please see Master Response 38. For further information regarding the adequacy and approach to modeling, please refer to Master Response 30. The water supply and Delta hydrodynamic modeling conducted for the EIR/EIS specifically considered and included potential future climate change to hydrologic and water quality variables. The anticipated hydrologic changes due to climate change (increased temperatures and more years of critical dryness, increased water temperatures, changes in precipitation and runoff patterns, sea level rise, and tidal variations) will constrain and challenge future water management practices across the state, with

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		Modeling fails to accurately describe climate change.	or without the proposed project. The state is addressing climate change through strategies and a decision-making framework as outlined in the California Climate Adaptation Strategy and Adaptation Planning Guide. However, no single project and indeed none of the project alternatives would be able to completely counteract all of the impacts of climate change. For additional information regarding Greenhouse Gas Emissions and Climate Change, please see Master Response 19.
2627	10	Shortcomings with the Plan documents include the following: The Plan fails to adequately protect ESA listed fish species; [and] The Plan documents fail to sufficiently analyze the impacts on ESA listed fish species, particularly coldwater pool needs of winter-run salmon and habitat needs of Delta smelt.	The preferred alternative, 4A, does not propose any changes in upstream operations or criteria. As such, the analysis does not show that the project would cause any significant effects on the cold-water pool. Additionally, the preferred alternative includes operational criteria that minimize and avoid effects to Delta Smelt related to entrainment and rearing habitat, and includes habitat restoration and avoidance measures to address construction effects. The effects of all of these activities are described in the EIR/EIS, including demonstration of the minimal changes in upstream habitats. ESA compliance for avoiding jeopardy of listed species will be conducted through the Section 7 process, where FWS and NMFS will determine the adequacy of the project in meeting ESA obligations.
2627	11	Shortcomings with the Plan documents include the following: The Plan documents continue to assume restoration of a greater quantity than now committed to, as well as other conservation measures that are no longer certain or part of the project, and therefore can no longer be counted on to offset impacts.	The proposed project was developed to meet the standards of the Clean Water Act and federal and state Endangered Species Acts, and is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria to improve water operations of the proposed project. It is designed to improve native fish migratory patterns and allow for greater operational flexibility. The project will be required to mitigate impacts to natural resources; however, if selected Alternative 4A is not a HCP and does not include the conservation measures originally associated with the BDCP. The State is delivering the EcoRestore program separately. Please see Master Response 5 for further discussion concerning implementation agreements and conservation measures.
2627	12	Shortcomings with the Plan documents include the following: The Plan fails to rely upon the best available science regarding the fishery ESA concerns.	The operational criteria included in the preferred alternative, 4A, is based on several years of coordination with fish agencies and incorporation of the best available science to avoid and minimize the effects of changes in Delta operations. Additionally, a ROD will not be issued until the completion of the Section 7 consultation with FWS and NMFS, with the issuance of a BiOp pertaining to all of the ESA-listed species that could be affected by the preferred alternative.
2627	13	Shortcomings with the Plan documents include the following: The Plan documents consistently utilize an optimistic approach related to any uncertainty of the benefits of the proposed actions, yet minimizes the impacts at every turn at the same time; [and] The Plan lacks any tangible description of a sufficient or acceptable monitoring program.	The main role of CEQA and NEPA is to provide decision makers and the public with an objective evaluation of the potential adverse impacts of a project. If the impacts are found to be significant, then the question is whether such impacts can be mitigated or if there is a feasible alternative that would substantially lessen significant impacts. While project proponents can present the potential benefits in the environmental documentation and in the planning documents, state and federal laws require an objective and critical analysis of the significant adverse or negative environmental impacts/effects. The Lead Agencies therefore reject the notion that the documentation "minimizes the impacts at every turn..." as characterized by the commenter. The Federal and State Lead Agencies have done their best to make the Final EIR/EIS for the BDCP and California WaterFix as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached. However, DWR and USBR have strived to use the best available science throughout the effects analysis, consistent with the requirements of applicable state and federal environmental legislation and regulation. Additionally, the official public review process for the proposed project provides an opportunity for formal public comment on the proposed project and project alternatives. Public and agency comments on the public draft have led to further refinement of the

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			<p>proposed project, as evidenced in the RDEIR/SDEIS.</p> <p>Given that considerable scientific uncertainty does exist regarding the Delta ecosystem, including the effects of CVP and SWP operations and the related operational criteria, DWR, Reclamation, DFW, USFWS, NMFS, and the public water agencies will establish a robust program of collaborative science, monitoring, and adaptive management. The Collaborative Science and Adaptive Management Program (AMMP) developed for the California WaterFix Project (Alternative 4A) would not, by itself, create nor contribute to any new significant environmental effects; instead, the AMMP would guide the operation and management of facilities and protected or restored habitat associated with Alternative 4A to comply with applicable environmental laws on the basis of new scientific and technical information developed through the collaborative science aimed at addressing areas of uncertainty.</p> <p>Collaborative science and adaptive management will support the proposed action by helping to address scientific uncertainty where it exists, and as it relates to the benefits and impacts of the construction and operations of the new water conveyance facility and existing CVP and SWP facilities.</p> <p>The collaborative science effort is expected to inform operational decisions within the ranges established by the biological opinion and 2081(b) permit for the proposed action. However, if new science suggests that operational changes may be appropriate that fall outside of the operational ranges evaluated in the biological opinion and authorized by the 2081(b) permit, the appropriate agencies will determine, within their respective authorities, whether those changes should be implemented. An analysis of the biological effects of any such changes will be conducted to determine if those effects fall within the range of effects analyzed and authorized under the biological opinion and 2081(b) permit. If NMFS, USFWS, or DFW determine that impacts to listed species are greater than those analyzed and authorized under the biological opinion and 2081(b) California WaterFix permit, consultation may need to be reinitiated and/or the permittees may need to seek a 2081(b) permit amendment. Likewise, if an analysis shows that impacts to water supply are greater than those analyzed in the EIR/EIS, it may be necessary to complete additional environmental review to comply with CEQA or NEPA.</p> <p>For more information on monitoring, please refer to ES.4.2 (Collaborative Science and Adaptive Management Program) on pages ES-37 through ES-39 of the RDEIR/SDEIS) and to Master Response 33, Adaptive Management and Monitoring. With respect to CEQA, a mitigation monitoring and reporting program (MMRP) shall be developed and presented to the decision makers at the time when they will consider certification of the EIR and project approval. The MMRP shall be designed to ensure compliance with adopted mitigation measures during project implementation, as required by Section 21081.6 of the Public Resources Code. The MMRP is not part of the Final EIR; instead, it is a separate document and need not be circulated with the draft EIR/EIS prior to action taken by the decision makers.</p>
2627	14	<p>Shortcomings with the Plan documents include the following:</p> <p>The Plan documents only look at tunnel alternatives, instead of truly examining other alternative options such as increased storage and/or other methods to meet the goals of the project.</p>	<p>For more information regarding why water storage was not included in the proposed project, refer to Master Response 37 (Storage) and Appendix 1B, Water Storage, EIR/EIS. Please refer to Master Response 4 for additional details on the selection of alternatives. Also, please see Master Response 6 for details on demand management and Master Response 3 for additional details on the project purpose and need.</p>
2627	15	<p>Despite the extensive critical comments and concerns voiced herein, TCCA [Tehama-Colusa Canal Authority] does wish to highlight that we continue to be committed to working collaboratively with all statewide water interests in the effort to find balanced and equitable solution for the Delta. We have made this sentiment clear throughout the proceeds to the BDCP project proponents, as well as to DWR and USBR. Despite the incredible volume of material produced and numerous meetings held, [a] real collaborative process has yet to take place. As a result, this process has yielded a set of documents, alternatives and a plan that is viewed with skepticism and concern. The</p>	<p>The commenter does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. The Proposed Project is the result of more than seven years' collaboration and consultation with numerous stakeholders, agencies, public water agencies and environmental organizations. The feedback was used to guide the development and subsequent revisions of the Proposed Project and its associated EIR/EIS to reflect concerns addressed from the various groups. All of the documents, studies, administrative drafts, and meeting materials have been posted online since 2010 in an unprecedented commitment to provide public access and government transparency. The Lead Agencies remain committed to working</p>

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		north state is receptive to and supportive of finding solutions to these problems, we just do not want to be the solution. The resulting Plan documents have merely served to solidify our concerns and criticisms. It is the sincere belief of the upstream stakeholders that a collaborative effort that takes into account our needs and concerns would result in a much more balanced, achievable and supportable solution. TCCA is committed to such a collaboration should the opportunity present itself.	collaboratively with all interested and affected parties. Please also refer to Master Responses 39 and 40 for further discussion regarding public review and outreach.
2628	1	The RDEIR/SDEIS weaves an artificial reality: an omelet of distortion and half-truth crafted to support a preordained conclusion. It is the most deficient EIR/EIS we have reviewed in more than three decades of analyzing environmental documents. As the Delta Independent Science Board (DISB) more charitably characterized it in its review, "we find the Current Draft sufficiently incomplete and opaque to deter its evaluation and use by decision-makers, resource managers, scientists, and the broader public." (Delta Independent Science Board review of the RDEIR/SDEIS, 30 September 2015, page 1)	The lead agencies believe that the EIR/EIS is complete in its evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS. Although the lead agencies have identified a proposed project and a preferred alternative – alternative 4A, the lead agencies have not impermissibly pre-committed to or pre-approved the proposed project. Please also see Master Response 4. Please refer to the tables of commenters and comment letters #1448 and #2546 to see responses to the Delta Stewardship Council's comment letter including the Delta Independent Science Board's comments.
2628	2	The RDEIR/SDEIS is needlessly complex, is based upon outdated and incomplete information, is internally inconsistent in its analyses and its conclusions are irreconcilable with the facts and analyses. It fails to provide comprehensible summaries of environmental impacts.	The size and complexity of these drafts reflect an unprecedented effort to analyze a proposed project under both state and federal laws for endangered species along with 17 action alternatives. Please refer to Master Response 38 for comments pertaining to the length and complexity of the EIR/EIS. Please refer to Chapter 32 of the Final EIR/EIS and Master Response 40 for information regarding outreach conducted for California WaterFix (and previously the BDCP). The lead agencies believe that 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.
2628	3	The RDEIR/SDEIS ignores U.S. Environmental Protection Agency's request to analyze an alternative that would comply with water quality standards, as it ignores the State Water Resources Control Board's (SWRCB) request to analyze an alternative with higher Delta outflows.	Please see Master Response 4 regarding the range of alternatives selected. The alternatives included in the Draft EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the Draft EIR/EIS. In response to public input, several new alternatives have been studied in the Recirculated DEIR/EIS and a new preferred Alternative (4A) identified. The alternatives included in the FEIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A of the DEIR/EIS, Identification of Water Conveyance Alternatives, Conservation Measure 1. Appendix 3A thoroughly explains why various proposals were not analyzed in the EIR/EIS, including the NRDC Portfolio-Based Proposal, Congressman Garamendi's Water Plan, and other similar concepts that would require actions that are beyond the scope of the proposed project. Please see Master Response 3 for information on the purpose and need for the proposed project. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts; as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of diversion in the north Delta the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.

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2628	4	The RDEIR/SDEIS hides the modeling results requested by the State Water Board in Appendix C, without subsequent discussion or analysis because those modeling results demonstrate that fisheries criteria and water quality standards can be significantly met by reductions in water exports.	The modeling results included Appendix C were placed in this appendix in the RDEIR/SDEIS because they were not part of the alternatives analyzed in Draft EIR/EIS; and therefore, were not included in Appendix A or Chapter 2 of the RDEIR/SDEIS. The modeling results included Appendix C were considered in the development of Alternative 4A as described in the Final EIR/EIS.
2628	5	The RDEIR/SDEIS fails to analyze and discuss alternatives that include higher Delta flows coupled with reduced exports. The 2009 Delta Reform Act required the State Water Resource Control Board to conduct an extensive public proceeding to determine flow criteria necessary to protect public trust resources and the California Department of Fish and Wildlife (CDFW) to conduct a public proceeding to determine quantifiable biological objectives and flow criteria to protect Delta species of concern. Both the State Water Resource Control Board and CDFW found that, based upon best available science, significant increases in Delta flows are necessary to protect public trust resources. Given the accelerating collapse of Delta fisheries since release of those reports, it is likely that increased flows will be required to protect fisheries. The failure of the RDEIR/SDEIS to analyze and discuss alternatives requiring increased flow/reduced exports because such an alternative would not meet project goals renders the document legally inadequate and virtually useless for decision-makers and the public.	The proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta, as described in Chapter 5, Water Supplies, and Chapter 6, Surface Water. The model results in Final EIR/EIS for Alternative 4A indicate that flows and export volumes would increase in wet, above normal, and below normal years between December and March and in June and July as compared to the Existing Conditions and No Action Alternative. Export rates and volumes would not substantially change in April and May. During the September through December period in all year types and in February and March in wet and above normal year types, Delta outflow would increase under Alternative 4A as compared to Existing Conditions. However, Delta outflow would be similar or less in most conditions except in October in all water year types as compared to the No Action Alternative.
2628	6	The RDEIR/SDEIS disingenuously represents that already degraded fisheries and impaired water quality can be protected by diverting additional millions of acre-feet of water from an estuary whose environmental tapestry has already been shredded by the diversion of half its inflow.	The proposed project was developed to meet the standards of the federal and state Endangered Species Acts; as such it is intended to be environmentally beneficial, not detrimental. Please refer to Master Response 3 for the Purpose and Need and Master Response 28 for a discussion of the proposed project's Operational Criteria. The volume of water anticipated to be exported under Alternative 4A would be almost the same than the no action alternative. There would be no "additional millions of acre-feet of water" exported as the commenter asserts. For more information on volumes of water exported under the alternatives, please refer to model results presented in Chapter 5 Water Supply. For more information regarding CALSIM II modeling results please see Appendix 5A of the FEIR/EIS. For more information regarding purpose and need please see Master Response 3.
2628	7	By diverting prodigious quantities of the least contaminated water around the Delta, the California WaterFix will increase the concentration of pollutants in the estuary and lead to significantly increased violations of water quality standards. Consequently, WaterFix is inconsistent with the Delta Reform Act's requirements to "improve water quality" and achieve "water quality objectives in the Delta."	The EIR/EIS fully addresses the potential water quality effects of the California WaterFix on beneficial uses upstream of the Delta, in the Delta and downstream of the Delta. Most of the water quality constituent effects would not be significant. Where significant effects are identified impacts are reduce to less than significant levels with mitigation (i.e electrical conductivity). One impact for the California WaterFix related to mercury levels in tidal restoration areas is considered significant. Please refer to Chapter 8, Water Quality and Master Response 14, which addresses water quality issues.
2628	8	Additional diversions will degrade critical habitat for endangered species already tottering on the precipice of extinction by depriving it of crucially needed inflow identified as necessary for species survival. WaterFix is, therefore, inconsistent with the Delta Reform Act's requirements to "restore the Delta ecosystem."	For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31.
2628	9	Additional degradation of Delta water quality and the failure to include a defensible antidegradation analysis ensures that both WaterFix and the RDEIR/SDEIS are inconsistent with Porter-Cologne and the federal Clean Water Act.	Please refer to Master Response 14 regarding assessment of water quality the EIR/EIS, and the relevance of federal and state antidegradation policy considerations in the CEQA/NEPA process.
2628	10	The RDEIR/SDEIS provides few details of how the state and federal projects will operate to protect fisheries and water quality under California WaterFix, leaving the details to an undefined future adaptive management program. However, adaptive management has been the professed principle of water operations since CalFed. The National Research	The adaptive management and monitoring program will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, state 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final,

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		<p>Council's 2011 report titled A Review of the Use of Science and Adaptive Management in California's Draft Bay Delta Conservation Plan, describes adaptive management as a marvelous idea that frequently fails because of variety of enumerated reasons. (footnote 1: The list of reasons for failure of adaptive management programs include: lack of resources; unwillingness of decision makers to admit to and embrace uncertainty; institutional, legal, and political preferences for known and predictable outcomes, the inherent uncertainty and variability of natural systems; the high cost of implementation; and the lack of clear mechanisms for incorporating scientific findings into decision making.</p> <p>http://www.nap.edu/catalog/13148/a-review-of-the-use-of-science-and-adaptive-management-in-californias-draftbay-delta-conservation-plan) All of these identified reasons exist on steroids in the management of water resources in the Delta. The lack of identified specificity in the RDEIR/SDEIS adaptive management program is a CEQA/NEPA fatal flaw.</p>	<p>such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and state 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act).</p> <p>Please refer to Master Response 33 regarding adaptive management and monitoring.</p>
2628	11	<p>The RDEIR/SDEIS ignores and fails to adequately analyze the trend, extent and magnitude of continuing declines in pelagic and anadromous fisheries. Since 1967, the California Department of Fish and Wildlife's Fall Midwater Trawl abundance indices for striped bass, Delta smelt, longfin smelt, American shad, splittail and threadfin shad have declined by 99.7, 97.8, 99.9, 91.9, 98.5 and 97.8 percent, respectively. (footnote 2: http://www.dfg.ca.gov/delta/projects.asp?ProjectID=FMWT) Every single survey of Delta smelt in late 2014 through mid-2015 identified new historic lows in species abundance. (footnote 3: See Bibliography: https://www.wildlife.ca.gov/Conservation/Delta/20mm-Survey; https://www.wildlife.ca.gov/Conservation/Delta/Spring-Kodiak-Trawl; https://www.wildlife.ca.gov/Conservation/Delta/Townet-Survey) The U.S. Fish and Wildlife's (USFWS) Anadromous Fisheries Restoration Program (AFRP) documents that, since 1967, in-river natural production of Sacramento winter-run Chinook salmon and spring-run Chinook salmon have decline by 98.2 and 99.3 percent, respectively, and are only at 5.5 and 1.2 percent, respectively, of doubling levels mandated by the Central Valley Project Improvement Act, California Water Code and California Fish & Game Code. (footnote 4: See, http://www.fws.gov/lodi/afrp/) For example, population year classes of naturally reproducing Sacramento River winter-run, spring-run and fall-run Chinook salmon were virtually destroyed by lethal temperatures in 2014 (footnote 5: State Water Resource Control Board, Order Conditionally Approving a Petition for Temporary Urgency Changes in License and Permit Terms and Conditions Requiring Compliance with Delta Water Quality Objectives in Response to Drought Conditions, 3 July 2015, pp. 15,16: http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/tucp_order070315.pdf And NRDC, TBI, Drought Operations Will Cause Additional Unreasonable Impacts on Fish and Wildlife in 2015, 20 May 2015, slide 2: http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/workshops/nrdc_tbi_pres.pdf) and, as of 15 October, the 2015 winter-run year class numbers are 22% below last years decimated levels. (footnote 6: http://www.sacbee.com/news/state/california/water-and-drought/article41684160.html)</p>	<p>Appendices 11A and 11B of the DEIR/EIS include descriptions of the declines of covered and noncovered fish species.</p>
2628	12	<p>The RDEIR/SDEIS's analyses are predicated upon assumptions of compliance with existing water quality standards contained in State Water Resources Control Board's (SWRCB) D-1641 and the reasonable and prudent measures contained in the biological opinions issued by the U.S. Fish and Wildlife Service and National Marine Fisheries</p>	<p>The existing regulations contained in D-1641 and the BiOps were correctly assumed as part of the existing condition and No Action baselines for CEQA and NEPA evaluation. The SWRCB will be updating the WQCP as a separate process and CVP and SWP will be required to comply with the final plan and its flow and water quality regulations. Temporary changes in water quality compliance as a result of drought or other</p>

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		Service (NMFS). However, it grievously fails to acknowledge, discuss or analyze the fact that the SWRCB has adopted a pattern and practice of serially weakening compliance with adopted water quality standards or to analyze or discuss the failure of the biological opinions to reverse or reduce the continued decline of listed species.	conditions are within the purview of the SWRCB, and any potential future adjustments are speculative. Similarly, any applicable future BiOps would be part of the compliance matrix for Delta operations, and the current BiOps were issued with RPAs that are being implemented and were found to meet the requirements of ESA to avoid jeopardy and adverse modification of critical habitat.
2628	13	The RDEIR/SDEIS fraudulently claims that fish screens on the new diversion will be protective of aquatic life but fails to acknowledge and discuss that the proposed screens are highly experimental and that many of the studies required to determine if the screens will actually work are proposed post-construction. As the Delta Independent Science Board observed, these "measures are assumed to function as planned, with no evidence to support the assumptions." (Delta Independent Science Board review of the RDEIR/SDEIS, 30 September 2015, page 17) Nor does the RDEIR/SDEIS discuss or analyze the fact that the new screens will be located in close proximity to critical spawning and rearing habitat areas and will not prevent entrainment of eggs or larval Delta smelt, longfin smelt, Sacramento splittail and smaller lamprey ammocetes that will be present during periods of diversion or that the new screens will not prevent the massive entrainment of primary production and lower trophic orders that form the base of the food web. And the RDEIR/SDEIS is silent on the need to retrofit the obsolete South Delta fish screens to state-of-the-art standards, despite the fact that half of Delta exports (more in drier periods) will continue to be diverted via those inadequate facilities.	Various preoperational and post-construction studies are proposed to better inform screen design and effectiveness. The RDEIR/SEIS conclusions related to potential entrainment at the NDD draw on the analysis in the DEIR/EIS, which incorporates detailed analyses provided in the public draft with respect to life stages expected to be screened at the NDD. The Biological Assessment of Alternative 4A (California WaterFix) for ESA-listed fishes conducted an analysis of potential entrainment of phytoplankton carbon, which showed that losses would not be significant in relation to the overall stock within the Delta. DWR is required to improve salvage efficiency (including reducing prescreen losses across Clifton Court Forebay) as part of compliance with the NMFS (2009) CWP/CVP biological opinion; changes in fish screen design are not proposed as part of any of the alternatives assessed in the RDEIR/SDEIS. Please also see Master Response 17. The positive-barrier fish screens for the proposed north Delta intakes would be designed to establish protection standards for salmonids and delta smelt, and would comply with CDFW, NMFS, and USFWS fish screening criteria. Appendix 3F of the RDEIR/S provides details on the development of intakes and fish screening technology, as well as the Conceptual Engineering Reports (CERs). It is proposed that monitoring and research would be conducted to inform the fish screen design, construction, and operation in order to maximize their effectiveness. Dual operations provides for flexibility that will better protect the fish based on real time data. For responses to comments related to the Delta Independent Science Board's letters, please refer to comment letters BDCP 1448 and/or RECIRC 2546.
2628	14	The RDEIR/SDEIS erroneously assumes that habitat losses can be simply mitigated by purchases of additional habitat acreage. This betrays a fundamental misunderstanding of aquatic habitat. Aquatic habitat comprises the physical and chemical parameters necessary for renewable fisheries. Present habitat restoration efforts have largely failed and have become habitat for invasive species because they failed to reproduce the conditions necessary for native species to thrive. The RDEIR/SDEIS also ignores the historical record of habitat mitigation: required habitat mitigation in the CalFed Record of Decision and the various biological opinions has never been completed and there are no assurances that the tunnel project's promised habitat mitigation will not suffer a similar fate.	Habitat restoration, enhancement and protection presented in the EIR/EIS under Alternative 4A is intended to reduce the effects of conveyance facility construction and operation. The habitat types and acreages are linked to listed species protections detailed in the Biological Assessment for this alternative, These actions were developed in consultation with federal and state fish and wildlife agencies which will include conditions for implementation of these actions in a Biological Opinion as required under Section 7 of the ESA and incidental take permit as required under CESA Section 2081 (b).
2628	15	The RDEIR/SDEIS is an illegitimate orphan in search of a parent. The BDCP EIR/EIS was the product of an almost decade-long effort to develop a program to both restore the Delta and provide enhanced water supply security. The Delta Reform Act of 2009 created the Delta Stewardship Council (Council) to develop a Delta Plan that would approve BDCP if it qualifies as a habitat conservation plan (HCP). The Delta Reform Act also directed the State Water Resource Control Board to develop flow criteria protective of public trust resources and directed the CDFW to develop flow criteria and quantifiable biological goals protective of species of special concern. These criteria were to inform the Council in development of the Delta Plan. The Council, in developing the Delta Plan, left the incorporation of specific flow criteria and quantifiable biological goals to BDCP. Unfortunately, BDCP failed to incorporate flow criteria and quantifiable biological goals into its project and the BDCP EIR/EIS failed to analyze alternatives that included such criteria/goals. When BDCP was informed that it could not qualify as a habitat conservation Plan (HCP), it quickly morphed into a single purpose water export delivery plan. However, the BDCP EIR/EIS analyses were predicated on the existence of a	In April 2015 state and federal agencies announced a new sub-alternative—Alternative 4A (California WaterFix)—which replaced Alternative 4 (the proposed BDCP) as the state's proposed project. Alternative 4A reflects the state's proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. These two efforts are a direct reflection of public comments. See Master Response 31 for more information about compliance with the Delta Reform Act. Comment does not address the adequacy or accuracy of the EIR/S.

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		massive habitat restoration program that no longer exists. Consequently, the BDCP EIR/EIS is not only internally inconsistent; it is inconsistent with requirements in the Delta Reform Act and the Delta Plan.	
2628	16	The RDEIR/SDEIS is fundamentally deficient because, as noted above, it failed to identify, discuss or analyze flows necessary to protect public trust resources as required by the Delta Reform Act. Beyond requiring the State Water Resource Control Board to develop flow criteria to inform the Delta Plan process, the Delta Reform Act also required the State Water Resource Control Board to include appropriate Delta flow criteria in any order approving a change in the point of diversion of the state and federal projects from the southern Delta to a point on the Sacramento River. The Act specifies that the flow criteria shall be informed by the earlier analysis conducted by the State Water Resource Control Board regarding flows necessary to protect public trust resources. The Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Bureau or Reclamation) submitted a joint application for a change in point of diversion on 26 August 2015 (it should be noted that the Delta Reform Act requires a change in point of diversion be completed before any construction is initiated). Other petitions for a 401 certification and 404 permit have been submitted. Both the State Water Resource Control Board and California Department of Fish and Wildlife's flow criteria reports recommended substantial increases in both Delta inflow and outflow to the Bay. The State Water Resource Control Board requested that BDCP model a significantly higher outflow alternative. Since the State Water Resource Control Board has already declared that existing flow are inadequate to protect public trust resources, it is more than likely that flows higher than considered in the RDEIR/SDEIS will be required in any change in point of diversion. The inexplicable failure of the RDEIR/SDEIS to analyze any alternative that includes significantly higher outflows, including flow modeling requested by the State Water Resource Control Board, deprives decision-makers, resources managers, scientists and the public of crucially needed information on which to base informed comments on the WaterFix and RDEIR/SDEIS. It also squanders limited resources of agencies and the public in having to review an environmental document and process various applications that will have to be significantly revised and recirculated.	As noted in 2628-4, the SWRCB did request additional outflow be considered in an alternative analyzed in this EIR/EIS. The results are summarized in Appendix C of the RDEIR/SDEIS. In addition, the proposed project (Alternative 4A) does include additional spring outflow as compared to the No Action Alternative. The range of alternatives analyzed in the EIR/EIS includes Alternative 8 which considers the highest ranges of Delta outflow that can be accomplished through operations of SWP and CVP water rights and in a manner that will protect cold water pools in the upstream SWP and CVP reservoirs. DWR and Reclamation do not have the authorization to change non-SWP and non-CVP water rights, including deliveries to Feather River and Sacramento River water rights settlement contractors whose pre-SWP/CVP water rights must be delivered in accordance with State law. For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31.
2628	17	The RDEIR/SDEIS is incomplete in failing to include the results from the U.S. Bureau of Reclamation's Biological Assessment (BA) for WaterFix. WaterFix operations will require consultation with USFWS and National Marine Fisheries Service (NMFS) pursuant to the federal Endangered Species Act and a Section 7 incidental take permit including reasonable and prudent alternatives/measures. Reclamation is required to prepare a BA as part of the permitting process. We (California Water Impact Network, California Sportfishing Protection Alliance and Aqua Alliance) are informed that consultation has begun but that the BA has not been completed. Failure to include the BA in the RDEIR/SDEIS deprives decision-makers and the public of crucially needed information regarding impacts to fish and wildlife that are necessary for preparing informed comments on WaterFix and the RDEIR/SDEIS.	USFWS and NMFS are co-lead agencies for the NEPA document. A Section 7 incidental take permit will be required under the federal Endangered Species Act. The EIR/EIS (See Chapters 11 and 12, plus associated appendices) has significant information on the effects of the project, No Project/No Action and other build alternatives). The BA will utilize the analyses presented in the EIR/EIS for the Section 7 review process. USFWS/NMFS will prepare a biological opinion will be the decision document. It should be recognized that if approved, the project will need to implement all mitigation measures as defined in the EIR/S, plus any additional measures required as part of the subsequent permitting process. Therefore, the decisionmakers and the public have been informed of the "minimum" measures that would be required.
2628	18	The RDEIR/SDEIS is focused on maximizing water contract deliveries but neglects to include adequate discussion and analyses of California's over-appropriated water rights system, the fact that Delta exports are limited to water surplus to the needs of the Delta and areas of origin and the implications of impending climate change. For example, reduced runoff caused by climate change will draw the critical low salinity zone eastward necessitating an increase in Delta outflow to prevent extinction of Delta and longfin smelt and other estuarine species. But any increased outflow would decrease	All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights or reduction in total water rights issued to DWR and Reclamation. Water rights issued on rivers in the Trinity and Central Valley watersheds include a wide range of beneficial uses from hydropower to municipal, industrial, and agricultural water users. However, not all of the water diverted under the water rights is consumptively used. For example, water diverted for hydropower electric generation is fully returned to the

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		exports turning the economic analysis of the project on its head.	<p>water bodies; and a portion of the water diverted from municipal, industrial, and agricultural water uses is returned to the water bodies. In addition, the amount of water diverted is dependent upon water rights priorities and the need to meet environmental flow and quality requirements. Therefore, it is difficult to compare the total volume of water rights licenses to the total amount of water available in the system. For example, water rights issued to DWR and Reclamation are not fully available to provide water under the SWP and CVP water contracts in many years due to the demands of senior water rights holders and regulatory requirements, including releases to maintain water quality in the western Delta. It is recognized that in some drier years, DWR and Reclamation would not have adequate water in the reservoirs to fully meet the water quality criteria in the western Delta without reducing water deliveries to other water rights holders or reducing cold water storage volumes that are required for fisheries in the upstream rivers.</p> <p>For additional information regarding water quality, please see Master Response 14. For additional information regarding public trust, please see Master Response 13. For additional information regarding climate change, please see Master Response 19. For additional information regarding upstream reservoir effects, please see Master Response 25.</p>
2628	19	The RDEIR/SDEIS fails to comport with an array of state and federal laws governing environmental review, water quality, protection of fisheries, water rights, etc. Its fantasy conclusion that additional diversions of water around the Delta will not significantly harm the estuary's aquatic ecosystem and water quality and can receive legally required permits reflects an arrogant assumption that the broad suite of promulgated environmental statutes simply does not apply to project proponents. Reality is likely to provide a different answer.	<p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. Please see Master Response 3 for additional information regarding the purpose and need behind the proposed project.</p> <p>The proposed project was developed to meet the standards of the Clean Water Act and federal and state Endangered Species Acts, the proposed project is intended to be environmentally beneficial, not detrimental. Please also refer to Master Response 28 for a discussion of the proposed project's Operational Criteria.</p> <p>The commenter does not offer any evidence on how the project would not be in accord with these laws. No issues related to the adequacy of the environmental impact analysis in the CEQA and NEPA documents were raised.</p>
2628	20	The RDEIR/SDEIS is an analysis of a project in search of a sponsor. It is simply astonishing that WaterFix has reached this stage of development without a realistic, defensible benefit-cost analysis or the commitment of a single party to bear the costs of construction and operation. The entire project rests on the prayer that: somehow, someone will agree to pay for it; the State Water Resource Control Board will not require higher flows to protect the estuary now or in the future; water quality will not continue to deteriorate; the experimental fish screens will somehow work, climate change will not bring extended periods of drought (and dry tunnels) and will not significantly reduce instream flow or increase salinity intrusion; listed species will not continue to decline and additional species will not be listed necessitating additional restrictions on exports, the prophesied catastrophic earthquake doesn't destroy the water delivery systems in the more earthquake-prone areas south of the Delta; future groundwater regulations will not prevent substantial quantities of Tuscan aquifer water to be substituted for surface water and exported; opponents will not succeed in a single one of myriad legal actions against the project; and that agricultural contractors can somehow absorb the extravagant cost of tunnel-delivered water and remain in business.	<p>DWR acknowledges your opposition to the project. No issues related to the adequacy of the environmental impact analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/DEIS were raised. The proposed project was developed to meet the standards of the federal and state Endangered Species Acts; as such the proposed project is intended to be environmentally beneficial. Please refer to Master Response 3 for the Purpose and Need and Master Response 28 for a discussion of the proposed project's Operational Criteria. Please refer to Master Response 5 regarding funding.</p>

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		Should WaterFix go forward and any one or several of the aforementioned prayers not be answered, the project becomes a colossal disaster, a financial nightmare and the largest stranded asset in human history. The failure of the RDEIR/SDEIS to adequately analyze and discuss these risks is an indictment of state and federal planning processes.	
2628	21	The California Water Fix EIR/EIS fails to disclose or analyze fairly or completely the necessary facts to determine whether the tunnel project will meet state interests in the Delta or will instead continue state and federal water management that has resulted in a steady decadal decline in the Bay/Delta estuarine condition. The environmental review also fails the requirement of enabling the public and future decision-makers to determine whether the Water Fix is compatible with the "longstanding constitutional principle of reasonable use and the public trust doctrine {which} shall be the foundation of state water management policy and are particularly important and applicable to the Delta." Water Code 85023	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information regarding the potential impacts and proposed mitigation measures on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>For more information regarding the Public Trust Doctrine, please refer to Master Response 13.</p>
2628	22	<p>The California Supreme Court last visited public trust law in the seminal case of National Audubon Society v. Superior Court of Alpine County, 33 Cal.3d 419 (1983) in which the court said: "The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust whenever feasible." The Supreme Court also said, quoting now Justice of the 3rd Appellate District Ron Robie, that "the requirements of the California Environmental Quality Act (Public Resources Code 21000 et seq.) imposes a similar obligation."</p> <p>We (California Water Impact Network, California Sportfishing Protection Alliance and AquaAlliance) can find no credible analysis of whether or not Article 10, Section 2 (the reasonable use, and unreasonable method of diversion provisions) was analyzed for consistency with the Water Fix tunnel project or with the public trust doctrine. We request that you do so before approving the tunnels and the new diversions that will lessen presently inadequate flows in the rivers and Bay/Delta. This is surprising because the Delta Reform Act also required the State Water Board to provide the Delta Stewardship Council with recommendations as to the amount of flow necessary to recover the estuary:</p> <p>For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan [BDCP], the board shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources. In carrying out this section, the board shall review existing water quality objectives and use the best available scientific information. The flow criteria for the Delta ecosystem shall include the volume, quality, and timing of water necessary for the Delta ecosystem under different conditions. The flow criteria shall be developed in a public process by the board within nine months of the enactment of this division. The public process shall be in the form of an informational proceeding... and shall provide an opportunity for all interested persons to participate. The flow criteria shall not be considered pre-decisional with regard to any subsequent board consideration of a permit, including any permit in connection with a final BDCP. (Water Code § 85086)</p> <p>The State Board, after extensive hearing, found that the public trust needs of the Bay/Delta required increased outflow from the Delta into Suisun Bay and then into the San Francisco Bay. The State Board recommended that 75% of unimpaired flow be required in the winter and spring months for this purpose. Among the key points made regarding necessary Delta environmental flows for the State Water Board hearing in</p>	<p>As described in Appendix 3A, Identification of Water Conveyance Alternatives Conservation Measure 1, of the EIR/EIS, one of the potential alternatives considered was based upon the State Water Resources Control Board 2010 Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, which described providing up to 75 percent of unimpaired flow into the Delta to improve aquatic resources habitat conditions. This potential alternative was not evaluated in detail because the flow recommendations in the 2010 report could not be achieved without adverse impacts to cold water management for fisheries in the Sacramento, Feather, and American rivers without reductions in non-SWP and non-CVP water rights diversions. The purpose and need of this EIR/EIS would not allow changes to non-SWP and non-CVP water rights. However, Alternatives 7 and 8 in the EIR/EIS reflect similar flow criteria in a manner that would only affect SWP and CVP water rights.</p> <p>For additional information regarding the public trust, please see Master Response 13.</p> <p>Please refer to Master Response 30 regarding operational criteria and 33 regarding adaptive management.</p>

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		<p>2010, the Delta Environmental Flows Group (DEFG) testified that the recent flow regimes both harm native species and encourage non-native species and provided the following justification for that scientific opinion:</p> <p>The major river systems of the arid western United States have highly variable natural flow regimes. The present-day flow regimes of western rivers, including the Sacramento and San Joaquin, are highly managed to increase water supply reliability for agriculture, urban use, and flood protection. Recent Delta inflow and outflow regimes appear to both harm native species and encourage non-native species. Inflow patterns from the Sacramento River may help riverine native species in the north Delta, but inflow patterns from the San Joaquin River encourage non-native species. Ecological theory and observations overwhelmingly support the argument that enhancing variability and complexity across the estuarine landscape will support native species. High winter-spring inflows to the Delta cue native fish spawning migrations, improve the reproductive success of resident native fishes, increase the survival of juvenile anadromous fishes migrating seaward, and disperse native fishes spawned in prior years.</p>	
2628	23	<p>Need for additional freshwater flows and outflow; high freshwater outflows (indexed by X2) during winter and spring provide benefits to species less tolerant of saltwater including starry flounder, bay shrimp, and longfin smelt. (footnote 7: Dahm, C., T. Dunne, W. Kimmerer, D. Reed, E. Soderstrom, W. Spencer, S. Ustin, J. Wiens, and I. Werner. 2009. Bay Delta Conservation Plan Independent Science Advisors' Report on Adaptive Management. Prepared for BDCP Steering Committee. February 2009. 33 pages) Freshwater flows provide positive benefits to native fishes across a wide geographic area through various mechanisms including larval-juvenile dispersal, floodplain inundation, reduced entrainment, and increased up-estuary transport flows. Spring Delta inflows and outflow have declined since the early 20th century, but average winter-spring X2 has not had a time trend during the past 4-5 decades. (footnote 8: Sommer, T.R. W.C. Harrell, A. Mueller-Solger, B. Tom, and W. Kimmerer. 2004. Effects of flow variation on channel and floodplain biota and habitats of the Sacramento River, California, USA. Aquatic Conservation: Marine and Freshwater Ecosystems 14: 247-261) The estuary's fish assemblages vary along the salinity gradient and along the gradient between predominantly tidal and purely river flow. In tidal freshwater regions, fish assemblages also vary along a gradient in water clarity and submerged vegetation. (footnote 9: Sommer, T.R., W.C. Harrell, and M.L. Nobriga. 2005. Habitat use and stranding risk of juvenile Chinook salmon on a seasonal floodplain. North American Journal of Fisheries Management 25: 1493-1504)</p> <p>Generally, native fishes have their highest relative abundance in Suisun Marsh and the Sacramento River side of the Delta, which are more spatially and temporally variable in salinity, turbidity, temperature, and nutrient concentration and form than other regions. This is exactly the location where the Water Fix plans to build its new diversions. In both Suisun Marsh and the Delta, native fishes have declined faster than non-native fishes over the past several decades. These declines have been linked to persistent winter, spring and low fall outflows and the proliferation of submerged vegetation in the Delta. (footnote 10: Feyrer, F., and Healey, M.P. 2003. Fish Community Structure and Environmental Correlates in the Highly Altered Southern Sacramento-San Joaquin Delta. Environmental Biology of Fishes 66: 123-132)</p> <p>However, many other factors also may be influencing native fish declines including</p>	<p>The comments are noted. Analysis of potential effects of changes in Delta outflow was provided in the RDEIR/SEIS; see, for example, Impact AQUA-22 in Chapter 4, Section 4.5.7 (for longfin smelt) and Impact AQUA-203 in Chapter 11, Section 11.3.5.2 of Appendix A (for noncovered fish species).</p>

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		<p>differences in sensitivity to project entrainment as productivity declines, and greater sensitivity to combinations of food-limitation and contaminants, especially in summer-fall when many native fishes are near their thermal limits. The weight of the circumstantial evidence summarized above strongly suggests flow stabilization harms native species and encourages nonnative species, possibly in synergy with other stressors such as nutrient loading, contaminants, and food limitation. (footnote 11: Feyrer et al. 2007) Feyrer, F., M. Nobriga, and T. Sommer. 2007. Multi-decadal trends for three declining fish species: habitat patterns and mechanisms in the San Francisco Estuary, California, U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 64: 723–734)</p>	
2628	24	<p>When will necessary state-of-the-art fish screens be required on South Delta export pumps?</p> <p>New fish screens at the existing South Delta state and federal export pumps would drastically reduce entrainment of virtually all of the pelagic and salmonid listed pursuant to state and federal endangered species acts. The screening project was mothballed after MWD and the State Water Contractors, the beneficiaries of the SWP and CVP, stated that they would not pay for them. The BDCP/Water Fix RDEIR is required to disclose and analyze the impacts of the continued use of the South Delta project pumps since they will be used in low water years to provide the largest amount of water diverted from the Bay/Delta under the new project operational plans. The RDEIR/SDEIS should disclose and analyze the following facts:</p> <p>a. New state-of-the-art fish screens were required mitigation measures in the CalFed Record of Decision. Evaluation of the success of the installed new fish screens was to occur before further consideration of a peripheral canal.</p> <p>b. Screening of agricultural diversions accomplishes little if the CVP/SWP pumps subsequently destroy fish that bypass agricultural screens.</p> <p>c. The new screens at the Contra Costa intake have only taken a couple of smelt since they were constructed (much different than the 26,000 Delta smelt killed by the project pumps between June 1 and June 24 of 2007).</p> <p>d. The first units of the new screens would have been in place today had the water contractors not refused to pay for them.</p> <p>e. The required state-of-the-art screen project also encompassed improved new salvage facilities, transportation methods and improved release methods and new release areas. The new screens would have significantly reduced the approach velocity of water and new screen openings would have been reduced from the present one-inch to a couple of millimeters (thereby preventing most smelt from going down the Delta Mendota Canal to Los Angeles).</p> <p>f. The mandated new fish screens would have been in front of Clifton Court Forebay, which would have eliminated most of the current predation occurring in the Forebay (Forebay predation is the largest cause of mortality for most species “taken” by the pumps).</p> <p>g. A component of the new screen project would have been an accelerated and intensified effort in improving survivability of smelt. Indeed, survival rates of salvaged</p>	<p>DWR and Reclamation are required to improve fish collection efficiency at the existing south Delta salvage facilities, as part of facility improvements required by the National Marine Fisheries Service 2009 biological opinion on the SWP/CVP. For example, in 2014 Reclamation replaced the secondary louver system with a traveling screen system. These screens provide protection by guiding fish into the holding tanks while catching debris on pegs and transporting debris to a collection system at the work surface.</p> <p>The technology required at the proposed north Delta intakes and the existing south Delta export facilities differ fundamentally. The north Delta intakes would be located on the side of the river channel and so would be designed to comply with CDFW, NMFS, and USFWS fish screening criteria (Appendix 5B Section 3.B.3.3). The south Delta export facilities are located on dead-end channels and requires active collection and salvage of fishes.</p> <p>Screening the intakes at Clifton Court Forebay was analyzed during the water conveyance alternative development process and is described in the 2013 Public Draft EIR/EIS, Appendix 3A. This alternative was eliminated from further evaluation because initial results of recent studies, including information included in the recent NMFS biological opinions, supported a phased approach that would emphasize improvements to operations of fish handling facilities and reduced predator potential within Clifton Court Forebay prior to further analysis of installation of fish screens. Nevertheless, DWR and Reclamation will continue investigating strategies to increase fish salvage efficiency, reduce pre-screen losses, and improve screening efficiencies, consistent with the 2009 biological opinion of the SWP/CVP.</p>

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		<p>Delta smelt are improving. Recent results from Pit-tag (passive integrated transponder tags) monitoring show that approximately 33.3% of Delta smelt salvaged survives collection, transport and release back into the Delta (14% at the CVP). Unfortunately, most smelt that reach the present screens pass through them and are never diverted to the salvage buckets.</p> <p>H. The Fish Facilities Team effort was probably the finest multidisciplinary interagency study, with high synergies, that he witnessed in his decades with Department of Fish and Game/National Oceanic and Atmospheric Administration.</p> <p>i. Had the new screens been installed, as mandated, they would also have largely eliminated Clifton Court predation and significantly improved salvage and survivability of many other species presently in precipitous decline, including salmon, steelhead, splittail, threadfin, American shad, longfin, striped bass, etc.</p> <p>J. Under CalFed, an evaluation of the success of the installed new fish screens was to occur before further consideration of a peripheral canal. Clearly, it cannot be claimed that money is an obstacle to construction of new screens, considering the estimated costs of proposed new reservoirs and peripheral tunnels, respectively.</p>	
2628	25	<p>What new conditions on export pumping will be implemented in light of increased water exports and resulting reverse flows to protect the Bay/Delta ecosystem?</p> <p>The average of SWP and CVP exports in the 1970s were 1.430 million acre feet and 2.141 million acre feet, respectively. Exports in the 1980s averaged 2.425 million acre feet (SWP) and 2.519 million acre feet (CVP). During the 1990s, average exports were 2.305 million acre feet (SWP) and 2.219 million acre feet (CVP). Exports dramatically increased between 2000 and 2007 to an annual average of 3.251 SWP and 2.590 million acre feet (CVP). Additionally, average annual exports to Contra Costa Water District and the North Bay Aqueduct significantly increased from 90 TAF and 0 TAF, respectively, in the 1970s to 120 TAF and 48 TAF in the 2000s. Total average annual exports from the South Delta increased from 3.662 million acre feet during the decade following approval of the subject water rights to an annual average of approximately 6.008 million acre feet between 2000 and 2007. The dramatic increase in the level of exports, beginning in 2003, coincided with the crash in pelagic species populations. For example, exports in 2003, 2004, 2005 and 2006 were 6.323 million acre feet, 6.145 million acre feet, 6.470 million acre feet and 6.315 million acre feet, respectively.</p>	<p>The historical use of SWP and CVP water rights presented in this comment are consistent with historical information presented in the EIR/EIS. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights or reduction in total water rights issued to DWR and Reclamation.</p> <p>For additional information regarding area of origin, please see Master Response 26. For additional information regarding water rights, please see Master Response 32.</p>
2628	26	<p>What is to be done about current salt loading to the San Joaquin River and Delta?</p> <p>The State Board assigned Department of Water Resources and the Bureau the responsibility for meeting salinity objectives in the 1979 Delta Plan, D-1485 and the 1995 Delta Plan and D-1641. Salinity standards continue to be routinely violated. The San Joaquin River Salinity and Boron Total Maximum Daily Load assigns responsibility for controlling salt delivered to the San Joaquin Valley from the Delta to the Bureau. The Bureau's salt load reductions are to be addressed through a joint Management Agency Agreement with the Central Valley Board. Unfortunately, the Bureau is claiming sovereign immunity and, while promising some level of cooperation, refuses to accept specific enforceable load limits that will actually lead to reductions in salt loading to the San Joaquin River. Since the BDCP/Water Fix project will continue to use the South Delta</p>	<p>It is not a purpose of the CEQA/NEPA process to provide a comprehensive assessment of how existing adverse water quality conditions could be minimized. The potential for water conveyance operations to affect contaminants in the Delta (including Suisun Marsh) under existing conditions and future no action conditions, and with implementation of each project alternative (including conservation measures), is assessed in detail in Chapter 8, Water Quality, of the EIR/EIS. Where significant impacts to uses would occur due to the alternative, mitigation to lessen those impacts is provided. Please also refer to Master Response 14 regarding water quality and salinity.</p>

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		pumps in most years and will use them heavily in low water years, the RDEIR/SDEIS must adequately assess what is likely to happen when the North Delta diversions go into effect, depriving the Bay/Delta estuary of approximately half of its present freshwater flow. The RDEIR/DEIS does not, thereby violating both NEPA and CEQA.	
2628	27	<p>The RDEIR/SDEIS fails to adequately disclose and analyze the impacts to water quality and contaminant control by diverting large amounts of water in the North Delta.</p> <p>The Water Fix environmental documents pay lip service to the control of the largest sources of water quality impairment and controllable pollutant loading into the Delta and its tributaries. While recent information has, perhaps, refined our understanding of these issues, the causes and sources of these problems and the actions necessary to reduce or eliminate them have been known for decades. Many years ago, the State and Regional Water Boards identified salt and selenium impairment of the San Joaquin River and Delta, organophosphorus (OP) pesticides in the Sacramento and San Joaquin Rivers and Delta, low dissolved oxygen in the Stockton Ship Channel, agricultural pollution and the problems of municipal wastewater and storm water discharges. The sources and actions necessary to address and eliminate them have also been long known. The statutory authority and regulatory tools to address them have existed since the 1970s. Unfortunately, what has been absent is the political will to meaningfully attack these problems, and the Water Fix will make solutions to these problems impossible by decreasing freshwater flows into most of the Delta.</p>	The issue raised by the commenter addresses the merits of the project, and does not provide any specific information regarding the claimed inadequacy of the environmental analyses provided in the 2015 SDEIR/SDEIS or the 2013 DEIR/DEIS. Also, please refer to response to comment 2628-26.
2628	28	<p>Flow is important to sustaining the ecological integrity of aquatic ecosystems, including the public trust resources that are potentially impacted by the Water Fix and the three new diversions proposed above the great majority of the Bay/Delta. Flow affects water quality, food resources, physical habitat, and biotic interactions. Alterations in the natural flow regime affect aquatic biodiversity and the structure and function of aquatic ecosystems. Delta outflows and the position of X2 are closely and inversely related, with a time lag of about two weeks. (footnote 13: Jassby, A.D., W.J. Kimmerer, S.G. Monismith, C. Armor, J.E. Cloern, T.M. Powell, J.R. Schubel, and T.J. Vendlinski. 1995. Isohaline position as a habitat indicator for estuarine populations. Ecological Applications 5(1): 272-289, February 1995) X2 is defined as the horizontal distance in kilometers up the axis of the estuary from the Golden Gate Bridge to where the tidally averaged near-bottom salinity is 2 practical salinity units (psu). The position of X2 roughly equates to the center of the low salinity zone (defined as salinity of 0.5 to 6 psu). The X2 objectives in the 2006 Bay-Delta Plan were designed to restore a more natural hydrograph and salinity pattern by requiring maintenance of the low salinity zone at specified points and durations based on the previous month's Eight River Index. The relationships between outflow and several measures of the health of the Bay-Delta Estuary have been known for some time and are the basis for the current X2 objectives. (footnote 14: Ibid., Jassby et al. 1995)</p> <p>DWR and the Bureau have failed to formulate the California Water Fix in such a manner that analyzes the competing demands of all beneficial uses, and instead have devised a plan that puts maintenance of yield to the water rights of the federal Central Valley Project and the State Water Project over all other beneficial uses, whether property or not. In essence, the Water Fix proposal conducts its water quality control planning for the outcome of "no net loss to exports" and ignored its responsibilities to evaluate the competing needs of all beneficial uses in the process of developing water quality and flow objectives. This failure violates numerous requirements of state and federal</p>	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>More than two-thirds of the residents of the state and more than two million acres of highly productive farm land receive water exported from the Delta watershed. The proposed project aims to provide a more reliable water supply, in a way more protective of fish. However, the lead agencies have no authority to designate what water is used for.</p> <p>One of the State Water Resources Control Board's (State Water Board's) charges is to ensure that the State's water is put to the best possible use and that this use is in the best interest of the California public. This charge is reflected in part by the designation of beneficial uses established through the State Water Board's planning process. These beneficial uses are identified in each Water Quality Control Plan (Basin Plan) issued by the State Water Board.</p> <p>The proposed project Lead Agencies have no power to impose penalties on individual water users. DWR and Reclamation have contracts with various entities, some of which sell water to water retailers, who have individual policies and programs to motivate ratepayers to conserve water. Different districts have the right to take different approaches depending on their individual circumstances.</p> <p>For additional information regarding beneficial use of water, please see master response 34.</p> <p>The proposed project represents an appropriate response to reduced and unreliable water supply, as a balance against relevant environmental considerations, in accord with the public trust doctrine. The 2013 Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) and 2015 Partially Recirculated DEIR/Supplemental DEIS (RDEIR/SDEIS) promote covered activities and associated federal</p>

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		<p>environmental laws and is not completely disclosed or analyzed fairly by the RDEIR/SDEIS in terms of impacts on the Bay/Delta.</p> <p>The adequacy of the Water Fix environmental documentation is governed by many different laws, including state CEQA guidelines, federal NEPA guidelines, water code section 13241, the Public Resources Code (21159), Porter-Cologne, and the Clean Water Act (as it applies to water quality standards promulgated by the Board). Further, portions of water quality control plans that fall under the jurisdiction of the CWA require approval by the U.S. Environmental Protection Agency. These various laws charge the Water Fix agencies (DWR and the U.S. Bureau of Reclamation) with, among other things, reasonably describing and analyzing potentially significant direct and indirect environmental impacts of a project; describing and analyzing reasonably foreseeable methods of compliance with the regulatory requirements of each alternative, analyzing potentially feasible mitigation measures and the economic considerations of establishing objectives in water quality control plans; and analyzing related indirect and induced impacts on the regional economy including estimating the total cost of implementing their project.</p> <p>In addition to the various laws mentioned above, governments have a permanent fiduciary responsibility and obligation to protect the public trust. In <i>National Audubon Society v. Superior Court</i>, the California Supreme Court held that "the public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands, state, the Board is charged with ensuring the state of California carries out its fiduciary responsibility to protect air, running water, the sea, and the seashore, 'these things that are common to all'."</p> <p>The State has invoked its public trust responsibilities in regulating the waters of California and acknowledges that the public trust is one of its ongoing regulatory responsibilities. The State has also adopted regulations governing how it treats the public trust in matters of the appropriation of water in California. The Public Trust Doctrine provides that no one has a vested right to appropriate water in a manner harmful to the interests protected by the public trust. In accordance with this doctrine, California's constitution promises water rights only up to what is a reasonable use. No one has a right in California to use water unreasonably, not even the federal government. The courts, in <i>United States v. State Water Resources Control Board</i> (1986, 182 Cal.App.3d 82), determined that the Board had the authority to modify an appropriative water right permit once it had been issued, and that it could reduce the US Bureau of Reclamation's Central Valley Project permits to gain compliance from the Bureau.</p>	<p>actions that restore and protect water supply while preserving and enhancing the health of the Bay-Delta for the benefit of fish and wildlife. The proposed project offers significant environmental benefits by avoiding the degradation of air quality associated with fallowed land and the adverse impacts caused by increased groundwater pumping (such as increased soil salinity, land subsidence, higher energy demand, and depletion of groundwater reserves). After balancing the benefits of the proposed project against the potential harms that the proposed project is designed to address, the public trust doctrine supports adoption of the proposed project. For additional information on how the proposed project meets the requirements of the Public Trust Doctrine, please see Master Response 13.</p> <p>As described in Appendix 3A, Section 3A.9.3, of the 2013 Public Draft EIR/EIS the State Water Resources Control Board prepared a Delta Flow Criteria Report in accordance with the requirements of the Sacramento-San Joaquin Delta Reform Act of 2009. Information from that report included "determinations of flow criteria for the Delta ecosystem to protect public trust resources. The report makes clear, however, that the flow criteria do not consider the balancing of public trust resource protection with public interest needs for water. The flow criteria also did not consider other public trust resource needs such as the need to manage cold-water resources in reservoirs tributary to the Delta. Nonetheless, the flow determinations contained in the Delta Flow Criteria Report, together with recent scientific conclusions of other State and federal agencies, including the Department of Fish and Wildlife, National Marine Fisheries Service, and the Interagency Ecological Program provide a useful guide to establish one side of a reasonable range of alternatives" (State Water Resources Board letter dated April 19, 2011). The information in the flow criteria report was used to inform the development of the proposed project.</p> <p>The modeling results included Appendix 5E of the Final EIR/EIS may be considered by the State Water Resources Control Board in consideration of the DWR and Reclamation's Change of Place of Diversion petition for the proposed project.</p>
2628	29	<p>Proponents of the Bay Delta Conservation Plan (BDCP) and its peripheral tunnels suggest that only by diverting water from the Sacramento River can the Delta be restored because of immense fishery losses at the South Delta export pumps. This is simply incorrect! Fish losses could even increase with the addition of a North Delta diversion point.</p>	<p>The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S. Chapter 11 of the FEIR/EIS describes fish resources.</p>
2628	30	<p>The Water Fix RDEIR/SDEIS does not comply with NEPA or CEQA.</p> <p>The Water Fix plans for construction and operation of a new water supply project, including new water diversions beginning in the northern Delta and tunnels under the</p>	<p>All of the action alternatives evaluated in the EIR/EIS, Existing Conditions, and the No Action Alternative would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. DWR and Reclamation operate with water rights issued by the State Water Resources Control Board that are junior in</p>

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		<p>Delta to transport water to the south as first proposed by the BDCP. The Water Fix suffers from all of potential for causing major impacts to the Delta estuary, including but not limited to, reduced flow into Suisun and San Francisco bays, removal of millions of acre feet. of fresh, cold, clean water from the Bay/Delta estuary, and new obstructions for listed species that are presently suffering population collapse from state and federal water mismanagement. The main difference between BDCP and the Water Fix is that the Fix has dropped the elements of BDCP that were ostensibly designed to restore the declining health of the Bay/Delta estuary. The Fix document is not a full disclosure document as required by NEPA and CEQA, and it forecloses alternatives that would not require new conveyance and/or would increase Delta flows by reducing exports.</p> <p>For many years, environmental and fishing groups (including CSPA, CWIN, and Aqua Alliance) have advocated a simple alternative to the tunnels, the Environmental Water Caucus alternative. The EWC alternative responds to the purpose and need for the tunnel project in conformance with the existing law. We believe that the alternative, must be included as one of the alternatives analyzed in the RDEIR/EIS so that at least one alternative would meet required legal standards. So far, the agencies in charge of the project have refused to consider following existing law, which would require them to find alternative water supplies for their needs. The alternative, can be crafted to be compatible with the EWC alternative repeatedly submitted to state and federal agencies for analysis.</p> <p>This RDEIR/EIS, however, fails to properly analyze the impacts of implementing the state and federal government Water Fix in conformance with NEPA and CEQA. Specifically, it fails to establish an adequate "baseline", improperly defers and segments environmental analysis, and fails to provide an accurate, stable, and finite description of the project, which includes the Water Tunnels. As a direct result of this failure to properly define the project, the RDEIR also cannot properly analyze the impacts of implementing the project, including the project's cumulative impacts, and fails to formulate adequate mitigation. The RDEIR also fails to develop or consider the required range of reasonable alternatives to reduce or at least minimize the project's impacts on the environment.</p>	<p>priority to many senior water rights holders in the Delta watershed. Under the action alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative. Conveyance facilities under the action alternatives could only deliver the amount of water diverted under the existing SWP and CVP water rights and in accordance with the existing and future related regulatory requirements based upon river water levels and flow, water available in the system, the presence of threatened and endangered fish species, and water quality standards. The proposed project does not seek any new water rights or reduction in total water rights issued to DWR and Reclamation. The State Water Resources Control Board, not DWR and Reclamation, is responsible for decisions relating to water rights.</p> <p>The EWC's proposal covers approaching several of the issues that the proposed project is intended to address through various mechanisms, many of which aren't under the jurisdiction of the lead agencies. Appendix 1C of the Final EIR/EIS, Water Demand Management, describes conservation, water use efficiency, and other sources of water supply including desalination. Refer to Master Response 6 for more information on demand management. Although components such as desalination plants and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the State, they are beyond the scope of the project. For additional information on how the alternatives were chosen, please see Appendix 3A in the Final EIR/EIS. Please also see Master Response 4.</p> <p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>. Although the commenter's specific contentions of inadequacy are addressed in separate responses, it is worth noting that "[t]he description of the project ... should not supply extensive detail beyond that needed for evaluation and review of the environmental impact[.]" (State CEQA Guidelines, § 15124.) "A general description of a project element can be provided earlier in the process than a detailed engineering plan and is more amenable to modification to reflect environmental concerns." (Dry Creek Citizens Coalition v. County of Tulare (1999) 70 Cal.App.4th 20, 28.) "The 'general description' requirement for the technical attributes of a project is consistent with the other CEQA mandates to make the EIR a user-friendly document." (Ibid.) "The EIR must achieve a balance between technical accuracy and public understanding." (Ibid.)</p> <p>The only CEQA Guidelines, Section 15124 mandatory components of a Project Description in an EIR are the following:</p> <p>(a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.</p> <p>b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.</p> <p>(c) A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.</p> <p>(d) A statement briefly describing the intended uses of the EIR.</p>

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			<p>(1) This statement shall include, to the extent that the information is known to the Lead Agency,</p> <p>(A) A list of the agencies that are expected to use the EIR in their decision making, and</p> <p>(B) A list of permits and other approvals required to implement the project.</p> <p>(C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.</p> <p>The commenter has not claimed that the descriptions of the various alternatives in the EIR/EIS fail to include these required items of information. Instead, the commenter identifies a series of very technical issues that were not explained to the commenter’s satisfaction, and mixes legal arguments with its claims that certain technical information is lacking. In short, the commenter has failed to show any legal inadequacy in the Project Description.</p> <p>Based on the project description provided in Chapter 1 and Chapter 3 of the Final EIR/EIS, the following resource chapters discuss the impacts of the various action alternatives as well as proposed extensive mitigation measures for any significant impacts that result from implementation of the project.</p> <p>Please see Master Response 1 regarding development of the project Baseline.</p>
2628	31	<p>The RDEIR/SDEIS established an inadequate and inaccurate baseline.</p> <p>The RDEIR/SDEIS’ formulation of baseline environmental conditions is fundamentally flawed and deceptive because, among other flaws, it fails to provide accurate information regarding existing surface water and groundwater supply and demand. Additionally, the RDEIR/SDEIS falsely cites ongoing unsustainable and illegal Delta water exports to establish a baseline for future exports when DWR has known at least since 1960 that they could not deliver more than 3.1 million acre/ft. of water without additional water sources. (DWR Bulletin 76) The vague and inaccurate environmental baseline established in the RDEIR/SDEIS violates NEPA and CEQA and makes any analysis of the project’s impacts impossible. The RDEIR/SDEIS’ omission of the required information in its baseline analysis violates the foundational NEPA/CEQA mandate for informed decision-making. (California Native Plant Soc. v. City of Santa Cruz (2009) 177 Cal.App.4th 957, 987.)</p> <p>Existing physical conditions in the vicinity of a project “normally” serve as the “baseline” for determining the significance of the project’s environmental impacts – that is, the set of conditions against which the scope and severity of the project’s effects are compared. (Guidelines, § 15125(a); Communities for a Better Environment v. South Coast Air Quality Management District (2010) 48 Cal.4th 310, 315 (CBE SCAQMD).) If an “EIR does not adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project, informed decision-making cannot occur under CEQA and the final EIR is inadequate as a matter of law.” (Communities for a Better Environment v. City of Richmond (2010) 184 Cal.4th 70, 82-83 (CBE Richmond)) (citation omitted).) An adequate baseline thus serves the “fundamental goal” of an EIR: “to inform decision makers and the public of any significant adverse effects.” (Neighbors for Smart Rail v. Exposition Metro Line Construction Authority (2013) 57 Cal.4th 439, 447 (Neighbors); County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 953 (without an “adequate baseline description ... analysis of impacts, mitigation measures and project alternatives</p>	<p>All of the action alternatives evaluated in the EIR/EIS, Existing Conditions, and the No Action Alternative would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. DWR and Reclamation operate with water rights issued by the State Water Resources Control Board that are junior in priority to many senior water rights holders in the Delta watershed. Under the action alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative. Conveyance facilities under the action alternatives could only deliver the amount of water diverted under the existing SWP and CVP water rights and in accordance with the existing and future related regulatory requirements based upon river water levels and flow, water available in the system, the presence of threatened and endangered fish species, and water quality standards. The proposed project does not seek any new water rights or reduction in total water rights issued to DWR and Reclamation. The State Water Resources Control Board, not DWR or Reclamation, is responsible for decisions relating to water rights.</p> <p>Water rights issued on rivers in the Trinity and Central Valley watersheds include a wide range of beneficial uses from hydropower to municipal, industrial, and agricultural water users. However, not all of the water diverted under the water rights is consumptively used. For example, water diverted for hydropower electric generation is fully returned to the water bodies; and a portion of the water diverted from municipal, industrial, and agricultural water uses is returned to the water bodies. In addition, the amount of water diverted is dependent upon water rights priorities and the need to meet environmental flow and quality requirements. Therefore, it is difficult to compare the total volume of water rights licenses to the total amount of water available in the system. For example, water rights issued to DWR and Reclamation are not fully available to provide water under the SWP and CVP water contracts in many years due to the demands of senior water rights holders and regulatory requirements.</p> <p>The EIR/EIS acknowledges that there are many programs under development by regulatory agencies as well as DWR and Reclamation that could change the availability of water supplies for SWP and CVP water users. Since these programs are still under development and the potential outcomes are not known at this time, these programs are not included in the analysis of the action alternatives or included in the No Action</p>

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		<p>becomes impossible”).) An adequate baseline is one against which predicted effects can be described and quantified. (Neighbors, supra, 57 Cal.4th, at 447 (citing CBE SCAQMD, supra, 48 Cal.4th, at 315).) The Water Fix RDEIR/SDEIS, however, erred in failing to include a quantified analysis of the availability of water flowing into the Delta and the demand for that water. According to the RDEIR/SDEIS, annual Delta exports vary from 3 to 6.5 MAF. However, without detailed information on flows in and out of the Delta (after consumptive use is calculated), the RDEIR/SDEIS fails to provide sufficient information to allow agencies and the public to assess the impacts of implementing the Water Fix project on Bay/Delta habitat, public trust resources and responsible exports in a quantified manner. (Neighbors, supra, 57 Cal.4th at 447) (“an EIR must delineate environmental conditions prevailing absent the project, defining a “baseline” against which predicted effects can be described and quantified”, citing CBE SCAQMD, 48 Cal.4th, at 315).)</p> <p>The Water Resources chapter of the RDEIR/SDEIS provides a qualitative summary of various hydrological conditions, water resources and water uses for various watersheds within the Delta and those outside of the Delta that import Delta water. This qualitative assessment, however, fails to holistically recognize the critical importance of Delta water flow, and Bay/Delta outflow, to the health of the ecosystem. Even the Delta Independent Science Board Lead Scientist has explained that restoring more natural flow regime is critical goal for Delta ecosystem. Though it was possible to conduct an analysis of water availability and disclose that information as part of baseline conditions (example water availability analysis that shows that the Central Valley watershed is over-appropriated by up to 5 times), the Water Fix proponent agencies deferred the development of water availability analysis to the SWRCB. Thus, the RDEIR/SDEIS fails to provide the public with a basic analysis of how much Delta water is available for various uses, including Bay/Delta export.</p> <p>The RDEIR/SDEIS also fails to discuss over-allocated water entitlements that create unrealistic demands for Delta water, or “paper water.” In fact, the SWP/CVP only supplies approximately half of the entitlements of water per year. (PCL v. DWR (2000) 83 Cal.App.4th 892, 908.) The California courts have criticized paper water, recognizing the “huge gap between what is promised and what can be delivered.” (PCL v. DWR, supra, 83 Cal.App.4th at 903 (“Entitlements’ is a misnomer, for contractors surely cannot be entitled to water nature refuses to provide or the body politic refuses to harvest, store and deliver”).) The Water Fix agencies acknowledge that “[e]xisting configurations of Delta water conveyance and associated conveyance facilities do not provide adequate long-term reliability to meet current and projected water demands for SWP and CVP water exports from the Delta watershed. However, the RDEIR/SDEIS avoids addressing the paper water issue in favor of more cursory treatment, referring to the failure to construct a peripheral canal in 1982 and passage of federal and State laws to protect wild rivers has resulted in water supply shortages such that “full amount of water originally envisioned when the SWP was planned is no longer visible.” Similarly, the RDEIR/SDEIS admits that the CVP/SWP’s ability to convey water from the Delta is further reduced by the capacity of conveyance and storage facilities in areas outside of the Delta that use Delta water. The RDEIR/SDEIS also notes that continued reliability of CVP and SWP water supplies in the Delta has been reduced over the past 20 years through the implementation of water quality objectives, water rights decisions, and biological opinions.</p> <p>The RDEIR/SDEIS fails to provide information that allows the decision-makers for the</p>	<p>Alternative. If these programs were included in the detailed EIR/EIS analysis, they would be included in both the No Action Alternative and the action alternatives; and the incremental differences between the action alternatives and the No Action Alternative under the environmental resources would be similar. The purpose of the EIR/EIS is to provide those incremental differences to the decision makers of DWR and Reclamation to inform their decision of the proposed project. In the future following completion of the updated programs that could affect water availability, SWP and CVP operations would need to be reviewed to determine if the operations continued to comply with the new regulations and to inform the SWP and CVP water users of changes in water supply availability.</p> <p>Please also refer to Master Response 1 regarding environmental baseline. For additional information regard water transfers, please see Master Response 43.</p>

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		<p>project permits that are required in the future (Change in Point of Diversion, new water quality standards, Corps of Engineers wetland permit, etc.) and for the public to quantify the difference between Delta water supply and demand, which is part of baseline conditions, and therefore necessary to assess the impacts of implementing the Water Fix. The exact quantification of the gap between supply and demand is necessary in order for the many decision-makers expected to rely on this document to make informed decision-making that evaluate all actions that could be taken in order to meet the legally required goals. Only through quantifying water supply, entitlements, and demand would decision-makers and the public be able to realistically assess the environmental impacts of the Water Fix's approach to water reliability, whereby it is expected that "[w]ater exported from the Delta will more closely match water supplies available to be exported while providing the fullest possible protection for the Delta ecosystem."</p> <p>The RDEIR/SDEIS' failure to include realistic water supply data in its environmental baseline is prejudicial because it undermines the statutory goals of an EIR/EIS to inform decision makers and the public of potentially significant adverse effects on the physical environment. (See <i>Neighbors</i>, supra, 57 Cal. 4th at 516 (citing <i>Kings County Farm Bureau v. City of Hanford</i> (1990) 221 Cal.App.3d 692, 712).) The vague and cursory water supply and demand conditions as described by the RDEIR/SDEIS without support by quantitative data does not provide sufficient baseline information that would allow decision-makers or the public to evaluate significant adverse water resources and biological impacts (among others) the tunnel and diversions will have on the environment. (Guidelines, §15125(a); CBE SCAQMD, supra, 48 Cal.App.4th, at 315.)</p>	
2628	32	<p>The RDEIR/SDEIS Failed to Include an Accurate, Stable and Finite Project Description.</p> <p>According to the RDEIR/SDEIS, the Water Fix is a standalone project that no longer includes most of the environmental restoration that the proponent agencies believed would be necessary to qualify for "safe harbor" under ESA Section 10 as a federal HCP or a state NCCP. Since the Bureau of Reclamation is one of the proponent agencies and is no longer applying for protection from the ESA for federal contractors, the Fix project needs to go through the normal process for project approval. The Water Fix RDEIS/SDEIS cannot be adequate without the Bureau preparing the first step in an ESA Section 7 process, that of preparing and submitting a Biological Assessment of the impacts and effects on the environment of their proposed project. This step has not been done at the present time. The inclusion of the normal Biological Assessment would provide the public and later decision-makers with operational parameters that would enable a more complete analysis of this project. A Biological Assessment of the proposed project's likely impacts on listed species and a complete assessment of the existing aquatic habitat needs of the listed species would give a more complete picture that would enable members of the public to better understand and evaluate all of the issues that need to be considered, including (1) reliable water supply; (2) Delta ecosystem restoration; (3) protection and enhancement of the Delta as an evolving place; (4) water quality improvement; and (5) flood risk reduction.</p> <p>Adequate information regarding the Water Fix and its potential impacts on the environment has been lacking throughout this long, ever-changing process. The passage of the DRA was based on a BDCP process that would qualify as a federal ESA Section 10 Habitat Conservation Plan and a state Natural Communities Conservation Plan. However, the information that was available to the DSC throughout the environmental</p>	<p>The lead agencies believe that the BDCP and EIR/EIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>The Proposed Project has been developed with the goals of minimizing and avoiding incidental take of listed species to the maximum extent practicable. Chapter 11, Fish and Aquatic Resources, and Chapter 12, Terrestrial Biological Resources, EIR/EIS, describe effects of the Proposed Project and several alternatives on fish and wildlife species in the Plan Area. Section 7 requires that federal agencies, in consultation with the federal fish and wildlife agencies, ensure that their actions are not likely to jeopardize the continued existence of species or result in modification or destruction of critical habitat. Where the alternative does not include preparation of an HCP, ESA compliance for construction and operation of water intakes in the north Delta and associated conveyance facilities would be achieved solely through Section 7. For these alternatives, USFWS and NMFS would not issue a permit and would not act as a lead agency for NEPA compliance. Where Section 7 is the ESA compliance strategy, USFWS and NMFS will assume roles as cooperating agencies for purposes of the NEPA review. Reclamation would be the lead federal action agency for Section 7 compliance where a non-HCP alternative is selected. Reclamation's Section 7 compliance would be expected to also address the Section 7 compliance needs for the USACE permit actions. In cooperation with DWR, Reclamation would prepare a biological assessment (BA) for submission to USFWS and NMFS requesting formal consultation under ESA Section 7.</p> <p>A biological opinion is not required prior to the release of the Draft BDCP/CWF EIR/EIS. For the Proposed Action, the USFWS and NMFS will conduct an internal ESA section 7 consultation prior to issuance of an Section 10(a)(1)(B) permit for the Proposed Action. These federal agencies will coordinate the ESA</p>

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		<p>review of the Delta Plan has now been changed. The voluntary discarding of the BDCP will potentially have grave impacts on the Delta Stewardship Council’s Delta Plan. So many of the assumptions of both the Council and the state legislature that resulted in the dual goals of the DRA have been eliminated, leaving the Delta Plan with major holes in it that cannot be closed. The DRA left the questions of storage and conveyance, flows, biological targets, amount of restoration, and species viability up to the BDCP program. Now that the project description has changed so substantially, eliminating the restoration portion of the dual goals, who is now to determine whether or not the project can accomplish the DRA’s statutory requirements? Specifically, DSC had access to then reliable information that the BDCP planned divert up to 15,000 cubic feet per second of water from the Delta, and that the Resources Agency maintained that “a conveyance capacity ranging in size from 12,000 to 15,000 cubic feet per second would best accommodate the dual objectives” of the Delta Reform Act. (2010 BDCP Highlights) In July 2012, the Governor and the DWR Deputy Director described the BDCP project as consisting of two 33-foot diameter tunnels 35 miles long with the capacity to convey 15,000 cubic feet per second of water under the Delta to the pumping plants at the south end of the Delta. The location of the upstream diversion would be near Clarksburg on the Sacramento River.</p> <p>The DSC’s RDEIR released for public review in November 2012, however, continued to define the project by a vague and misleading reference to plans to encourage “conveyance facilities (pipelines and pumping plants)” as if there was still some question as to what those projects entailed. In fact, the location and size of the new conveyance project--the Water Tunnels--had been announced by the Governor four months earlier. Moreover, by March 2013, prior to the certification of the FEIR in May, Administrative Drafts of the BDCP Plan had been released showing more specific details about the project including placement of three intakes for the Water Tunnels “between River miles 37 and 41 (near Clarksburg).” (March 2013 Admin. Draft BDCP. The Council certified its FEIR based on an existing understanding that BDCP would be a Habitat Conservation Plan and a state Natural Community Conservation Plan. It relied on the completion of the BDCP process for resolution of most of the thorny issues that have plagued the Bay/Delta estuary for decades. In mid-2015, the BDCP project failed. The Water Fix was rolled out by DWR and the Bureau and BDCP was nothing more than a preliminary pile of 44,000 pages used to confuse and exhaust reviewers in the Water Fix BDEIR/SDEIS. The Delta Plan required by the DRA was prepared for a different reality, and the Fix was truly in. The project was now completely different from before and the attempt to save and restore the Bay/Delta estuary was no longer the responsibility of the proponents of the Water Fix.</p> <p>CEQA requires that “an agency must use its best efforts to find out and disclose all that it reasonably can” about the project being considered and its environmental impacts.” (Vineyard Area Citizens v. City of Rancho Cordova (2007) 40 Cal.4th 412, 428 (Vineyard).) “CEQA requires full environmental disclosure.” (CBE Richmond 184 Cal.4th 70, 88.) A primary goal of CEQA is “transparency in environmental decision-making.” (Save Tara v. City of West Hollywood (2008) 45 Cal.4th 116, 136.) Specifically, “An accurate, stable and finite project description is the sine qua non [absolutely indispensable requirement] of an informative and legally sufficient EIR.” (San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App.4th 645, 655 (project description unstable and misleading statements that no increases in production were being sought).) “However, a curtailed, enigmatic or unstable project description draws a red herring across the path of public input.” (Ibid.). “Only through an accurate view of the project may the public</p>	<p>consultation process and other environmental review processes, such as the National Environmental Policy Act (NEPA), consistent with federal regulations. In addition, the USFWS and NMFS will consult with the United States Bureau of Reclamation (Reclamation) to complete biological opinions or a joint biological opinion prior to federal action to carry out the BDCP.</p> <p>For more information regarding the proposed project’s compliance with the Delta Reform Act please see Master Response 31.</p> <p>Please also refer to Master Response 8 regarding how the lead agencies reviewed the project as a whole and Master Response 45 regarding permits and timing of issuance of permits.</p>

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		<p>and interested parties and public agencies balance the proposed project’s benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives.” (Ibid., citations and internal quotation marks deleted; accord, CBE Richmond, supra, 184 Cal.4th 83-86.)</p> <p>Under CEQA a “project” is defined as “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. . .’ Guidelines, § 15378, subd. (a). . .” (Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora (2007) 155 Cal.App.4th 1214, 1222.) Moreover, “The term project refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term project does not mean each separate governmental approval.” (Ibid., internal quotation marks deleted.)</p> <p>Here, it would be difficult to construct a closer relationship than that of the BDCP/Water Fix Water Tunnels and the Delta Plan. The specific location, size, and a variety of the Delta Water Tunnels factors had already been described in the BDCP process by DWR and others. For instance, the chair of the DSC presented testimony to the Legislature regarding the BDCP and the Delta Plan and commented extensively on administrative drafts of the BDCP as a responsible agency. Pursuant to the 2009 DRA, the BDCP Plan was to be considered for inclusion in the Delta Plan (WC, § 85320(a)), and it was the DSC’s position that it had no discretion over the inclusion of the BDCP in the Plan if certain conditions precedent were met (DSC Role Regarding Conveyance)). The Delta Fix is not a HCP as allowed under the federal endangered species act (ESA) or a Natural Communities Conservation Plan (NCCP). Because of the changes in the project caused by the proponent’s inability to design a project that could meet the requirements for a qualifying program, the Water Fix will need approvals from numerous federal and state agencies, including the DSC, before the tunnel project can be approved. In this circumstance, the requirements of the Delta Reform Act mandating achievement of the dual goals of restoring and enhancing the Bay/Delta have not be met by the state and federal agencies now proposing the Delta Water Fix. The Water Fix RDEIR/EIS project description and federal purpose and need fail to meet the requirements of the DRA and the DSC’s Delta Plan.</p> <p>Thus, the proponents failure to provide an “accurate, stable, and finite” description of the project, by improperly excluding requirements of existing state and federal law, and a real review of what would be possible if existing law were followed. Despite the proponents’ claims to the contrary, the vague description of the science and law governing implementation of actions or development of projects, including construction and operations of facilities or infrastructure misleads the public into believing that there was some uncertainty about what conveyance projects were allowed to accomplish. Contrary to the excuses offered by the proponents, information is readily available from the earlier comments gathered during the BDCP process which allow the quantification of water to be diverted from the Bay/Delta and analysis of the resulting environmental impacts. It is also necessary to analyze whether the present Water Fix tunnels and diversions can meet the dual goals of the DRA. By killing the BDCP and the NCCP, and moving forward with an altered project containing the same infrastructure project, and requiring the public to digest the 44,000 pages of the BDCP DEIR/EIS along with 8,000 pages of Water Fix RDEIR/EIS, DWR and the Bureau make it impossible to follow the details of this project. By failing to provide the required accurate, stable, and finite</p>	

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		<p>project description, the tunnel proponents failed to proceed in the manner required by state and federal law.</p> <p>The RDEIR attempted to justify the absence of much environmental analysis of the Revised Project by distancing the probable effects of implementing the Water Fix, instead of the BDCP. The Delta Stewardship Council (DSC) is a responsible agency for the BDCP/Water Fix environmental review and has been consulting with DWR during the development of the BDCP. Accordingly, the Water Fix proponents must completely evaluate the potential environmental consequences of all BDCP/Water Fix alternatives and analyze their ability to meet the new dual goal standards now embedded in the California Water Code.</p> <p>The DSC FEIR denied that “both the Delta Plan and the PEIR must include quantitative measures of the Plan’s effect on the environment.” According to the DSC FEIR, “There is no basis on which to provide additional, project-specific analyses as suggested by commenters, including quantification of changes in the amount of water supply available from the Delta. . .” DSC claims that “Without specific details of future projects, it is not possible for the [DSC] to develop quantitative thresholds of significance, conduct site-specific quantitative analyses, and design site-specific mitigation measures.”</p> <p>Based on this approach, in that FEIR the DSC stated that it did “not evaluate the potential environmental consequences of various BDCP options that DWR may be considering.” In responding to comments on that document, the DSC denied that its EIR “must include quantitative measures of the Plan’s effect on the environment” and that it could not provide “additional, project-specific analyses as suggested by commenters, including quantification of changes in the amount of water supply available from the Delta. . .”</p> <p>The DSC’s approach to punt the clear requirements of the DRA in its review was without merit. They relied on the project description of the BDCP in making their erroneous decision. They are now, in a sense, victims like the rest of the public. This unstable, shifting attempt to change horses in mid-stream on this project results in a bait and switch by DWR and the Bureau that will result in grave environmental damage to the Bay/Delta estuary. So too is the Water Fix proponents’ approach to prepare an RDEIR/EIS that allows environmental, legal, and scientific questions like flow, water quality, and water availability to continue to be passed into the future to be decided by others. In 2013, the DSC segmented and deferred environmental analysis of the new conveyance to the ongoing and future BDCP process. The new Water Fix proponents propose in this RDEIR/EIS to defer these environmental requirements to other agencies. The change of point of diversion, the amount and quality of water diverted miles upstream of the present system and necessary cold water pools in DWR and Bureau storage facilities are left to the State Water Board; and water quality, water temperature and other wetland issues are left to the Army Corps of Engineers. EIR Guideline § 15004(b) states the fundamental CEQA rule that EIRs “should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.” Consequently, “public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance.” § 15004(b)(2). As an example, “agencies shall not. . . Otherwise take any action which gives impetus to a planned or foreseeable project in a</p>	

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		<p>manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project.” § 15004(b)(2)(B).</p> <p>Deferral of analysis in the context of EIR preparation is only permissible if (1) obtaining more detailed useful information is not meaningfully possible at the time of EIR preparation and (2) such information is not necessary at an earlier stage in determining whether or not to proceed with the project. (County Sanitation Dist. No. 2 of Los Angeles County v. County of Kern (2005) 127 Cal.App.4th 1544, 1599.) That other agencies have CEQA obligations pertaining to what they are or will be doing does not relieve the first agency from conducting environmental review including feasible alternatives. (127 Cal.App.4th at 1602-3.) (See also Fullerton Joint Union High School Dist. V. State Bd. Of Education (1982) 32 Cal.3d 779, 794-797 (an essential step “culminating in action which may affect the environment” requires CEQA environmental review).)</p> <p>In summary, the presence of a CEQA/NEPA process in the BDCP/Water Fix process does not absolve the other state and federal agencies from their duties under CEQA to perform comprehensive and detailed environmental analysis. Nor does the fact of past and future environmental processes relieve the Water Fix of its responsibility to obtain detailed useful information about Bay/Delta hydrology, necessary Delta inflow and outflow, water quality and water availability for their project.</p>	
2628	33	<p>Potential impacts from new conveyance and restoration projects included in the Water Fix were not disclosed, and the ones that were disclosed are not fairly analyzed.</p> <p>The RDEIR/SDEIS for the Water Fix contains simple admissions of obvious and significant environmental impacts without accompanying exploration and analysis of those significant impacts. The RDEIR/SDEIS admits: “Operations of new water supply facilities whether . . . tunnels, . . . water intakes or diversions may create long-term changes in local mixtures of source waters within water bodies, ...Operation of facilities within the rivers and streams upstream of the Delta or in the Delta could result in changes in salinity in the Delta by reducing Delta freshwater inflows during some periods of the year.” The RDEIR/SDEIS admits that the “Revised Project” would have significant and unavoidable environmental impacts including violation of water quality standards or substantial degrading of water quality and substantial adverse effects on special status species and on fish or wildlife species and their habitat and movement. Similarly, the cumulative impacts analysis for the Water Fix document states that the Project could lead to “changes in instream flow or water quality conditions” without providing adequate details on the damage that might cause the Bay/Delta estuary. This cursory analysis does not, however, describe what the changes and their environmental impacts might be and/or the full consequences of those impacts. The Water Fix CEQA Findings label certain environmental impacts as significant without exploring and analyzing the significant construction and “operation of reliable water supply” projects that cannot be avoided and that cannot be mitigated to a “less-than-significant level.” These admitted substantial adverse effects include: effects on “special status species”, “sensitive natural communities, including wetlands and riparian habitat”, “substantial degradation of visual qualities”, “scenic vistas and scenic resources”, and exposure of “sensitive receptors to substantial pollutant concentrations.”</p> <p>With respect to the effect of new conveyance in the north Delta altering flows, the Water Fix proponents acknowledged that:</p> <p>Water flow in the Delta is critically important because flow affects the reliability of</p>	<p>The lead agencies believe that the BDCP and EIR/EIS are complete in their evaluation of impacts, direct and cumulative, that project description is complete and satisfies the requirements of NEPA, that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies agree that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>To review responses to comments submitted by other entities during the 2013 and/or 2015 comment periods, please refer to the index of commenters to find the appropriate letter number(s).</p> <p>With regard to water quality Please see Master Response 14.</p> <p>Please also refer to Master Response 38 regarding the length of the environmental document and 41 regarding transparency.</p>

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		<p>water supplies and the health of the Delta ecosystem. The best available science demonstrates that flow management is essential to restoration of the Delta ecosystem.</p> <p>Altered flows in the Sacramento and San Joaquin rivers and their tributaries change flows within and out of the Delta and affect salinity and sediment in the Delta. Fish and other aquatic species native to the Delta are adapted to natural flow, salinity, and sediment regimes. Current flow, salinity, and sediment regimes harm native aquatic species and encourage non-native species. The best available science suggests that the currently required flow objectives within and out of the Delta are insufficient to protect the Delta ecosystem. (Nov. 12, 2012 Initial Statement of Reasons) for the BDCP project.)</p> <p>But adequate information and analysis on what the significant adverse impacts are or how severe they are is absent from the BDCP previous RDEIR and Findings. Now the Water Fix RDEIR/SDEIS continues to pass the above issues forward, while relying on their incomplete and incomprehensible environmental document to justify their approval of the state and federal proponent’s own project in the meantime. We (California Water Impact Network, California Sportfishing Alliance and Aqua Alliance) do not believe that other agencies further down the permitting line will supply the information necessary to justify final approval of this devastating project. We are entitled to see revised and more complete information in the Water Fix RDEIR/EIS before approval of the project.</p> <p>To this end, comments on this RDEIR/SDEIS will echo our previous comments on the BDCP draft documents. We stated:</p> <p>Recent ‘Red Flag’ issues raised by the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service concerning the Delta Water Tunnels are many, and include as just one example ‘potential extirpation of mainstream Sacramento River populations of winter-run and spring-run Chinook salmon over the term of the permit. . .’ (NMFS Progress Assessment and Remaining Issues Regarding the Administrative Draft BDCP Document, p. 12, April 4, 2013). Those species of salmon are listed endangered species under the Endangered Species Act, 16 U.S.C. § 1531 et seq. (NOAA fisheries Red Flag comments on BDCP))</p> <p>The Delta Stewardship Council’s Delta Plan previously conceded that “[t]he perilous condition of salmon, Delta smelt, and other species remains a key limit on project operations.” Those CEQA Findings also acknowledged cumulatively considerable impacts include: projects that “in combination with the cumulative projects, could violate water quality standards,” and that “[t]hese cumulative biological resources impacts could be significant, and the Project could have a considerable contribution.” None of these identified issues were adequately analyzed by the Water Fix environmental document, even with the totally confusing incorporation of the BDCP to the Water Fix documents. No human being can fully review and comprehend 50,000 pages of material that is claimed to be relevant to the Water Fix decision. This volume of material is one of the most confusing and frustrating things about the changes from the BDCP to the Water Fix. One has to search both documents to attempt to find answers to the simplest questions like “How can BDCP fail on environmental grounds, and yet the Water Fix be approved when the only real difference in the two projects is that the Water Fix project proponents have eliminated more than 70% of the restoration activity?</p> <p>CEQA requires that each EIR shall include “[a]ll significant effects on the environment of the proposed project.” (PRC, §21000(b)(1).) “‘Significant effect on the environment’ means a substantial, or potentially substantial, adverse change in the environment.”</p>	

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		<p>(PRC, §21068.) Effects can be direct, indirect, or cumulative. (Guidelines, §§15358, 15355.) When “assessing the impact of a proposed project on the environment, the lead agency normally examines the ‘changes’ in existing environmental conditions in the affected area that would occur if the proposed activity is implemented.” (San Joaquin Raptor Rescue Center, 149 Cal.App.4th 645, 660; Guidelines, §15126.2(a).)</p> <p>Before adopting the Water Fix, DWR and the Bureau are required to assess the environmental impacts resulting from the changes called for by the Project, including those related to issues of hydrology, water flows, water quality, ecosystem restoration and water availability with which the tunnels and new diversions are so inescapably intertwined. Instead of disclosing the likely impacts from these actions, the Fix proponents elected to defer such analyses to others at a time after the Water Fix was approved. Consequently, decision-makers and the public cannot be apprised of the possible environmental impacts of the Water Fix, which includes conveyance without most of the ecosystem restoration. (California Clean Energy Com. v. City of Woodland (2014) 225 Cal.App.4th 173, 200 (Woodland) (“CEQA’s demand for meaningful information ‘is not satisfied by simply stating information will be provided in the future’”))</p> <p>This attempt to avoid disclosure of impacts runs counter to the proponent’s duty to discover, disclose, and analyze impacts in good faith, and not sweep stubborn problems “under the rug.” (Kings County, supra, 221 Cal.App.3d at 733.) A lead agency may not simply label certain impacts as significant and then find that overriding considerations warrant proceeding with the project; that approach is “backward and allows the lead agency to travel the legally impermissible easy road to CEQA compliance.” (Berkeley Keep Jets Over the Bay Com.v. Board of Port Comrs.(2001) 91 Cal.App.4th 1344, 1371 (Berkeley).) The RDEIR/EIS and the CEQA Findings conceded that implementation of the Water Fix would have numerous significant adverse impacts ranging from violation of water quality standards, conversion of agricultural land, and substantial adverse effects on special status species and their habitat. However, then RDEIR/EIS failed to analyze how severe those impacts would or might be, thereby violating NEPA and CEQA.</p>	
2628	34	<p>The RDEIR/SDEIS fails to properly analyze the cumulative impacts of implementing the BDCP/Water Fix Plan, the EcoRestore Plan, the DSC Delta Plan and numerous other parts of Governor Brown’s California Water Plan.</p> <p>The RDEIR/SDEIS fails to properly analyze cumulative impacts of the project in that it does not sufficiently analyze the BDCP/Water Fix as a cumulative project; provides an unduly limited cumulative projects list; fails to include all the elements of Governor Brown’s California Water Plan and fails to include upcoming SWRCB proceedings as a cumulative project. It also fails to sufficiently analyze cumulative impacts on Delta, upstream and downstream water and biological resources; and fails to properly analyze cumulative impacts regarding changing storm patterns, sea level rise, and other impacts of climate change. An EIR must discuss cumulative impacts, or the collectively significant changes in the environment resulting from the incremental impact of the project “when added to other closely related past, present, and reasonably foreseeable probable future projects.” (Guidelines, §§ 15355(b), 15130(a)(1).) An agency must use standards of practicality and reasonableness as well as its best efforts to fully disclose cumulative impacts of a project. (Guidelines, §§15130(b), 15144, 15151; see also CBE Richmond, supra, 184 Cal.4th at 96; Banning Ranch Conservancy v. City of Newport Beach (2012) 211 Cal.App.4th 1209, 1228; Vineyard, supra, 40 Cal.4th at 428; Citizens to Preserve the</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information regarding the potential impacts and proposed mitigation measures on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Each resource chapter has a cumulative impacts analysis. For greenhouse gas emissions, please see Final EIR/EIS, chapter 22, air quality. Cumulative greenhouse gas emission impacts are also addressed in this chapter. For climate change, or how the proposed project is resilient to climate change, please see Final EIR/EIS, 29. Please also see Final EIR/EIS, Appendices, 29A, Effects of Sea-Level Rise on Delta Tidal Flows and Salinity; 29B, Climate Change Effects on Hydrology in the Study Area Used for CALSIM Modeling Analysis; 29C, Climate Change and the Effects of Reservoir Operations on Water Temperatures in the Study Area, and 29D Climate Change Analysis and Discussion of Future Uncertainty.</p> <p>Additionally, please see Master Response 19 which also discusses the recent California Supreme Court decision, California Building Industry Association v. Bay Area Air Quality Management District (2015) 64_Cal.4th_369 regarding climate change analyses in CEQA documents.</p>

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		<p>Ojai v. County of Ventura (1985) 176 Cal.App.3d 421, 432 (citation omitted); San Franciscans For Reasonable Growth v. City and County of San Francisco (1984) 151 Cal.App.3d 61, 81) (San Franciscans.) While the absence of information in an EIR is not a prejudicial abuse of discretion per se, it must not “minimize[] or ignore[] cumulative impacts.” (Al Larson Boat Shop, Inc. v. Board of Harbor Comrs. (1993) 18 Cal.App.4th 729, 749 (citations omitted); Kings County, supra, 221 Cal.App.3d at 712.) Absent meaningful cumulative analysis, there would be no control of development and “piecemeal development would inevitably cause havoc in virtually every aspect of the [] environment.” (Kings County, supra, 221 Cal.App.3d, at 720; San Franciscans, supra, 151 Cal.App.3d, at 61.)</p>	<p>For additional information on cumulative impacts please see Master Response 9.</p>
2628	35	<p>The RDEIR/SDEIS fails to adequately analyze BDCP/WaterFix as a cumulative project.</p> <p>Section 15130(b) of CEQA Guidelines require an EIR’s cumulative impact analysis to include either a list of past, present, and reasonably anticipated future projects that have produced or likely to produce related or cumulative impacts or include a summary of projections contained in a general plan or related planning document. (Guidelines, §15130(b).) While the RDEIR/EIS includes the Council’s Delta Plan, the BDCP and the California Water Plan in its list of related actions, programs, and projects considered in the cumulative impact assessment, the cumulative impact analysis regarding the BDCP/Water Fix fails to meet minimum requirements.</p> <p>CEQA Guidelines §15130(b) requires an EIR to include “a summary of [a related project’s] expected environmental effects, with specific reference to additional information stating where such information is available.” The cumulative analysis in the EIR provides only a cursory paragraph summarizing the elements of Governor Brown’s California Water Plan. In Section 23 of the Delta Plan EIR, the chapter of that EIR devoted to BDCP, the Stewardship Council avoided discussing the BDCP’s expected cumulative environmental effects by stating that “specific details of BDCP have not been defined,” that the project does “not make recommendations for specific BDCP facilities or operations,” and that “the agencies pursuing BDCP are best positioned to develop and evaluate possible options and decide on the best Delta conveyance concept.”</p> <p>Although an EIR is not required to speculate about cumulative impacts that might occur, specific information regarding cumulative impacts should be disclosed when feasible. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260, 277-78; East Bay Mun. Util. Dist. V. Department of Forestry & Fire Protection (1996) 43 Cal.App.4th 1113, 1130.) The cumulative impacts of the BDCP were far from speculative at the time the Water Fix RDEIR/SDEIS was prepared. This information permitted a discussion of a general range of impacts and cumulative impacts the Water Fix would likely produce in connection with the Council’s Delta Plan, the Governor’s California Water Plan, the new storage under study and other reasonably foreseeable projects.</p> <p>Yet the Delta Plan EIR systematically failed to disclose even the most basic information. For instance, the only information regarding BDCP’s impact on biological resources in the EIR’s cumulative impact analysis is that “changes in instream flow or water quality conditions” could result from construction and operation of projects including the BDCP. (EIR section 23 on BDCP) The EIR fails to discuss how biological resources would be impacted by these “changes” or, more accurately, flow reductions that likely will result from implementing the new BDCP diversions, for instance. With the Delta Plan explicitly promoting a project that would remove close to half of the flow of the entire</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information regarding the potential impacts and proposed mitigation measures on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Each resource chapter has a cumulative impacts analysis.</p> <p>For additional information on cumulative impacts please see Final EIR, Resource chapter and Chapter 31. Additionally, please see Master Response 9. For additional information on upstream reservoir effects and storage please see Master Response 25 and Master Response 37, respectively.</p> <p>The project description is legally adequate. Lead agencies may change a project description under CEQA. The lead agencies also properly recirculated its 2015 SDEIR/SDEIS to inform the public and decisionmakers of this change.</p> <p>Although the commenter’s specific contentions of inadequacy are addressed in separate responses, it is worth noting that “[t]he description of the project ... should not supply extensive detail beyond that needed for evaluation and review of the environmental impact[.]” (State CEQA Guidelines, § 15124.) “A general description of a project element can be provided earlier in the process than a detailed engineering plan and is more amenable to modification to reflect environmental concerns.” (Dry Creek Citizens Coalition v. County of Tulare (1999) 70 Cal.App.4th 20, 28.) “The ‘general description’ requirement for the technical attributes of a project is consistent with the other CEQA mandates to make the EIR a user-friendly document.” (Ibid.) “The EIR must achieve a balance between technical accuracy and public understanding.” (Ibid.)</p> <p>The only CEQA Guidelines, CCR 14, Ch 3, Section 15124 mandatory components of a Project Description in an EIR are the following:</p> <p>(a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.</p> <p>(b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.</p> <p>(c) A general description of the project’s technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.</p>

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		<p>Sacramento River (BDCP operations criteria)), "changes in instream flow" ought to have been elaborated upon for purposes of full disclosure.</p> <p>In addition, the Council's FEIR barely acknowledges that BDCP-related ecosystem restoration activities "could involve the conversion of farmland to accommodate ecosystem restoration or enhancement or Delta conveyance," and claims these effects "could be temporary . . . Which would not be a significant impact, or permanent." What would the Council's FEIR have said if they had known that the Water Fix was to replace the BDCP? The continually shifting project description means we will never know. The Water Fix RDEIR/SDEIS fails to provide a summary of the expected cumulative effects in a reasonable and good faith manner since specific details are still unknown. Will the Water Fix tunnels have water in them during dry years? Will there be new upstream storage projects and if so how will they be operated in conjunction with the new diversions and tunnels? How much agricultural land will be taken out of production as mitigation for the projects impacts? If so, how much land will be required to satisfy the requirements of the dual goals that are now part of the Water Code? BDCP said 133,000 acres; the Water Fix says 30,000 acres. What will U.S. Fish & Wildlife, National Marine Fisheries Service, California Fish & Game, the Delta Stewardship Council, the State Water Board, the Environmental Protection Agency, and the Army Corp of Engineers require? (San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 733 (failure to note loss of prime farmland resulting from required sewer expansion led to an insufficient analysis of the combined environmental effects of the proposed development).)</p> <p>Second, Guidelines §15130(b) requires that the discussion of cumulative impacts shall reflect the severity of the impact from the projects and their likelihood of occurrence. The sufficiency of the factual disclosure and the adequacy of the analysis must be commensurate with the importance of the place potentially impacted. The Bay/Delta estuary is accurately described in the Delta Reform Act as a place of hemispheric importance, and the paramount interest of the people of California. The Water Fix RDEIR/SDEIS fails to give either the estuary, or the law designed to protect this "paramount" interest, its due NEPA/CEQA consideration.</p>	<p>(d) A statement briefly describing the intended uses of the EIR.</p> <p>(1) This statement shall include, to the extent that the information is known to the Lead Agency,</p> <p>(A) A list of the agencies that are expected to use the EIR in their decision making, and</p> <p>(B) A list of permits and other approvals required to implement the project.</p> <p>(C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.</p> <p>The commenter has not claimed that the descriptions of the various alternatives in the EIR/EIS fail to include these required items of information. Instead, the commenter identifies a series of very technical issues that were not explained to the commenter's satisfaction, and mixes legal arguments with its claims that certain technical information is lacking. In short, the commenter has failed to show any legal inadequacy in the Project Description.</p> <p>Based on the project description provided in Chapter 1 and Chapter 3 of the Final EIR/EIS, the following resource chapters discuss the impacts of the various action alternatives as well as proposed extensive mitigation measures for any significant impacts that result from implementation of the project.</p> <p>The Stewardship Council's EIR is in flux due to the recent Sacramento County Superior Court's ruling and the Council's subsequent appeal, please review Master Response 31.</p> <p>For additional information regarding agricultural impacts, please see Master Response 18.</p>
2628	36	<p>The RDEIR/SDEIS fails to properly analyze cumulative impacts related to climate change, water resources, and sea level rise.</p> <p>An EIR must assess direct and indirect environmental effects of a project to ensure the long-term protection of the environment. (CEQA Guidelines §§ 15065(a)(4), 15126.2; PRC, §21001(d).) Climate change impacts fit squarely within a cumulative impacts analysis. (Ctr. For Biological Diversity v. Nat. Highway Traffic Safety Admin. (9th Cir. 2008) 538 F.2d 1172, 1217.) However, the EIR/EIS and the Findings do not adequately address the Fix's impacts on climate change. In particular, the document fails to analyze impacts of cumulative projects on water resources in the context of sea level rise and changes in storm patterns.</p> <p>The Water Fix proposes potentially massive shifts in water resources that will be exacerbated by climate change impacts such including rising sea levels as well as changes in precipitation and patterns. However, the EIR fails to adequately address the cumulative impacts the project could have on water resources against existing or future sea level and hydrological conditions. The cursory treatment in the RDEIR/SDEIS provides in discussing potential impacts on various projects due to changes in rainfall</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information regarding the potential impacts and proposed mitigation measures on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Throughout the DEIR/S and RDEIR/SDEIS climate change is included in all resource impact assessments. The commenter should specifically refer to Final EIR, Chapter 6 (Surface Water) and Final EIR, Chapter 11 (Aquatic Resources) for a complete accounting of the impacts of climate change and sea level rise on the project. Please also see Final EIR, chapter 22, Air Quality and Greenhouse Gases. For climate change, or how the proposed project is resilient to climate change, please see Final EIR/EIS, 29. Please also see Final EIR/EIS, Appendices, 29A, Effects of Sea-Level Rise on Delta Tidal Flows and Salinity; 29B, Climate Change Effects on Hydrology in the Study Area Used for CALSIM Modeling Analysis; 29C, Climate Change and the Effects of Reservoir Operations on Water Temperatures in the Study Area, and 29D Climate Change Analysis and Discussion of Future Uncertainty.</p>

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		<p>patterns does not adequately inform decision makers or the public about these impacts.</p> <p>To the minimal extent the RDEIR/SDEIS does discuss sea level impacts on water resources it relies on different assumptions than the Water Fix relies on planning for flood protection in anticipation of 55 inches of sea level rise by 2100. The Water Fix tunnel project will have effects and impacts long before 2100. The relevant issues regarding climate change in the Bay/Delta include changes in flows, changes in salinity, changes in estuarine residence time, changes in salinity, changes in exotic species and predation, changed effects on water quality from agricultural run-off and pesticide use. Without additional discussion and analysis of the effect of climate change in the areas of changing snowpack, increased water temperature, increased evapotranspiration, rim dam water management, flood flows, and upstream fishery habitat, it is impossible for the public and state and federal decision-makers to know whether the project should be approved.</p> <p>The failure of the RDEIR/SDEIS to adequately analyze potential climate change effects on Delta hydrology makes it impossible for the public and the decision-makers to evaluate the alternatives, the mitigations, and the true nature of the environmental impacts of the proposed Water Fix, all of which are violations of CEQA's fair disclosure requirements to afford the fullest possible protection of the environment. (CEQA Guidelines § 21001(a); Kings County, supra, 211 Cal.App.3d, at 720; Friends of the Eel River v. Sonoma County Water Agency (2003) 108 Cal.App.4th 859, 868 (Friends of the Eel River); Ojai, supra, 176 Cal.App.3d, p.432; San Franciscans, supra, 151 Cal.App.3d, at 81.) The Water Fix environmental review's deficient cumulative impacts section has led to an incomplete EIR/EIS that skews the public's decision making process and must be returned to the proponents for re-drafting. (Madera Oversight Coalition, Inc. v. County of Madera (2011) 199 Cal. App. 4th 48.)</p>	<p>Additionally, please see Master Response 19 which also discusses the recent California Supreme Court decision, California Building Industry Association v. Bay Area Air Quality Management District (2015) 64 Cal.4th_369 regarding climate change analyses in CEQA documents. Please also see Master Response 9 on cumulative impact analysis.</p>
2628	37	<p>The Water Fix agencies failed to develop and consider a range of reasonable alternatives.</p> <p>Brief descriptions of the project alternatives are found in the Findings and RDEIR/SDEIS Executive Summary and the RDEIR/EIS comparison of alternatives. According to the RDEIR/SDEIS, Alternative 4A, the preferred alternative called for by water exporters, would result in exporting more water out of the Delta in many year types. Appendix C, requested by the State Board and discussed in more detail below, would reduce exports in order to increase water flows to protect the Bay/Delta.</p> <p>Other than Appendix C, a modeling process requested by the State Water Board, and the Environmental Water Caucus alternative supported by the environmental community, and more fully described in the Environmental Water Caucus's alternative comments incorporated herein which would increase Delta flows by reducing exports, the alternatives appear vague to the point of being almost indescribable. Finding that the Preferred Project Alternative (4A) would result in export of roughly the same amount of water from the Delta and its watershed that is presently diverted is baffling. The only thing we know is that by calling for improved, meaning new Delta conveyance, the Water Fix is a step toward increasing the capacity to export even more water from the Bay/Delta and do so without letting the water first flow through the Delta as it does now. Thus the Water Fix preferred Alternative seems calculated to worsen rather than improve the current state of Delta water quality and quantity. Given the RDEIR/SDEIS' conclusion that Appendix C would sharply reduce exports from the Delta and thus is</p>	<p>The lead agencies analyzed a reasonable range of alternatives. Please see Final EIR, chapter 3, Description of Alternatives. Please refer to Master Response 4 for additional details on the selection of alternatives.</p> <p>The modeling results included Appendix C were placed in this appendix in the RDEIR/SDEIS because they were not part of the alternatives analyzed in Draft EIR/EIS; and therefore, were not included in Appendix A or Chapter 2 of the RDEIR/SDEIS. The modeling results included Appendix C were considered in the development of Alternative 4A as described in the Final EIR/EIS.</p> <p>The proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta, as described in Chapter 5, Water Supplies, and Chapter 6, Surface Water. The model results in Final EIR/EIS for Alternative 4A indicate that flows and export volumes would increase in wet, above normal, and below normal years between December and March and in June and July as compared to the Existing Conditions and No Action Alternative. Export rates and volumes would not substantially change in April and May. During the September through December period in all year types and in February and March in wet and above normal year types, Delta outflow would increase under Alternative 4A as compared to Existing Conditions. However, Delta outflow would be similar or less in most conditions except in October in all water year types as compared to the No Action Alternative.</p> <p>Commenter has referred to BDCP as being dead. Please note that BDCP is not dead. Although Alternative 4 is no longer the preferred alternative, it remains a viable alternative for lead agencies' consideration.</p>

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		<p>infeasible, the failure to develop and consider a range of reasonable alternatives reducing exports "less sharply" than called for by Appendix C or the EWC alternative is incomprehensible.</p> <p>The RDEIR/SDEIS explains that the State Board requested Alternative, relegated to Appendix C and not considered for analysis in the Water Fix document itself, decreased export of water from the Delta and so allegedly did not meet the proponent agencies purpose and need for the project. The results show what could be done in constructing a real alternative to improve Bay/Delta public trust resources. Some of the excerpts from Appendix C follow: "In order to provide Delta outflow similar to what was included in Alternative 8 without impacting instream flows and storage, additional Delta outflows (beyond those presented for Alternative 4 in the BDCP Draft EIR/EIS or Alternative 4A in this RDEIR/SDEIS) were achieved by reducing SWP and CVP exports." The modeled results found that "increased winter/spring Delta outflow will shift the low salinity zone further downstream into the Suisun region likely resulting in more favorable conditions for longfin smelt and Delta smelt habitat. Higher Delta outflow during this period could also shift pelagic fish further from the export pumps and assist out-migrating salmonids. Additionally, the increased winter/spring Delta outflow would push fresh water through the Delta, past the Suisun region, and out into the San Francisco Bay likely benefiting native estuarine species that have evolved under conditions of seasonally fluctuating salinity." To the extent that releasing this increased storage would not impact cold water pool supplies or instream flows necessary to protect fish or other beneficial uses, this increased storage could potentially be available to offset water supply effects or to further augment Delta outflows or instream flows."</p> <p>Despite this modeling, the agencies did not prepare an alternative informed by proposals from environmental organizations led by the Environmental Water Caucus and supported by our previous comments to BDCP. The Environmental Water Caucus proposal for an alternative also involves decreased water exports from the Delta as well as other features described in the EWC comments and incorporated herein. The RDEIR/SDEIS admits that overall Appendix C would have less water quality impacts than the Water Fix preferred Project, because it involves fewer facilities and less diversions of water from the Delta and Delta watershed. Also, "Appendix C would contribute more to improving conditions for biological resources and arresting ecosystem decline than the Preferred Water Fix Project." (Alt 4A)) Appendix C would have to be environmentally superior to the Revised Project with respect to impacts on Delta waters. The Environmental Water Caucus Alternative would have even more environmental benefit to estuarine fisheries, since it proposes new screens on the existing South Delta pumping facilities, where over half of the water exported will continue to be exported in normal and below water years.</p> <p>Comments on the previous environmental documents for the now dead BDCP specifically proposed new alternatives creating a range of reasonable alternatives in addition to the Environmental Water Caucus alternative. Some of the requested alternatives would not make a decision on whether to call for new conveyance until after determination of such fundamental issues as water supply availability and the environmental impacts of supplying the water under CEQA. Commenters called for developing a range of export reductions less severe than called for by the Environmental Water Caucus alternative. Without a broader range of alternatives, including export reductions and screening of the existing SWP/CVP pumping facilities in the south Delta,</p>	<p>For additional information regarding water quality, please see Master Response 14.</p>

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		<p>the Water Fix proponents completely fail to meet their NEPA/CEQA requirements.</p> <p>Despite the recognition by the Water Fix proponents that the Delta and the fish require greater rather than reduced flows, they relegated the State Water Board's requested modeling of higher outflows to Appendix C and subsequently failed to consider it. DWR and the Bureau summarily dismissed their legal responsibility to develop and consider a range of reasonable alternatives, including alternatives reducing exports, stating that the State Board's requested alternative did not meet their purpose a need for the project. They are wrong. There are alternative water supplies that are cheaper and more consistent with state and federal statutes, including the CWA, the ESA, the CVPIA, the public trust and the California Water Code. In other words, the proponents summarily refused to consider alternatives presented to them by the Environmental Water Caucus and the State Water Board and refused to develop and consider reasonable alternatives that would increase Delta flows by reducing exports.</p> <p>This refusal to develop and consider a range of reasonable alternatives increasing flows by reducing exports violates CEQA. Section 15126.6(a) of the CEQA Guidelines requires that: "An EIR shall describe a range of reasonable alternatives to the project or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The "public agency bears the burden of affirmatively demonstrating that, notwithstanding a project's impact on the environment, the agency's approval of the proposed project followed meaningful consideration of alternatives and mitigation measures." (Woodland, supra, 225 Cal.App.4th at 203.)</p> <p>In <i>Watsonville Pilots Association v. City of Watsonville</i> (2010) 183 Cal.App.4th 1059, 1086-1090 (Watsonville) a city did not consider and evaluate a reduced development alternative claiming it would have been inconsistent with a general plan objective to accommodate projected growth. The court responded: "The City's argument on this issue is premised on its claim that no discussion of an alternative is required if that alternative would not meet a project's objective. This premise is mistaken. It is virtually a given that the alternatives to a project will not attain all of the project's objectives." (Id. At 1087.) The court affirmed the trial court's issuance of writ of mandate and determination that the City's certification of a Final EIR violated CEQA. (Id. At 1095; accord, <i>Friends of the Eel River v. Sonoma County Water Agency</i> (2003) 108 Cal.App.4th 859, 872-873 (EIR analysis flawed because it did not contain consideration of alternatives that would reduce dependence on water diverted from the Eel River).)</p> <p>This case is dissimilar to the decision of <i>In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings</i> (2008) 43 Cal.4th 1143, 1162- 1169 (CalFed). In CalFed, the court did not fault the lead agency for failing to include reduced exports alternative in the former CalFed program EIR. CalFed had declined to carry the reduced export alternative over for study to the Final Program EIR because it concluded that alternative would not achieve the CalFed Program's "fundamental purpose and thus was not feasible." (Id. At 1166.) In this case, there has been no finding by anyone but the proponents who will own and manage the project that reducing exports is not feasible.</p> <p>In addition, this case involves the very "program-generated environmental impacts," that the court noted were absent and that "determine the required range of program alternatives." (CalFed, supra, 43 Cal.4th at 1168.) Here, the Water Fix proponents</p>	

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		<p>expressly call for new conveyance, and the Findings admit that water quality and fish species impacts result from new conveyance. Consequently, program-generated environmental impacts require a range of reasonable program alternatives. (See Guidelines, §15168(b) (explaining that a benefit of a program EIR is that it may include "more exhaustive consideration of effects and alternatives"); Friends of Mammoth v. Town of Mammoth Lakes Redevelopment Agency (2000) 82 Cal.App.4th 511, 533 ("Designating an EIR as a program EIR also does not by itself decrease the level of analysis otherwise required in the EIR. All EIRs must cover the same general content.").) Also, the court in CalFed observed that the CalFed proceedings were at a "relatively early stage of program design" and that the CalFed theory that it is possible to restore the Bay-Delta's ecological health while maintaining and perhaps increasing exports was "unproven." (Id.) The court said, "if practical experience demonstrates that the theory is unsound, Bay-Delta water exports may need to be capped or reduced." (Id.) The CalFed program work being reviewed in the cited case was performed in the 1990s. The theory that it is possible to restore Bay-Delta ecological health while maintaining or even increasing exports has now been demonstrated to be unsound. The importance of flow is reflected by the State Board's own finding after hearing in the 2010 during the Delta Plan process that "The best available science suggests that the currently required flow objectives within and out of the Delta are insufficient to protect the Delta ecosystem."</p> <p>A fundamental threshold decision will be made to either establish new conveyance, resulting in the diversion of more freshwater flows away from the lower Sacramento River and Delta, or to instead to increase freshwater flows through the Delta by reducing exports. The RDEIR/SDEIS for the Water Fix violates NEPA/CEQA because the required range of reasonable alternatives is absent from consideration in the environmental document. Moreover, the EIR impermissibly rejected consideration of variations on the EWC proposed alternative, which would have done more to increase flows into the Delta as the state and federal environmental agencies have recognized will be necessary to restore the ecosystem.</p>	
2628	38	<p>NEPA/CEQA conclusion: In determining the adequacy of an environmental document, the courts adopt a de novo standard of review to analyze potential abuse of discretion in procedural violations. (Woodland, supra, 225 Cal.App.4th at187; see also Vineyard, supra, 40 Cal. 4th at 426-27.) As a result of the foregoing fatal defects in its approach, we (California Water Impact Network, California Sportfishing Protection Alliance, Aqua Alliance) already know that the proponents would prejudicially abuse their discretion by certifying an EIR/EIS that does not comply with CEQA or NEPA by approving the Water Fix and certifying this document in its present condition. The EIR/EIS was also so inadequate and conclusory that meaningful public review and comment were precluded. Consequently, certification of the EIR/EIS and approval of the Water Fix must be set aside. In order to prove to a very large number of California citizens that the Fix is not in, this Draft EIR/EIS must again be corrected and sent out for recirculation and public comment. (Guidelines, §15088(a); Vineyard, supra, 40 Cal.4th at 448-450.)</p>	<p>The commenters' recitation of the law regarding standard of review is noted. Additionally, the commenters' conclusion in this comment is not supported by specific issues raised about the 2015 RDEIR/SDEIS or the 2013 DEIR/DEIS. Responses to specific comments prior to this conclusion are found in 2628-1 through 2628-37.</p> <p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>With regards to recirculation, please see Master Response 46.</p>
2629	1	<p>The Stone Lakes National Wildlife Refuge is ground zero for this project. (See Exhibits 1 and 2, Surface Impacts Figures.) Stone Lakes National Wildlife Refuge is adjacent to all three proposed Tunnel Intakes, and the Intermediate Forebay is located within the Refuge Boundaries. New power lines are proposed to cross the Refuge as well. Geotechnical exploration, construction equipment and associated traffic and noise will interfere with the Refuge for much of the fourteen- year construction period, and then industrial-scale water infrastructure will permanently dominate the landscape and the</p>	<p>The Preferred Alternative is now Alternative 4A. With the introduction of the new Preferred Alternative 4A, as well as other non-HCP alternatives 2D and 5A, further refinements in the design and alignment were made. The additional alternatives along with the design and alignment refinements were fully described, analyzed, and disclosed for public review and comment in the 2015 RDEIR/SDEIS. The refinements include steps to minimize impacts to Stone Lakes NWR, such as the removal of permanent transmission lines near Stone Lakes NWR. For more information on mitigation, environmental commitments, avoidance and minimization measures and alternative-specific commitments, please also see Master Response 22</p>

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		nearby Sacramento River. A place Congress specifically chose to save changed forever.	(Mitigation) and Response to Comment 2629-5.
2629	2	<p>Friends of Stone Lakes [FSL] submitted a letter dated July 25, 2014, commenting upon the 2013 Draft BDCP and Draft EIR/S. [footnote 1: FSL incorporates herein by reference its comment letter dated July 25, 2014, in its entirety, including all attachments thereto as additional comments on the RDEIR/S. References to Exhibits in this letter are to the Exhibits attached to the letter of FSL dated July 25, 2014.] FSL has not received responses to those comments. The state and federal lead agencies have now created new sub-alternatives, including the new Alternative 4A as the proposed preferred alternative. The comments in this letter thus focus on the analysis in the RDEIR/S pertaining to Alt. 4A. FSL notes, however, that its ability to effectively comment on the RDEIR/S was hampered by a number of factors, including:</p> <p>(1) receiving no responses on the FSL comments submitted in 2014; (2) the disjointed organization of analysis in the RDEIR/S; (3) lack of specific cross referencing between relevant portions of the RDEIR/S and the 2013 draft EIR/S and BDCP; (4) the confused manner in which the project that is actually being proposed is presented in the DSEIR/S; and (5) the Lead Agencies' failure to provide public access to other comments on the 2013 draft EIR/S. FSL's review was aided some by assistance from lead agency staff/consultants familiar with the preparation of these documents; FSL does not believe that an average member of the public would be able to discern the basic proposal or its impacts from the documents as presented.</p> <p>In addition to responses to the comments contained in this letter, FSL requests responses to all of its comments in its prior letter. In an attempt to focus the comments in this letter on the impacts of Alt. 4A, FSL has purposely not repeated everything in its July 25, 2014 letter. Please assume that all of FSL's prior comments on the 2013 documents and the previously preferred alternative (Alt. 4) also pertain to Alt. 4A unless those comments refer to a project component that is no longer included in Alt. 4A. As discussed below, due to the inadequacies of the RDEIR/S project description and impact analyses, it is quite difficult to discern which aspects of Alt. 4 are still included in Alt. 4A, especially with respect to measures or actions carried over from the previously proposed BDCP habitat conservation plan/natural community conservation plan. [footnote 2: See, e.g., RDEIR/S, App. A, p. 15-11 (referring to mitigation of impacts on long term reduction of recreation opportunities at Stone Lakes NWR from habitat creation that is not part of 4A).] Thus, the RDEIR/S lead agencies and consultants are in the best position to determine which of the previous comments also apply to Alt. 4A.</p>	<p>When a lead agency chooses to recirculate some or all of a Draft EIR or to prepare a supplement to a Draft EIS, the publication of such additional analysis almost always occurs prior to the preparation of responses to comments on the earlier Draft EIR or Draft EIS. Thus, persons or organizations commenting on documents such as the RDEIR/SDEIS nearly always do so without having seen written responses to their prior comments. Here, public comments and responses to comments submitted during the public comment period for the RDEIR/SDEIS and the previous comment period for the 2013 Public Draft will be made available to the public upon the release of the Final EIR/EIS. The Final EIR/EIS will include all comments received during both public review periods and responses to all comments.</p> <p>The obligations of California public agencies under Article 1, section 3(b)(1), of the California Constitution and under the Public Records Act do not include any obligation to post comments on draft environmental documents on agency websites as such comments come in from the public and interested agencies. Rather, those statutes deal with the obligation for public agencies to hold certain kinds of meetings of public bodies and public officials in public, and to make non-privileged documents of various kinds available to members of the public in response to formal requests. To date, neither the California Legislature nor Congress has required Lead Agencies for CEQA and NEPA documents to post comments on draft environmental documents on their websites during the public review periods for those draft documents.</p> <p>The approach taken here is therefore consistent with the requirements of CEQA (CEQA Guidelines §15088) and NEPA (40 CFR § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA. Please see Master Responses 40 (Public Outreach Adequacy) for additional detail on the public outreach that has been done for stakeholders and Master Response 42 (Public Comments) regarding treatment of public comments.</p> <p>Regarding the organization of the RDEIR/SDEIS, the beginning of the executive summary provides a document review roadmap that graphically presents the RDEIR/SDEIS structure and organization as it relates to the Draft EIR/EIS. The RDEIR/SDEIS provides revisions to the Draft EIR/EIS (Section 3 and Appendix A), additional analyses for Alternatives 4A, 2D and 5A (Section 4) and analyses and revisions to cumulative impacts (Section 5).</p> <p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the BDCP as fair, objective, and complete as possible. These agencies acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p>
2629	3	As explained in our prior comment letter, the Stone Lakes NWR [National Wildlife Refuge] and surrounding foraging acreage, especially those lands within the Refuges' legislatively approved Project Boundary, is "ground zero" for BDCP impacts. The primary proposed conveyance facility components, consisting of three massive pumping stations, the water conveyance tunnels, new transmission lines and an intermediate forebay, are all located either on or very close to the Refuge and have significant potential to degrade or threaten the Refuge's resources and habitat. Wildlife, staff and visitors will all be substantially impacted by construction noise, lighting and extreme levels of truck traffic that will occur during the lengthy construction process.	The Preferred Alternative is now Alternative 4A. For further responses to comments on the BDCP, please see Master Response 5 (BDCP). With the introduction of the new Preferred Alternative 4A, as well as other non-HCP alternatives 2D and 5A, further refinements in the design and alignment were made. The additional alternatives along with the design and alignment refinements were fully described, analyzed, and disclosed for public review and comment in the 2015 RDEIR/SDEIS. The refinements include steps to minimize impacts to Stone Lakes NWR, such as the removal of permanent transmission lines near Stone Lakes NWR. For more information on mitigation, environmental commitments, avoidance and minimization measures and alternative-specific commitments, please also see Master Response 22 (Mitigation) and Response to Comment 2629-5.
2629	4	A fundamental underpinning of the investment in time by FSL [Friends of Stone Lakes] in discussions of how to reduce impacts of the Project on the Refuge [Stone Lakes National Wildlife Refuge] was that the Project included a component to meet conservation	Although the commenter expresses displeasure that the Lead Agencies are no longer recommending as their preferred alternative a proposed project that includes an HCP and NCCP, many other commenters on the DEIR/EIS expressed the view that Alternative 4 and the other action alternatives in that document included

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		<p>standards under the HCP and NCCP statutes. Thus, even if there were severe impacts on the Refuge, for instance, the overall impact of the Project could be beneficial over the BDCP plan period. It was on this basis that FSL and many others spent significant time and resources to work with the Project proponents to improve the Project with respect to impacts on Refuge resources. FSL is extremely concerned that not all of the mitigation, which was anticipated to occur in conjunction with a habitat conservation plan/natural community conservation plan, will occur with Alt. 4A as a "stand-alone" construction project. FSL continues to be concerned that impacts to species within and near the Refuge that are proposed for direct and indirect impacts from the Project still have not been adequately addressed.</p>	<p>too many acres of conserved lands, not too few. By changing their original approach, the Lead Agencies believe they have been responsive to a majority of the commenters who were critical of Alternative 4 and other action alternatives set forth in the DEIR/EIS.</p> <p>The commenter states that it is are concerned that not all of the conservation identified in the BDCP would occur under the California WaterFix and has particular concerns of how the project and the difference in proposed conservation would affect the Stone Lakes National Wildlife Refuge. Please note that many of the actions that were part of the BDCP conservation strategy but not proposed to be implemented under the non-HCP alternatives would continue to be pursued as part of existing but separate projects and programs associated with (1) the 2008 and 2009 USFWS and NMFS BiOps (e.g., Yolo Bypass improvements and habitat enhancements, 8,000 acres of tidal habitat restoration), (2) California EcoRestore, and (3) the 2014 California Water Action Plan. Those actions are separate from, and independent of, the proposed project. Please also see Master Response 22 (Mitigation) for more information about the adequacy of mitigation measures.</p> <p>The commenter further states that it is concerned that the impacts to species within and near the Refuge have not been adequately addressed; however, no specific concerns about the adequacy of the analysis were raised. The EIR/EIS analyzes impacts to terrestrial and fish species, including habitat modification, and identifies mitigation measures to reduce significant environmental impacts to the extent feasible.</p>
2629	5	<p>Despite some design improvements since its inception, the [Stone Lakes National Wildlife] Refuge continues to be ground zero for the Tunnels project. This is inconsistent with policies pertaining to the creation of the Refuge in the first place. The national policy to promote efforts, which will prevent or eliminate damage to the environment under NEPA (42 U.S.C. § 4321) is implicated when the environment that may be damaged is one that Congress has specially designated for federal protection. (See Nat'l Audubon Soc'y v. Dep't of the Navy (4th Cir. N.C. 2005) 422 F.3d 174, 187 (ordering Navy to complete a Supplemental EIS to address its failure to take a "hard look" at impacts on a new landing field on Pocosin Lakes National Wildlife Refuge) (Navy).) As emphasized in the Navy case, "particular care" must be taken in a federal environmental document when the federal agency's actions will "affect the unique biological features" of "a congressional protected area," such as a national wildlife refuge. (Ibid. at p. 187.)</p> <p>The court in the Navy case explained that "the point of a wildlife refuge is not just to protect an area that is beautiful and valuable in its own right, but to remind us that an environment that is welcoming to wildlife will ultimately be one that is more hospitable to humankind." (Ibid. at p. 187.) The "mission of the National Wildlife System is to administer a national network of lands and waters for the conservation, management and where appropriate, restoration of fish, wildlife and plant resources and their habitats." (16 U.S.C. § 668dd(a)(2).)</p> <p>Congress has expressly found that the overall goals of the Stone Lakes National Wildlife Refuge are to:</p> <ol style="list-style-type: none"> 1. Preserve, enhance, and restore a diverse assemblage of native Central Valley plant communities and their associated fish, wildlife, and plant species; 2. Preserve, enhance, and restore habitat to maintain and assist in the recovery of rare, endangered, and threatened plants and animals; 3. Preserve, enhance, and restore wetlands and adjacent agricultural lands to provide foraging and sanctuary habitat needed to achieve the distribution and population levels of migratory waterfowl and other water birds consistent with the goals and objectives of 	<p>To the extent that the commenter intends to suggest that the National Environmental Policy Act (NEPA) disallows any federal action in any area adjacent to, or close to, the Stone Lakes National Wildlife Refuge, the Lead Agencies disagree. NEPA is an "essentially procedural" statute that does not dictate any particular result, including a result that minimizes environmental consequences. (See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519, 558 (1978); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989).) Even so, in preparing the EIR/EIS, both Reclamation, as Federal Lead Agency, and DWR, as State Lead Agency, have done their best to take "particular care" to consider potential impacts on the Stone Lake National Refuge and to mitigate any such impacts that cannot be completely avoided.</p> <p>The commenter expresses concern over the placement of the water conveyance infrastructure within and adjacent to the Stone Lakes Wildlife Refuge. The proposed intermediate forebay and RTM area are located within Cooperative Wildlife Management Area (CWMA) identified in the Stone Lakes Wildlife Refuge Comprehensive Conservation Plan (Stone Lakes CCP). The primary objective of the CWMA is to maintain lands in private ownership and continue agricultural production but also allow the USFWS to pursue a number of approaches to conserve and manage lands, depending on the preferences of willing landowners. The location of the intermediate forebay is an area that is entirely planted in vineyard, which has very little habitat value for wildlife species. The RTM area is used for hay or grain production, which does have high value for wildlife species.</p> <p>The commenter's concerns about the conflicts of the locations of these facilities with some of the goals of the Stones Lakes Wildlife Refuge are acknowledged. Alternative 4A's impacts on the Stone Lakes Wildlife Refuge Comprehensive Conservation Plan (Stone Lakes CCP) are addressed in Impact BIO-187; however, the discussion has been modified in the Final EIR to address the specific conflicts with the Stone Lakes CCP, as requested by the commenter. Please see the discussion of Impact BIO-187 in the Final EIR/EIS for further information. The revised text is intended to clarify the analysis and does not constitute significant new information requiring recirculation of the EIR/EIS.</p> <p>The commenter further states that "the mitigation that is provided for reducing impacts to the Refuge is uncertain and unenforceable". The Environmental Commitments and AMMs provide for the protection and restoration of habitat and avoidance and minimization of impacts on species, many of which are found within the Stone Lakes Wildlife Refuge. The AMMs and mitigation measures proposed in the EIR/EIS provide detail on how effects would be avoided and minimized and will be incorporated as part of the Mitigation</p>

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		<p>the North American Waterfowl Management Plan and Central Valley Habitat Joint Venture;</p> <p>4. Create linkages between Refuge habitats and habitats on adjacent lands to reverse past impacts of habitat fragmentation on wildlife and plant species;</p> <p>5. Coordinate Refuge land acquisition and management activities with other agencies and organizations and to maximize the effectiveness of Refuge contributions to regional habitat needs;</p> <p>6. Provide for environmental education, interpretation, and fish and wildlife-oriented recreation in an urban setting accessible to large populations; and</p> <p>7. Manage riverine wetlands and adjacent floodplain lands in a manner consistent with local, State, and Federal flood management; sediment and erosion control; and water quality objectives.</p> <p>(57 Fed.Reg. 33007 (July 24, 1992).) With major portions of the Project sited within and adjacent to the Refuge, the Project interferes significantly with the attainment of these goals. As described below, the Lead Agencies' attempt at a "hard look" fails to take particular care to evaluate how its actions will affect the unique biological features of Stone Lakes NWR [National Wildlife Refuge], which is a congressionally protected area. Moreover, the mitigation that is provided for reducing impacts to the Refuge is uncertain and unenforceable. As a result, the RDEIR/S must be re-written and recirculated prior to Project approval.</p>	<p>Monitoring and Reporting Program (MMRP), which adds to the certainty that these measures will be implemented and be enforceable. The Environmental Commitments are technically part of the project and will be implemented as part of the approved project. Please see Section 4 in the RDEIR/SDEIS for a description of Environmental Commitments to be carried forward into Alternative 4A. Please also see Master Responses 22 (Mitigation) and 33 (Adaptive Management and Monitoring).</p>
2629	6	<p>In order for the public to be able to comment meaningfully on a project, the description of the project must be clear and definite. After the close of the comment period on the BDCP and DEIR/DEIS, the Project proponents created several new sub- alternatives, including the new Alt. 4A, which is now the preferred alternative. If indeed Alt. 4A is the preferred alternative, and thus the proposed project for the purposes of the environmental review, the description of Alt. 4A is uncertain and incomplete, and fails to provide the public with a clear understanding of what environmental measures from the BDCP are actually incorporated into the Project or how they will be implemented.</p>	<p>The commenter has not been specific in describing Alternative 4A as “uncertain and incomplete,” so a specific response to this criticism is not possible. In structuring and preparing the RDEIR/SDEIS, the Lead Agencies took considerable care to guide readers through the document, and to explain how Alternative 4A both differed from, and was consistent with, Alternative 4 in different respects. Please see Section 4 in the RDEIR/SDEIS for a description of Environmental Commitments to be carried forward into Alternative 4A.</p> <p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>The documentation generated by this proposed project has undergone extensive public and scientific input, discussion, and transparency, including the posting of administrative draft chapters online and providing many more opportunities for public participation than is normally required by the CEQA/NEPA processes (see Master Response 41 [Transparency]). Master Response 40 (Public Outreach) provides a summary of the public outreach activities that have been conducted since the planning process began in 2006. The lead agencies believe that the public outreach efforts summarized here more than adequately satisfy the public outreach goals requirements under state and federal laws and guidelines.</p> <p>The alternatives included in the Draft EIR/EIS and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the EIR/EIS. In fact, as a direct result of the extensive public comments and agency input, the water facility and conveyance options proposed as part of the project changed significantly during the planning process in ways that reduce impacts in the Delta communities. Additional unique alternatives that were proposed during review of Administrative Drafts of the BDCP and EIR/EIS were also considered and described (see Appendix 3A of the EIR/EIS and Section 4 of the</p>

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			<p>RDEIR/SDEIS). Please also see Master Response 4 (Alternatives Development).</p> <p>This process included numerous public workshops and scoping meetings, extensive input from agencies, stakeholders, and the public, and an extensive multi-level screening process to refine the alternatives to be carried forward for full analysis in the EIR/EIS. As explained in Final EIR/EIS Appendix 3A "Identification of Water Conveyance Alternatives," the alternative development process for the EIR/EIS was based upon a number of legal considerations including: (1) the legal requirements for adequate discussions of alternatives in an EIR and EIS, as set forth in CEQA and NEPA respectively, and the regulations and case law interpreting those statutory schemes; (2) the concepts of "potential feasibility" under CEQA and "reasonableness" under NEPA; and (3) the requirements of Water Code Section 85320 from the 2009 Delta Reform Act. The results of a multi-level screening process reflecting these considerations were further compared to the requirements of the Delta Reform Act and scoping comments related to the definition of potential EIR/EIS alternatives as identified by responsible and cooperating agencies under CEQA and NEPA, respectively. Please refer to Master Response 4 (Alternatives) and 10 (Compliance with the Delta Reform Act).</p>
2629	7	<p>Alt. 4A now consists of what was previously called Conservation Measure 1 of the BDCP -- the proposed water conveyance system -- and a number of portions of some of what previously were referred to as "Conservation Measures" but have now been recharacterized as "Environmental Commitments". Nowhere in the RDEIR/S, however, is there a readily accessible and clear description of exactly which portions of the previous Conservation Measures ("CMs") have been incorporated into the new Environmental Commitments ("ECs"), or how they will be implemented. ECs are not included in the Executive Summary's Table of Mitigation Measures. (RDEIR, ES, Table ES-9.)</p>	<p>Please see REIR/SEIS Section 4.1.2.3 Environmental Commitments and Table 4.1-3 Environmental Commitments under Alternative 4A.</p> <p>As noted by the commenter, limited elements of the original BDCP Conservation Measures are included as part of the Alternative 4A and are now referred to as Environmental Commitments. To minimize confusion, the Environmental Commitments are numbered to track the parallel BDCP Conservation Measures and use the same nomenclature. The Environmental Commitments under Alternative 4A consist primarily of habitat restoration, protection, enhancement, and management activities necessary to mitigate for adverse effects from construction of the proposed water conveyance facilities, along with species-specific resource restoration and protection principles. Please see Master Response 22 for additional information.</p>
2629	8	<p>Of particular concern to FSL [Friends of Stone Lakes], is the amount of the proposed acreage for protection and restoration of natural communities that support migratory waterfowl. Though we have been assured that the CMs [Conservation Measures] pertaining to creation of greater sandhill crane habitat will be retained, is entirely uncertain as to how and when any such acreages will be acquired or managed. The RDEIR/S acknowledges on page 4.1-14 that only portions of the actions previously called CMs will be undertaken as part of Alt. 4A, and states that those will be at different levels. See Table 4.1-3, which constantly uses the qualifier of "Up to" a certain maximum of acreage to be protected or restored under ECs [Environmental Commitments] 3, 4 and 6-10. Yet the RDEIR continues to state that mitigation for impacts to these species will occur from the planned restoration acreages that were part of the Alt. 4 (BDCP). (See RDEIR/S, App. A, p. 15-10 (referring to habitat creation under BDCP as mitigating biological and recreational impacts); see also RDEIR/S, Section 12.3.3.9.)</p>	<p>Please see REIR/SEIS Section 4.1.2.3 Environmental Commitments and Table 4.1-3 Environmental Commitments under Alternative 4A. Potential impacts to greater sandhill cranes are analyzed in EIR/EIS Chapter 12, and RDEIR/SDEIS, Section 4. For additional information regarding the plans to reduce the effects of the project on greater sandhill cranes, please see Master Response 17 (Biological Resources).</p>
2629	9	<p>Under the prior preferred alternative, Alt. 4, the environmental restorations were included in the overall HCP/NCCP [habitat conservation plan/natural community conservation plan] and were proposed to be undertaken in accordance with the Implementation Schedule as established under the Implementation Agreement discussed in Chapter 6 of the BDCP as part of the HCP/NCCP. Alt 4A, however, does not propose a HCP/NCCP, and therefore the prior Implementation Agreement and Schedule is no longer applicable or relevant. There is nothing that can be readily located within the RDEIR/S or other Alt. 4A documentation that is proposed to replace the Implementation Agreement and Schedule, and therefore the new proposed ECs [Environmental Commitments] do not appear to have any implementation obligation or criteria. Because Alt 4A lacks any readily identifiable mechanism to incorporate the ECs</p>	<p>The Lead Agencies do not agree with the commenter that "new proposed ECs... do not appear to have any implementation obligation or criteria." The EIR/EIS describes the ECs and best management practices that would be implemented under the various alternatives. The project proponents will implement these ECs as part of the project construction activities. In other words, these ECs will be satisfied even if not separately imposed by the permitting agencies (i.e., be treated as de facto mitigation measures as noted on page 2-22, Section 2 of the RDEIR/SDEIS and Page 3B-3 of Appendix 3B). If permitting agencies impose additional measures or modifications, those will also be adhered to as part of the permit(s). The Lead Agencies will coordinate planning, engineering, design and construction, operation, and maintenance phases of the alternative with the appropriate agencies. For more information regarding ECs, please see Appendix 3B of the RDEIR/SDEIS and Master Response 22, Mitigation, ECs, AMMs, and Alternative-Specific ECs. Furthermore, with respect to environmental restoration and protection of sensitive species and habitat,</p>

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		<p>into it, they cannot be considered part of the project description upon which the environmental analysis rests. As such, the project description is vague and indefinite and with the absence of any sort of implementation mechanism, the ECs cannot be considered as a material aspect of the project description for Alt. 4A.</p>	<p>commitments to adaptive management and collaborative science will be undertaken to ensure EC implementation and monitoring obligations. This commitment will be secured through a Memorandum of Agreement between DWR, Reclamation, the public water agencies, DFW, NMFS, and USFWS (refer to page 4.1-21 in Section 4 of the RDEIR/SDEIS). Furthermore, the ECs, along with mitigation measures and avoidance and minimization measures, will be incorporated as part of the Mitigation Monitoring and Reporting Program (MMRP), which adds to the certainty that these measures will be implemented and be enforceable.</p> <p>With respect to the Implementation Agreement (IA), the commenter is correct that the IA is part of the HCP/NCCP process. Should the decision makers adopt the modified Alternative 4 (BDCP) described in Section 3 of the RDEIR/DEIS rather than the California WaterFix project, then the IA and its Schedule would be developed further and carried out.</p> <p>The Lead Agencies also respectfully disagree that the project description is vague. CEQA Guidelines Section 15124 mandates four items of information to be presented in the project description contained within an EIR:</p> <ol style="list-style-type: none"> 1. Project Location 2. Project Objectives 3. General Description of the Project's Technical, Economic, and Environmental Characteristics 4. Intended Uses of the EIR <p>The extensive environmental documentation prepared for the proposed project and alternatives includes all of the four items listed above, as well as sufficient detail to analyze potential environmental impacts under the various alternatives as required by CEQA and NEPA. Please refer to RDEIR/SDEIS Sections 3 (Conveyance Facility Modifications to Alternative 4) and 4 (New Alternatives: Alternatives 4A, 2D, and 5A). Revisions to the Draft EIR/EIS can be found in Appendix A to RDEIR/SDEIS including Chapter 3 (Description of Alternatives). For information regarding the adequacy of the project objectives, see Master Response 3, Purpose and Need/Project Objectives.</p>
2629	10	<p>FSL [Friends of Stone Lakes] provided detailed comments in 2014 regarding concerns with the conservation and mitigation approach in the BDCP. These comments also apply to the much scaled back mitigation and conservation that would be required under section 7 of the ESA and section 2081 of the California Endangered Species Act ("CESA"). The RDEIR/S does not contain adequate description of the location and character of mitigation and replacement habitat to assess its effectiveness. Moreover, the Biological Assessments have not been provided for public review. This critical information would be necessary in order to comment on the effectiveness of the mitigation currently being proposed.</p>	<p>The commenter states that the RDEIR/SDEIS does not contain sufficient detail regarding the location and character of proposed mitigation to assess its effectiveness. The Environmental Commitments, though of lesser acreage, rely on the same principles and guidance presented in the BDCP Conservation Measures and directly refers to these measures for that detail. The EIR/EIS provides a sufficient level of detail to satisfy the requirements of CEQA and NEPA. (See CEQA Guidelines Section 15126.4[a][1][D] [EIRs must discuss significant effects of mitigation measures, "but in less detail than the significant effects of the project as proposed"]; see also California Native Plant Society v. City of Rancho Cordova (2009) 172 Cal.App.4th 603, 621-625 [lead agency did not violate CEQA by failing to identify the off-site location at which mitigation for impacts to on-site wetlands would be carried out].) Specific locations for implementing many of the activities associated with these commitments have not been identified at this time. Therefore, the analysis considers typical construction, operation, and maintenance activities that would be undertaken for implementation of the habitat restoration and enhancement and stressor reduction efforts. Where appropriate and necessary, implementation of individual projects associated with an Environmental Commitment would be subject to additional environmental review. (See CEQA Guidelines Sections 15162–15164; 40 C.F.R. Section 1502.9[c].)</p>
2629	11	<p>The RDEIR/S states that it considers the ECs [Environmental Commitments] to be environmental mitigations, which act as "de facto CEQA and NEPA mitigation measures for the construction and operations-related impacts of Alternative 4A" (RSEIR/S, page 4.1-14). While the RDEIR/S refers to DWR including the ECs in the Mitigation Monitoring</p>	<p>Please refer to Responses to Comments 2629-9 and 2629-10 regarding implementation of ECs and mitigation measures. Please also refer to Master Response 22 (Mitigation) for further discussion on the adequacy of the Project's mitigation measures.</p>

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		<p>and Reporting Plan ("MMRP"), the same page states that the so called "Environmental Commitments" listed in Appendix 3B, will supposedly be enforced by a "[a]n environmental permitting coordinator." (RDEIR/S, App. 3C, p. 3B-3.) The CEQA lead agency is responsible for implementing a MMRP.</p> <p>The RDEIR/S approach to mitigation of the numerous significant effects of this Project does not meet the disclosure and enforceability requirements of CEQA. (CEQA Guidelines, § 15126.6, subd. (a)(2).) It is unclear why these ECs, if necessary to reduce significant Project impacts, would not be included as mitigation measures in the RDEIR/S. The information provided in Table 3B-1 is not a substitute for the required analysis and mitigation of project impacts. A clear implementation mechanism must be included in the RDEIR/S making these ECs subject to the required oversight and monitoring in the statutorily required mitigation monitoring and reporting plan. (See CEQA Guidelines, § 15097.)</p>	
2629	12	<p>A good example of the inadequacy of the implementation of the ECs [Environmental Commitments] is the case of the impacts of the forebay upon the [Stone Lakes National Wildlife] Refuge. FSL [Friends of Stone Lakes] believes that the location of the proposed forebay within the Refuge Project Boundary, together with the use of Zacharias Island to the west of the forebay as a tunnel muck storage area, when taken in conjunction with all of the cumulative effects of other aspects of the Project, necessitates the acquisition of all of Zacharias Island for wildlife habitat, and its permanent protection such as by incorporation into the Refuge, in order for there to be any type of a complete or adequate mitigation measure. This issue is discussed in great depth in FSL's letter of July 25, 2014, and nothing in the RDEIR/S has changed any of FSL's concerns in this regard.</p>	<p>The commenter states that the Environmental Commitments are inadequate and gives the impacts on the Stone Lakes Wildlife Refuge as an example. The analysis of effects in Chapter 12 Terrestrial Biological Resources considered the suitability of areas as natural communities, wetlands, and habitat for special-status species regardless of current ownership or future plans for areas. The areas in question are within the approved refuge boundary but are at this time still under private ownership. The Environmental Commitments in the EIR/EIS focus on the amount of protection and restoration to be done and the guiding principles for that are outlined in the corresponding Conservation Measures addressed in the Draft BDCP (see discussion in Chapter 3 of the EIR/EIS) and do not specify where protection and restoration will occur because to do so would be premature at this stage and lead to land speculation. For more information regarding the adequacy of mitigation measures and environmental commitments, please refer to Master Response 22 (Mitigation).</p>
2629	13	<p>FSL [Friends of Stone Lakes] has worked collaboratively to develop AMM20 Greater Sandhill Crane to lessen impacts to greater sandhill crane, which was part of the BDCP Alt. 4. Now, it is not clear what the exact wording of AMM20 is with respect to Alt. 4A, if it applies at all. According to Appendix D, which includes redline modifications to Alt. 4, AMM20 was extensively revised. (RDEIR/S, App. D, p. D.3-108.) Yet it is unclear whether this AMM applies to Alt. 4A. While some discussion of AMM20 is in Appendix 3B (at p. B-39), it is unclear whether this important AMM relates to Alt. 4A or to Alt. 4 (or both). (See Appendix 3B, p. 3B-77 (referring to the AMMs applying to the DSEIR/S, not the RDEIR/S).) Further causing confusion is the fact that the Alt. 4 discussion in Appendix D, states that no take of greater sandhill crane will occur; yet the BDCP previously attempted to calculate the number of bird strike deaths in Appendix 5.J.C. (See discussion below for further concerns about take of this state Fully Protected Species.)</p>	<p>AMM20 in its entirety appears in Appendix 3B of the EIR/EIS and is applicable to all alternatives considered in the EIR/EIS, including Alternatives 4 and 4A.</p> <p>As stated in AMM20 and in the analysis in Chapter 12, the proposed project will not result in take of greater sandhill crane pursuant to California Fish and Game Code Section 86.</p>
2629	14	<p>Even the best designed ECs [Environmental Commitments], AMMs [avoidance and minimization measures] and more rigorous mitigation measures are effective only if there is assurance that they will be fully implemented and enforced. Mitigation obligations, which are adopted and then ignored, are not mitigation obligations at all. The Plan does not provide assurances that the mitigation obligations, will be funded or implemented.</p> <p>Mitigation obligations that cannot be implemented because of lack of funding are not mitigation measures either. No finance plan has been set forth for the project. To the extent the ECs depend on future funding authorizations by the state and federal governments as well as General Obligation bond funding from the State, they cannot be</p>	<p>As described in Appendix 3B, the intention of identifying environmental commitments and other best practices in the manner it has been done in the EIR/EIS was to assure the reader that the Lead Agencies will not subsequently determine that such measures are infeasible and in fact assume full responsibility for their enforcement. See also responses to comments 2629-5 and 2629-9 and Master Response 22 (Mitigation). Also refer to Master Response 5 regarding funding for the proposed project.</p>

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		assumed to be certain. The sources of the funding and the costs to mitigate the direct impacts to the Stone Lakes NWR [National Wildlife Refuge] should be specifically delineated in the cost. Sources of secure funding to pay for all of the mitigation obligations relating to Alt. 4A must be identified and included in the documents. Bonding and endowments are feasible means to ensure mitigation and conservation commitments are upheld, and must be included in the Project.	
2629	15	Under Alt. 4 (the BDCP), a group such as FSL [Friends of Stone Lakes] could have potentially participated in the oversight process through the Stakeholder Council, which included seats for three conservation groups for the entirety of the Plan Area. Now, Alt. 4A includes no process or structure whatsoever for affected stakeholders during construction or project operations to participate in project implementation or to seek redress from severe impacts on the local wildlife and human communities. Such an important detail cannot be left to determine later, especially when water export agencies, through the Design Construction Enterprise, are vying to become the face of the project. Moreover, adequate funds for mitigation and compensation for damages caused by the project must be established, and oversight and public reporting of the implementation of all mitigation and other measures necessary to address the project's significant impacts must be provided.	There are numerous stakeholder groups within the Delta. Unfortunately, not every group can be formally engaged on the Council. Please see additional detail in Master Response 40 regarding public outreach. Please refer to response comment 2629-9 regarding oversight and implementation of mitigation and other measures. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2629	16	<p>The location and design of new transmission line corridors remains of great concern to the FSL [Friends of Stone Lakes]. The construction of new power lines within the Stone Lakes NWR [National Wildlife Refuge] is incompatible with the Refuge Management Plan, and placement of new power lines within and near the Refuge impedes the Refuge's core mission: the protection of vulnerable wildlife species such as the greater sandhill crane. These species are already under threat from widespread habitat degradation and existing power lines. Adding more power lines to this area would be highly damaging, and would certainly "take" or kill greater sandhill cranes and other birds.</p> <p>As recognized previously in the DEIR/S and more recently by the Delta Independent Science Board [DISB], construction of new transmission lines to power construction and operation of the project will lead to bird strike deaths. (September 30, 2015, DISB Letter, pp. 3. 17.) The Lead Agencies previously estimated that there would be 138 deaths per year, which is estimated to be reduced to 48 deaths per year if the power lines are marked. (See 2013 Draft BDCP, Appendix 5.J.C, p. 18 and Table 2, attached as Exhibit 3.) [footnote 3: Available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Appendix_5J_-_Effects_on_Natural_Communities_Wildlife_and_Plants.sflb.ashx] The reduction in bird strikes was attributed to according to a Colorado study indicating that a 66% reduction in bird strikes could be attained through marking. (2013 Draft BDCP, Appendix 5.J.C, p. 18.) This lack of proper maintenance of bird diverters also diminishes their effectiveness. (See Exhibit 4, Broken Bird Diverters.)</p> <p>Cranes, kite and rail are fully protected species under California law. (Fish and Game Code, § 3511.) While it was potentially possible to permit "take" (Fish and Game Code, § 86) in the context of a NCCP [natural community conservation plan] (Fish and Game Code, § 2835), that is not possible for a project subject to the typical CESA [California Endangered Species Act] 2081 take permitting process, as is now occurring under Alt. 4A. Thus, no take of sandhill crane, black rail or white tailed kite can be permitted.</p>	<p>Under Alternatives 1A through 8, electrical power to operate the new north Delta pumping plant facilities would be delivered through 230 kV transmission lines that would interconnect with a local utility at a new or existing utility substation depending on the conveyance alignment. The alignment of this transmission line and its interconnection point would be based on the selection of a power provider for the project following selection of a conveyance alignment. This selection is ongoing and the alignment of the transmission lines will be finalized at a later date.</p> <p>Regarding the commenter's concern over other parts of the document not recognizing both permanent and temporary transmission lines, Appendix 3C, Construction Assumptions for Water Conveyance Facilities, does specifically discuss temporary transmission lines (see Table 3C-1); Chapter 17, Aesthetics and Visual Resources, does in fact discuss both permanent and temporary transmission lines in its analysis (see Impact AES-1, Transmission Lines, in the Final EIR/EIS); and Chapter 15, Recreation, does specifically discuss temporary transmission lines (see Table 15-11).</p> <p>As discussed under Impact BIO-70 in the Final EIR/EIS for Alternative 4A, there would be no permanent transmission lines within the sandhill crane winter use area and no new permanent or temporary transmission lines would be constructed in the vicinity of Staten Island, which is one of the most important wintering sites for greater sandhill crane in the Delta. The Alternative 4A transmission line alignment within the sandhill crane winter use area would be limited to three segments of temporary transmission lines: a temporary 11-mile segment extending north and south between Intake 2 and the intermediate forebay; a temporary 9-mile segment extending east and west between the intermediate forebay and the SMUD/WAPA substation; and an 11-mile segment extending north and south between Bouldin Island and Victoria Island. These three temporary lines would be removed after construction of the water conveyance facilities, after 10–14 years.</p> <p>The EIR/EIS analyzed a potential transmission line footprint associated with each alternative and disclosed the potential impacts of the construction of new and temporary transmission lines on natural communities and sensitive species. The potential effects of new transmission lines installed as part of Alternative 4A on shorebirds and waterfowl are discussed in RDEIR/DSEIS Section 4.3.1.2. The Section acknowledges that "new transmission lines installed in the study area would increase the risk for bird-power line strikes, which could result in injury or mortality of shorebirds and waterfowl." However, the implementation of AMM20 (Greater</p>

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		<p>While the RDEIR/S now claims there will be no "take," no credible analysis has been conducted to estimate bird strike deaths from the current transmission line configuration, which is substantially similar to that described in 2013. (See Exhibit 5, RDEIR/S Figure 24-6, Electrical Transmission Lines; see also, Exhibit 6, California WaterFix Impacts to Waters of U.S.) Nonetheless, the RDEIR/S, in various locations, now claims that the transmission lines are somehow temporary and can be assumed to be taken down. (See, e.g., RDEIR/S, pp. 4.3.8-45, 62, 72, 113, 116, 135, 139-140; see also App. A, p. 15-11.) For instance, the RDEIR/S claims that the proposed 230 kV "9-mile segment extending east and west between the intermediate forebay and the SMUD [Sacramento Municipal Utility District]/WAPA [Western Area Power Agency] substation," for instance, is temporary, indicating it will be removed after the 14-year construction period. (RDEIR/S, p. 4.3.8-140.)</p> <p>Yet, in other parts, the RDEIR/S continues to characterize the transmission lines as permanent. For instance in Appendix 17E, which relates to aesthetic impacts, the transmission lines are depicted as permanent features. (RDEIR/S, Appendix 17E, p. 17E-55(Aesthetics); see also p. 15-8 (Recreation).) Additionally, the Construction Assumptions portion of the RDEIR/S makes no mention of the supposed temporary character of the transmission lines or includes the timing of their removal. (RDEIR/S, App. 3C-14.) Moreover, no requirement, mechanism or funding for the eventual removal of the transmission lines now labelled as "temporary" is included in the RDEIR/S. In our research with the utilities (and relying on common sense), we learned that the removal of such a large line is very unusual given the cost of construction.</p> <p>In any case, with construction slated at 14 years, the prior BDCP analysis, which likely underestimated bird deaths as described in FSL's prior comment letter, clearly indicates that birds would die on the electrical transmission lines each year. Even if the lines were "only" up for 14 years for instance, using the 2013 draft BDCP take numbers in Appendix 5.J.C, 672 sandhill crane deaths would be caused by the project.</p> <p>Nonetheless, the RDEIR/S now claims that by following AMM [avoidance and minimization measure] 20, "there would be no take of greater sandhill crane from the project per Section 86 of the California Fish and Game Code" (RDEIR/S, p. 4.3.8-140), despite the earlier findings by the project's own crane expert (Gary Ivey) that there would be 48 deaths per year even after mitigation. (2013 Draft BDCP, Appendix 5.J.C, p. 18 and Table 2). Notably AMM20 is not listed as an enforceable mitigation measure for impacts to cranes from the transmission lines (see, e.g., RDEIR, ES-68 (Impact BIO-70), and is instead only included in the now rejected Alt. 4 (RDEIR/S, App. D, p. D.3-108).</p> <p>Undergrounding the new transmission lines would eliminate the potential for take, yet the RDEIR/S does not include undergrounding as a requirement, and simply mentions it as a possibility. Remarkably, where AMM20 standard in the draft BDCP provided only that there be no net increase in bird strike hazard to greater sandhill cranes, the revisions now purport to provide that there will be no take of sandhill cranes associated with the construction and operation of the conveyance facilities! (RDEIR/S, Appendix 3, D.3-109.) FSL believes this assertion is totally unrealistic and unsupported in the document. FSL continues to have concerns regarding the conclusions of the analysis with respect to greater sandhill crane, to wit:</p> <p>-- Zero is not a realistic bird strike number;</p>	<p>Sandhill Crane) would avoid the potential for take through the installation of flight diverters on new transmission lines, and selected existing transmission lines in the study area. The final transmission line design will be determined in coordination with the wildlife agencies and wildlife agency-approved, qualified biologist familiar with crane biology.</p> <p>AMM20 in its entirety appears in Appendix 3B of the EIR/EIS and is applicable to all alternatives considered in the EIR/EIS, including Alternatives 4 and 4A. AMM20 has been updated and allows for a number of minimization and mitigation measures to meet the performance standard of no take of greater sandhill crane associated with new transmission lines. The performance standard will be accomplished by one or any combination of the following:</p> <ul style="list-style-type: none"> • Design the transmission line alignment to minimize risk. When locating powerlines, choose specific site locations that are in low risk zones or outside of the Greater Sandhill Crane Winter Use Area. • Remove, relocate or underground existing lines. Reduce the number of existing lines in risk zones to offset placement of new lines in risk zones. Prioritize elimination or reduction of existing lines and avoidance of new lines in the highest risk zones. • Underground new lines in high-risk zones of the greater sandhill crane winter use area. • Use natural gas generators in lieu of transmission lines in high-risk zones of the greater sandhill crane winter use area to provide power for the construction of the water conveyance facilities. • Install bird strike diverters on existing lines in high-risk zones. Bird diverters will be required on all new lines. The length of existing line to be fitted with bird strike diverters will be equal to the length of new transmission lines constructed as a result of the project, in an area with the same or higher greater sandhill crane strike risk to provide a net benefit to the species. Bird diverters will also be required on all new lines. For optimum results, the recommended spacing distance for bird flight diverters is 15 to 16.5 feet (4.5 to 5 meters) (Avian Power Line Interaction Committee 1994). Bird strike diverters will be installed on project and existing transmission lines in a configuration that research indicates will reduce bird strike risk by at least 60% or more. Bird strike diverters placed on new and existing lines will be periodically inspected and replaced as needed until or unless the project or existing line is removed, or are otherwise no longer a strike risk for greater sandhill cranes. The most effective and appropriate diverter for minimizing strikes with greater sandhill crane on the market according to best available science will be selected. • Manage habitat to shift cultivated land roost site locations away from risk zones created by new transmission lines. This can be accomplished by not flooding past or current roosting sites located in the vicinity of the new transmission line, thereby eliminating the sites' attractiveness as roosting habitat; and establishing new roost site equal or greater in size at new location in a lower risk zone but within 1 mile of the affected site. The relocated cultivated land roost site will be established prior to commencement of the wintering season that occurs prior to construction of new transmission lines. The existing cultivated land roost site will be flooded during the wintering season prior to construction; it will not be flooded during the wintering season that occurs during the year construction begins. A wildlife agency-approved, qualified biologist familiar with crane biology will design the new roost site and direct implementation of the roost site establishment. • Final transmission line design will be determined in coordination with the wildlife agencies and wildlife agency-approved, qualified biologist familiar with crane biology, to achieve the performance standard and ensure the measures described herein are incorporated. <p>All new transmission lines will be fit with bird diverters and other methods such as undergrounding transmission lines, using natural gas generators, and designing the final alignment will be evaluated</p>

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		<p>-- Other bird strikes besides greater sandhill cranes should have been analyzed;</p> <p>-- The effectiveness of marking transmission lines with bird diverters is likely overstated and lacks a credible basis, especially given known failures to maintain the devices properly;</p> <p>-- The RDEIR/S fails to address how other project impacts, such as light/sound/vibration/traffic and habitat fragmentation, could exacerbate the potential for bird strike deaths;</p> <p>-- While undergrounding now appears to have been given some recognition as important, there is still no requirement that the lines be undergrounded, despite the fact that undergrounding is the only truly effective means to eliminate bird strikes;</p> <p>-- Despite the fact that there are inferences to the effect that certain transmission lines are intended to be temporary and not permanent, there is no firm, enforceable commitment or funding for their removal.</p> <p>The minimization and mitigation for transmission line bird strike deaths is simply inadequate. One of the fundamental purposes of conducting an environmental review of a project is to identify potential mitigation measures, which lessen the impacts of the project. (Pub. Resources Code, § 21002.1, subd. (b).) There is no dispute over the fact that the introduction of a large new transmission line through the heart of the Stone Lakes NWR and adjacent habitat areas will result in additional bird strikes, and particularly the loss of greater sandhill cranes. (See 2013 Draft BDCP, Appendix 5.J.C, Figure 5.J.C-2 (Risk-Collision Index for Greater Sandhill Crane).) Stone Lakes' population of greater sandhill cranes is smaller, more recently established, and more vulnerable to disruptive impacts. We also believe that other birds besides cranes will die as a result of the new transmission lines.</p> <p>Additionally, proposed procedures to verify no take are wholly unsatisfactory. There is no provision, for instance, to include remote monitoring or other information gathering devices on the new power lines. Rather, the project apparently intends to rely on bird surveys conducted every 5 years to determine whether there has been a reduction in numbers of greater sandhill cranes. (See 2013 BDCP, Appendix 5.J.C, p. 17.) By the time a population level effect is found in bird counts, it will be too late. Such a lackadaisical approach to monitoring effectiveness of the AMM does not meet minimum standards under the CESA in particular, since the greater sandhill crane is a fully protected, state-listed species.</p> <p>There is little dispute that the most effective way to prevent birds strikes from occurring with the development of new transmission line facilities is to eliminate the conflict -- i.e., underground the lines. Taking into account the inability to permit take of fully protected species, undergrounding is a now an absolute necessity. While undergrounding is now more prominent in the discussion of AMM20 (RDEIR/S, p. D.3-109), it is still not required as a mitigation measure, nor is it described as part of the project. If the project proponents wish to conclude that no take will occur, undergrounding must clearly be part of the project or required as a mitigation measure.</p>	<p>throughout the project area, not only within the vicinity of Staten Island.</p> <p>A bird-strike analysis was conducted for multiple species as part of the BDCP which concluded that birdstrike potential was not significant for other species that were covered under the BDCP. The EIR/EIS addresses the impact of birdstrike for all avian species, analyzing factors such as flocking behavior, flight, wing shape, and movement patterns. The implementation of the measures proposed in AMM20 are expected to reduce the risk of birdstrike on avian species to a less-than-significant impact.</p> <p>Please see RDEIR/SDEIS Appendix 3B for more information regarding Environmental Commitments that pertain to transmission line design and alignment guidelines. For responses to comments related to the Delta Independent Science Board's letters, please refer to comment letters BDCP 1448 and/or RECIRC 2546.</p>
2629	17	<p>The RDEIR/S also still fails to analyze the growth inducing effects of constructing transmission lines. Pumps at intakes and at tunnel head works will require new transmission lines. Any new power generation facilities that are brought on line to</p>	<p>As stated in Chapter 30 (Growth Inducement and Other Indirect Effects) and section 4.4.12 of the RDEIR/SDEIS, the proposed project would not result in a permanent increase in population. The increase in construction workers anticipated during the construction period could increase demands for services during</p>

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		supply the power demands of the BDCP are by their very nature growth inducing because they bring power to areas that were previously unserved. The impacts of bringing the additional power generation capacity to supply the Tunnels' power requirements should have also been disclosed as an impact of the project.	this period; however, the increase in worker population would be minimal and spread out over the large multi-county study area. This additional population would constitute a minor increase in the total 2020 projected regional population of 4.6 million. Construction of new transmission lines is not anticipated to significantly induce growth. Sacramento County can limit the future potential for growth in the Delta by continuing to maintain agricultural General Plan and zoning designations where they currently exist.
2629	18	<p>The failure to adequately describe the transmission line portion of the project also constitutes impermissible piecemealing, as described in FSL's [Friends of Stone Lakes] previous comments. Unfortunately, besides placing the word "temporary" in front of the word transmission, and providing yet another "conceptual rendering" of the location of the transmission lines, the RDEIR/S does nothing to remedy this project description deficiency.</p> <p>There are already a significant number of transmission lines within and near the [Stone Lakes National Wildlife] Refuge. The addition of more large above ground transmission lines will unquestionably cause higher bird mortality and will compromise the ability of the Refuge to complete its boundaries by introducing new wildlife risks into the area. Unfortunately, a full and good faith analysis of means to reduce impacts associated with these new structures has not yet been adequately undertaken. Moreover, the new claims in the RDEIR/S regarding the ability of a combination of making certain transmission lines temporary, installing bird diverters, and "considering" undergrounding, will not prevent the take of fully protected species. Should the project wish to legitimately claim that no bird strike deaths will occur as a result of the project, all new transmission lines must be undergrounded or co-located with existing transmission lines in such a way to avoid any increase in bird strikes.</p>	Please refer to response to comment 2629-16 regarding evaluation of transmission line impacts and mitigation. The EIR/EIS provides sufficient detail for the project components to analyze potential environmental impacts. For more information the evaluation of the project as a whole please see Master Response 8 (Lead Agencies Analyzed the Project as a Whole). For more information regarding project and program level analysis please see Master Response 2 (Project Level v. Program Level).
2629	19	<p>As noted on the FSL [Friends of Stone Lakes] comment letter of July 25, 2014, the traffic demands from construction of the intake structures, tunnels and forebay will significantly increase traffic on roads serving the Stone Lakes NWR [National Wildlife Refuge] and significantly impact the Refuge. The key road segments serving the Refuge are Hood Franklin Road between River Road (Highway 160) and Interstate 5, and Lambert Road from Herzog Road to Franklin Boulevard. Hood Franklin Road is the main access to the Refuge Visitor Center and Blue Heron Trails public use area. Like the DEIR/S, the RDEIR/S fails to acknowledge the Visitor Center or Blue Heron Trails, or consider transportation or recreation impacts to these public facilities, which have been open since 2011. (RDEIR/S, App. A, p. 15-11.) Lambert Road is the access point for refuge staff and hunters to the South Stone Lakes unit of the Refuge.</p> <p>The RDEIR/S has modified the projected increase in traffic volume on roads in the vicinity of the tunnel project during construction. While the revised data projects the hourly traffic volumes as less than in the DEIR/S, to 620 vehicles per hour, this is still a significant amount of traffic, amounting to over 10 trucks a minute or on average (or one truck every 6 seconds). Table 19-5 for Alternative 4 in the DEIR/S includes graphs, which show that traffic volumes will remain flat throughout the day with minimal peak hour highs, which suggests that almost all of the trips will be generated by truck traffic hauling supplies and waste material. There appears to be no comparable table in the RDEIR/S and assume that the graphs of daily traffic volume by hour remain the same for Alt. 4A.</p>	<p>Transportation impacts associated with Alternative 4A are analyzed in RDEIR/SDEIS section 4.3.15. As explained in that section, traffic volumes generated during construction of Alternative 4A would be identical to those evaluated under Alternative 4. Similarly, the potential for Alternative 4A to permanently alter transportation patterns during operations and maintenance would be identical to those impacts described under Alternative 4. Effects of Alternative 4A related to increased traffic volumes during implementation of Environmental Commitments 3, 4, 6-12, 15, and 16 would be similar to, but less than, those described for Alternative 4.</p> <p>The lead agencies acknowledge the importance of Delta roads for agricultural access, local residents, and the Stone Lakes National Wildlife Refuge for their transportation needs. Mitigation Measure TRANS-1c requires the project proponents to work with affected jurisdictions to enhance capacity of congested roadway segments where construction traffic will substantially affect transportation facilities. However, some significant impacts may be unavoidable as discussed in DEIR/EIS Chapter 19, Transportation, where the discussion of the construction-related traffic impacts remains adequate for describing the impacts of Alternative 4A.</p> <p>The lead agencies acknowledge that construction truck traffic may degrade the physical condition of the roadway segments as discussed in the RDEIR/SDEIS (see page 19-133). The RDEIR/SDEIS identifies mitigation measures to reduce these impacts. The lead agencies also acknowledge concerns about transportation impacts on Delta roadways. Table 19-26 in Chapter 19, Transportation, of the DEIR/EIS identifies roadway segments that are deficient. Mitigation Measures TRANS-2a, b, and c seek to eliminate or minimize traffic on those segments or to improve the condition of those pavement sections if use by construction traffic cannot be avoided. Mitigation Measure TRANS-2c also includes remediation of roads to conditions prior to project construction.</p>

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			<p>Mitigation Measure TRANS-1b specifies limiting construction activity to hours with more capacity to avoid operational deficiencies on affected roadways. Mitigation Measure TRANS-1c also seeks to work with affected jurisdictions to enhance capacity of congested roadway segments where construction traffic will substantially affect transportation facilities. However, some significant impacts may be unavoidable as discussed in Chapter 19, Transportation.</p> <p>Mitigation Measure TRANS-1a, specifically includes measures to reduce traffic impacts on the Stones Lakes Wildlife Refuge Visitor Center. Though the document does not specifically refer to the Blue Heron Trails, public use areas traffic on roads adjacent to the refuge were addressed. Chapter 15, Recreation, does include a discussion of Blue Heron Trails in the setting section.</p>
2629	20	<p>Roads and high traffic volumes reduce landscape connectivity, which effect wildlife populations in the following ways:</p> <p>-- Roads and traffic limit the regular movement of animals to different habitats (e.g., wetland to grassland) to meet daily, seasonal, and basic biological needs such as reproduction, feeding and sheltering.</p> <p>-- Roads and traffic affect use of habitats adjacent to roadways with some species having a higher degree of aversion to traffic and associated noise.</p> <p>-- Roads and traffic limit the ability for areas to be recolonized, and ability of young to find and establish new territories.</p> <p>-- Roads and traffic increase wildlife mortality due to collisions, which can affect reproduction success. At sufficiently high rates of mortality, areas become population sinks, which can then affect regional populations.</p> <p>Impacts to landscape connectivity are evident along the east side of the Refuge, which is bordered by Interstate 5. The increase in volume of traffic since its construction in the late 1970's has affected a wide variety of animal species, which is evident by the number of carcasses Refuge staff observes on a weekly basis along the roadway. For example, barn owls are regularly found dead from collisions along the roadway. The number of collisions has been increasing over the years, as habitat conditions improve for the species and the birds that fly across Interstate 5 to access foraging areas. Additional species killed along Hood-Franklin and Lambert Road includes: gopher, garter and king snakes, western meadowlark, red winged blackbird, western pond turtle, barn owl, rabbit, opossum, striped skunk, coyote, American coot and unidentified ducks. River otter are another species that have been killed along roadways as individuals follow drainages from lakes to seasonal water bodies.</p> <p>The harmful effects of an increase in traffic underscore the need to maintain and restore essential movements of wildlife across roads to maintain population movements and genetic interchange. This is particularly important on roads with high traffic volumes that can be complete barriers to movement. Numerous studies show that high-volume and high-speed roads tend to be the greatest barriers and most effective in disrupting animal movements and population interchange. Therefore, mitigation measures must be put in place to offset the increase in traffic on roads bisecting the Refuge as part of the Project.</p> <p>We suggest that the following feasible mitigation measures be included in the RDEIR/S</p>	<p>The lead agencies acknowledge the concerns raised by the commenter regarding the Stones Lake National Wildlife Refuge located on Hood Franklin Road in Elk Grove / Sacramento County.</p> <p>Implementation of Mitigation Measure TRANS-1a will ensure construction and operational traffic impacts will be minimized to the greatest extent feasible.</p> <p>Mitigation Measure TRANS-1a requires that, prior to construction, the lead agencies will be responsible for project management and may contract with one or more construction management firms to assist in ensuring that construction contractors' crews and schedules are coordinated and that the plans and specifications are being followed. The lead agencies will also ensure development of site-specific construction traffic management plans (TMPs) that address the specific steps to be taken before, during, and after construction to minimize traffic impacts, including the mitigation measures and environmental commitments identified in this EIR/EIS. This will include potential expansion of the study area identified in this EIR/EIS to capture all potentially significantly affected roadway segments.</p> <p>The following have been added to Mitigation Measure TRANS-1a to address the concerns raised by the commenter:</p> <ol style="list-style-type: none"> 1) Implement maximum 45 mph speed limit on Hood Franklin Road west of Interstate 5. 2) Include signage on Hood Franklin Road: "Caution: entering sensitive wildlife area." 3) Further reduce speed limit in both directions to 35 mph from ½ mile west of Interstate 5 to 1 mile west of Interstate 4) Add sign at Visitor Center entrance stating that facilities are for SLNWR visitors only. 5) Add a right hand turn lane on Hood Franklin Road at the entrance of the Stone Lakes Visitor Center 6) Reduce speed limit to 35 mph on Lambert Road from 1 ½ miles west of Interstate 5 to 2 ¼ miles west of Interstate 5. 7) Include signage on Lambert Road: "Caution: entering sensitive wildlife area." <p>Please see the revised Mitigation Measure TRANS-1a in Chapter 19 of the Final EIR/EIS.</p> <p>The commenter includes several suggested mitigation measures, two of which have been addressed in mitigation measure TRANS-1a: reduced speed limits to 45 mph, or less, on Hood Franklin and Lambert Roads; and wildlife signage on both of these roads.</p> <p>Regarding wildlife crossings and connectivity in and around Stone Lakes, AMM20 includes a measure for the installation of a vegetation screen or other noise and visual barrier along Hood Franklin Road for the benefit</p>

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		<p>to reduce traffic impacts on the Refuge:</p> <ul style="list-style-type: none"> -- Avoid and/or reduce use of Hood-Franklin and Lambert Roads between Franklin Road and River Road. -- Purchase land or easements in strategic locations adjacent to the Refuge with no barriers to connectivity to offset losses of habitat and connectivity. -- Limit travel times to avoid dusk and dawn when some species are most active. -- Expand AMM20 3.C.2.20.1.4 Measures to Avoid and Minimize Potential Effects from Lighting and Visual Disturbance to restrict project related traffic on Hood Franklin Road one hour before sunset and one hour after sunrise to limit disturbance to greater sandhill crane roost site. -- Establish and enforce a lower speed limit (<45 mph). -- Construct wildlife crossing tunnels and fence barriers. -- Place wildlife crossing signage along Hood Franklin and Lambert Roads. 	<p>of cranes, which would be a minimum of 5 feet high (above the adjacent elevated road, if applicable) and which would provide a continuous surface impenetrable by light. This measure would potentially direct wildlife wishing to cross Hood Franklin toward the overcrossing of the canal that links the Stone Lakes properties just east of the town of Hood. The overcrossing includes strips of terrestrial habitat on either side of the canal. The effects of the project on wildlife corridors is addressed in Impact BIO-185, which includes a discussion of connectivity between Stone Lakes and the Yolo Bypass, and Mandeville Island and Staten Island.</p> <p>Regarding the purchase of land or easements around Stone Lakes, Environmental Commitment 3 is guided by the sighting and design criteria in BDCP Conservation Measure 3, which identifies the opportunity for developing a conservation strategy that builds off of the existing wildlife refuge. Chapter 3 of the Final EIR/EIS includes specific Resource Restoration and Protection Principles (RRPP) to guide protection and restoration efforts, including RRPPs L1 (acquire lands adjacent and between existing conservation lands), L2 (protect and improve habitat linkages), GGS5 (create connections between White Slough and Stone Lakes for giant garter snake), and GSC1 - 4 (includes specific conservation actions around Stone Lakes).</p> <p>Intake work is anticipated to occur 5 days a week and up to 24 hours a day and tunnel boring is anticipated requiring 7 days a week for 24 hours a day. Because it is necessary to keep the tunnel boring machine operating 24 hours a day in order to ensure construction is completed in a timely and cost effective manner, associated construction traffic cannot be diverted around Hood Franklin and Lambert Roads.</p>
2629	21	<p>In 2011, the USFWS opened a visitor station behind the office on Hood Franklin Road, which includes a parking area, restrooms, a series of universally accessible trails, informational kiosks, a playscape and an amphitheater for the visiting public. This area is now used by over 30,000 visitors annually that come for a quiet experience to explore the restored wetlands, riparian and grassland habitats and associated wildlife. Over 2,000 school children also visit this area to experience nature and take part in the Refuge's environmental education programs with hands on learning. FSL [Friends of Stone Lakes] provides funding for school groups. The site also hosts a variety of events each year with surges of attendance that fill the primary and alternate parking lots, including an environmental competition for grade school children from throughout the area, entitled "Nature Bowl".</p> <p>The visitor experience will be impacted by the increase in traffic and noise on Hood Franklin Road. Therefore, mitigation measures must be in place to ensure the continued use of the valuable resource. The following mitigations measures must be included:</p> <ul style="list-style-type: none"> --Construction of additional turn pocket at the main entrance to the Headquarters Unit on Hood Franklin Road. --Establish and enforce lower speed limits near the Refuge Headquarters Unit. --Prohibit project-related truck traffic on Hood Franklin Road Friday through Sunday. --Implement a litter control program. --Educate drivers and project personnel to not use facilities at Refuge Headquarters. --Implement noise reduction program. --Plant vegetation screen along road visible to public at least one year prior to beginning of construction. 	<p>The commenter requests mitigation measures to address effects from traffic and noise. Please see response to Comment 2629-20, which addresses several of these requested measures.</p> <p>Regarding a litter control program and covering trucks, AMM2, Construction Best Management Practices, requires that all contracts with contractors will include language reminding them of the obligations to abide by all laws related to litter. These obligations will be applicable both within work areas and while traveling along public roads within the Plan Area. Vehicles carrying trash will be required to have loads covered and secured to prevent trash and debris from falling onto roads and adjacent properties.</p> <p>Measures to reduce the effects of construction noise are addressed in AMM20, Greater Sandhill Crane, and AMM31, Noise Abatement.</p>

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		--Cover open haul trucks or otherwise control dust and debris that may escape from truck trailers.	
2629	22	<p>In 2005, a waterfowl hunting program was established at the Sun River Unit of the [Stone Lakes National Wildlife] Refuge. Hunters enter the Sun River Unit from Lambert Road, arriving between 4 and 5 a.m. and leaving between 11 and 2 p.m. on Wednesdays and Saturdays during the months of November through January. The entrance road has poor visibility in both directions. An increase in traffic associated with the Project will increase the ingress and egress hazards. Therefore, mitigation measures must be put in place to offset the increase in traffic.</p> <p>The following mitigation measures must be included for Lambert Road:</p> <p>--Design and build new entrance to Sun River Unit.</p> <p>--Design and build turn pockets on Lambert Road at the entrance to the Sun River Unit.</p> <p>--Prohibit project-related truck traffic on Lambert Road on Wednesday and Saturdays.</p> <p>--Signage indicating side road access hazard</p>	As stated in response to Comment 2629-20, the posted speed limit on Lambert Road will be reduced to 35 mph, which would improve safety on Lambert Road near the Sun River Unit entrance. This mitigation would offset any hazard created by increase in traffic such that it would not be necessary to design and build a new entrance to the Sun River Unit or to design and build new turn pockets on Lambert Road.
2629	23	[Stone Lakes National Wildlife] Refuge staff, volunteers, partners and cooperators utilize roads to travel between Refuge management units and move equipment such as tractors, boats, cattle trucks, etc. A significant increase in the volume of traffic on all roads will impact the ingress and egress onto service roads. Of particular concern are the more than 2,000 school children that visit the Refuge during the school year. They arrive and return in school busses. The level of truck traffic increases significantly the chances of a school bus-haul truck collision with tragic consequences. This potential safety risk must be evaluated in the RDEIR/S.	The lead agencies acknowledge that construction truck traffic may impact the local community (residents, employees, and visitors). The EIR/EIS identifies mitigation measures to reduce construction-related traffic impacts. Impact TRANS-1 addresses the general effects of increased traffic on local roadways and Mitigation Measure TRANS-1a includes the implementation of a 45 mph speed limit on Hood Franklin Road and a right hand turn lane on Hood Franklin Road at the entrance to the Stone Lakes Visitor Center, which is intended to reduce the effects of project related traffic on those visiting the Stone Lakes Wildlife Refuge Visitor Center. These requirements should reduce the risk of collisions between trucks and school buses.
2629	24	<p>FSL [Friends of Stone Lakes] previously submitted detailed comments regarding its concerns regarding the disposal of tunnel muck in areas currently in use or planned for use as wildlife habitat, such as Zacharias Island, which is within the [Stone Lakes National Wildlife] Refuge boundary. The project will generate a significant volume of tunnel muck (with now over 30 million cubic yards estimated from tunneling alone) that will need to be stored, used or disposed. Yet preliminary testing indicates that the muck may have high heavy metal content, making it unsuitable for use in areas exposed to wildlife and people.</p> <p>The Project must account for the fact that the muck may not be reusable. Specific mitigation must be developed that accounts for the very real possibility that the muck cannot be reused. While there are several ECs [Environmental Commitments] that supposedly address impacts associated with tunnel muck (see RDSEIR/S, App. B, p. 3B-12, 3B-52 to 69), we continue to have concerns, as described above, regarding the enforceability of these so-called "commitments."</p>	The EIR/EIS presents the impacts of reusable tunnel material (RTM) as permanent effects and identifies the locations and potential effects of these areas. It is acknowledged, however, that the preference would be to reuse this material for beneficial uses. Appendix 3B, Environmental Commitments, AMMs and CMs presents an environmental commitment in Section 3B.2.18 for Disposal and Reuse of Spoils, Reusable Tunnel Material (RTM) and Dredged Material. As indicated in the introduction to this appendix, this environmental commitment and all of the other environmental commitments are incorporated into the action alternatives and will be implemented as part of the alternative selected to be implemented. A Mitigation Monitoring and Reporting Program (MMRP) is also provided with this EIR/EIS that includes additional details about how these environmental commitments would be implemented and who would implement them. Please refer to Master Response 12 (Reusable Tunnel Material) for more information about treatment, use and other issues related to reusable tunnel material.
2629	25	FSL [Friends of Stone Lakes] continues to be concerned that the dewatering necessary for: (1) construction of the intakes (particularly the intake near Hood), (2) the forebay, and (3) tunnel construction may have adverse impacts on the [Stone Lakes National Wildlife] Refuge's water sources as well as trees and vegetation within the Refuge that rely on relatively shallow groundwater. Though it is not entirely clear from the RDEIR/S, it appears that significant dewatering activities will be necessary for all three of these	DWR has committed to using methods to remove groundwater in a manner that would protect groundwater elevations and quality in adjacent properties, which would include Stone Lakes. As described in the Final EIR/EIS, in Appendix 3B.2.23, Use of Slurry Cutoff Walls to Protect Groundwater during Dewatering Operations, during construction, deep slurry cutoff walls would be constructed around the intakes. The deep slurry cutoff walls at the intakes will be installed to reduce or avoid levee under-seepage in accordance with USACE requirements and to reduce the groundwater inflow into deep excavations within the intake

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		<p>activities, which will occur within and near the Refuge. These dewatering activities would significantly alter groundwater levels in the vicinity of the Refuge. (See Exhibit 7, RDEIR, App. A, Figure 7-27 (showing groundwater levels diminished by 4 feet within the Refuge).) The RDEIR/S does not describe dewatering activities with sufficient particularity to disclose the potential impacts to Refuge water supplies.</p> <p>The Refuge uses the SP Cut Waterway as a water source and is concerned that this surface water diversion and other wells within the Refuge will be adversely impacted during, and potentially after, construction. It appears that the locations and construction details for existing production wells in the vicinity of the project are still unknown. A good faith effort at full analysis would include having a detailed project description of the intended actions to construct the Tunnel facilities, analyzing all groundwater impacts, and proposing adequate mitigation.</p> <p>In addition, mitigation for water supply impacts remains inadequate. Mitigation Measure GW-1 must be modified to include replacement of water supplies for wildlife and habitat uses, in addition to replacement of interrupted domestic and agricultural water supplies. This previously requested change to mitigate for disruption of wildlife and habitat water supplies has not yet been made, despite other changes to the mitigation measure. (RDEIR/S, App. A, pp. 7-4 to 7-5.)</p>	<p>construction sites. The deep slurry cutoff walls will be installed around the structures to reduce the need to use dewatering wells and the related effects on groundwater conditions near the construction locations. The structures at the intake locations to be constructed below the ground surface will be constructed using impermeable structural material (e.g., concrete). Along the Sacramento River, cutoff walls will be extended into the levees in accordance with USACE requirements and a sheet pile cofferdam will be constructed prior to dewatering and excavation of the site.</p> <p>Slurry diaphragm walls will be installed prior to construction of the tunnel shafts to minimize the need for dewatering. The tunnel shafts and the bottom of the tunnel shafts will be constructed of impermeable material to prevent groundwater from entering the tunnel.</p> <p>Deep slurry cutoff walls at the forebays will be installed to reduce or avoid levee under-seepage in accordance with Division of Safety of Dams requirements for water storage facilities. The deep slurry cutoff walls around the forebays will reduce the need to use dewatering wells and the related effects on groundwater conditions near the construction locations.</p> <p>Construction of slurry cutoff walls along the water bodies at the intake locations and the forebays will extend to the levees where the slurry cutoff wall will connect to a diaphragm wall installed along the levee. The diaphragm wall will serve as a structural wall for the intake. The slurry cutoff wall also will be constructed along the backside of the intake structure sites. This slurry cutoff wall will be tied into the proposed slurry cutoff wall that parallels the river or sloughs. In this arrangement, the entire ground area within the slurry cutoff wall perimeter can be dewatered without impacting surrounding groundwater levels.</p> <p>The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions and No Action Alternative. Mitigation Measure GW-1 in the Final EIR/EIS states that prior to construction, the location of wells within the anticipated area of influence of construction sites at which dewatering would occur will be determined. Based on available information, thorough site investigations, and desk studies; the location of wells, depths of the wells and the depth to groundwater within these wells will be determined. If monitoring data or other substantial evidence indicates that groundwater levels have declined in a manner that could adversely affect adjacent wells, temporarily rendering the wells unable to provide adequate supply to meet preexisting demands or planned land use demands, the project proponents will implement one or more of the following measures: deepening or modifying wells to maintain water supplies at preconstruction levels, or securing temporary water supplies from offsite sources.</p> <p>It is possible, however, that some construction activities may result in effects, depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts by implementing activities such as siting project footprints to encourage continued land use; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing infrastructure in support of continued water supply activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; and engaging counties, owners/operators, and other stakeholders in developing optional land use stewardship approaches. As described in Mitigation Measure AG-1 in Chapter 14, Agricultural Resources, in the EIR/EIS, adversely affected wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses and would be adversely affected by project construction or operation would be relocated or replaced.</p>
2629	26	<p>The BDCP includes three approximately 40 acre concrete batch plant and 2 acre fuel stations near each of the three intake sites, all of which are immediately west of the [Stone Lakes National Wildlife] Refuge boundary. (RDEIR/S, p. 4.1-22, Map book, Figure M3-4, Sheets 2 and 3.) Due to the proximity of the Refuge to these activities, we are</p>	<p>Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP. Alternative 4A has been developed in response to public and agency input. Impact analyses of the Preferred Project and all alternatives have been presented in the 2015</p>

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		<p>concerned about potential impacts on the Refuge and habitat in the surrounding vicinity. These impacts do not appear to have been disclosed in the RDEIR/S.</p> <p>Batch plants are a significant source of noise, dust and traffic. The content of the dust would likely be hazardous to humans, wildlife and vegetation. Dust generated by batch plants can contain asbestiform particles and crystalline silica, which are hazardous to the human respiratory system. The pH of many of these dusts may also be dangerous to vegetation and animals. The RDEIR/S has not, but must, analyze these potential impacts, and specifically the impacts of placing a batch plant so close to sensitive biological resources. At a minimum, mitigation in the form of noise screens, limiting truck drum speeds, lining hoppers with a resilient surface, and routing trucks to avoid sensitive receptors should be required. (See 2013 DEIR/S FSL Comment Letter, Exhibit K, Report on Noise Levels from Proposed Batching Plant, July 2008.)</p>	<p>RDEIR/SDEIS and this Final EIR/EIS.</p> <p>Regarding disclosure and evaluation of potential impacts on the Refuge and surrounding vicinity, please refer to Response to Comment 2629-5.</p> <p>Relative to Stone Lakes, Alternative 4A includes a 1-acre batch plant and 1-acre fuel station at each of the three intakes and a 38-acre batch plant and 1-acre fuel station off of Twin Cities Road west of I-5.</p> <p>Particulate matter emissions associated with concrete batching were quantified and disclosed as part of the impact analysis in Chapter 22, Air Quality. PM10 and PM2.5 emissions from onsite concrete batching were estimated using emission factors provided the United States Environmental Protection Agency's AP-42 and concrete data provided by DWR. The total volume of concrete required to construct the major water conveyance features (e.g., Intake, pumping plants) is summarized in Table 22B-18 in Appendix 22B, Air Quality Assumptions. Daily PM10 and PM2.5 emissions from onsite concrete batching were calculated by multiplying the anticipated volume of concrete produced at each batch plant by the AP-42 dust emission factors.</p> <p>Potential increases in regional PM10 and PM2.5 emissions as a result of concrete batching are assessed in Impacts AQ-1 through AQ-4 in Chapter 22, Air Quality. These impacts evaluate potential air quality effects as a result of construction of the entire water conveyance facilities, including concrete batching activities. As disclosed, construction emissions could exceed local air district thresholds. The project would implement a robust fugitive dust control plan, as described in Appendix 3B, Environmental Commitments, which addresses particulate matter from 1) site grading, 2) unpaved roads, and 3) concrete batching. Reductions achieved at the concrete batch plants from the use of watering/chemical stabilizers and other emissions controls were obtained from the SMAQMD's Concrete Batching Policy Manual. Reductions cited in this guidance are specific to the Sacramento-San Joaquin area and are based on achieved-in-practice technologies.</p> <p>Potential health risks from exposure to localized PM10 and PM2.5 emissions as a result of concrete batching are assessed in Impacts AQ-9 through AQ-12. As disclosed, emissions from concrete batching would contribute to exceedances of SJVAPCD's PM10 threshold under some Alternatives. Mitigation Measure AQ-9, which includes receptor relocation, is available to address this effect. New concrete batch plants would also be subject to air district permit restrictions for criteria pollutant and TAC emissions.</p> <p>A discussion of aggregate mining activities including concrete batch plants and associated equipment is added to Chapter 23 of this Final EIR/EIS. This activity is associated with noise from equipment operating in borrow/spoil areas. Assuming 100% utilization within a given hour of day, the combined worst-case noise level would be 91 dBA Leq (1hr) at 50 feet. The effect of exposing noise-sensitive land uses to noise increases above thresholds from borrow/spoil areas would be significant. However, most construction activities of this kind would occur during daytime hours. Mitigation Measures NOI-1a and NOI-1b would be available to reduce this effect. Implementation of these measures would reduce the impact; however, it is not anticipated that feasible measures would be available in all situations to reduce construction noise to levels below the applicable thresholds therefore this impact would be significant and unavoidable.</p> <p>Chapters 11 and 12 of the 2013 Public Draft BDCP EIR/EIS as revised in the RDEIR/SDEIS, and Section 4 of the RDEIR/SDEIS, include in-depth, comprehensive analyses of potential effects on all endangered fish and wildlife known or expected to occur in the BDCP Plan Area, which includes discussions of habitat degradation from fugitive dust.</p>
2629	27	<p>Noise levels above 60 dBA [A-weighted decibels], which are expected during construction, may interfere with communication among birds and other wildlife. A baseline of 40 dBA is used to describe the existing ambient noise level in the study area.</p>	<p>Construction of the project uses noise thresholds established by California DWR, which were established based on a consensus of experts, and local and resource agencies. Mitigation Measure NOI-1a is available to reduce noise impacts during construction. Operation of the project is expected to conform to local</p>

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		<p>(RDEIR/S, App. A p. 23-7.) The thresholds for construction indicate that, where existing ambient noise level is less than 60 dBA, impacts would be significant where construction noise levels are predicted to exceed the DWR standard of 60 dBA (50 dBA during nighttime hours). (RDEIR/S, App. A p. 23-8.) There is no analysis in the RDEIR/S relating to the impacts of this noise on wildlife.</p> <p>Construction noise above background noise levels (greater than 50 dBA) could extend 1900 to 5250 feet from the edge of construction activities. (2013 BDCP, Appendix 5.J, Attachment 5J.D, Indirect Effects of the Construction of the BDCP Conveyance Facility on Sandhill Crane, Table 4; see also BDCP, p. 12-1834.) Impacts</p> <p>may be similar among other bird species likely to be present in the area, which should also be analyzed in the RDEIR/S. [footnote 4: See BDCP, p. 12-1546 (California Black Rail), 12-1557 (California Clapper Rail), 12-1568 (California Least Tern), 12- 1617 (Least Bell's Vireo and Yellow Warbler), 12- 1627 (Suisun Song Sparrow and Saltmarsh Common Yellow Throat Sand), 12-1643 (Swainson's Hawk), 12-1659 (Tricolored blackbird), 12-1674 (Western Burrowing Owl), 12-1685 (Western Yellow-Billed Cuckoo), 12-1700 (White Tailed Kite), 12-1712 (Yellow Breasted Chat), 12-1722 Cooper's Hawk and Osprey), 12-1744 (Cormorants, Herons, and Egrets), 12-1758 (Short Eared Owl and Northern Harrier), 12-1769 (Mountain Plover), 12-1775 (Black Tern), 12-1787 (Grasshopper Sparrow and California Horned Lark), 12-1795 (Least Bittern and White Faced Ibis), 12-1808 (Loggerhead Shrike), 12-1818 (Modesto Song Sparrow), 12-1821 (Bank Swallow), and 12-1834 (Yellow Headed Blackbird).]</p> <p>We also continue to be concerned that the 2013 BDCP, Appendix 5.J.C treats the indirect effects on greater sandhill crane of noise from all construction activity and pile driving separately. The two types of noise should be aggregated so that the full impact on cranes is disclosed. It does not appear that this previously stated concern has been addressed at all in the RDEIR/S.</p>	<p>standards, through Mitigation Measure NOI-3.</p> <p>The commenter states that the potential impacts of noise should be analyzed for bird species other than sandhill cranes. Chapter 12 of the FEIR/EIS includes a qualitative analysis of potential impacts of noise on all avian species and other sensitive wildlife. The analysis includes reference to AMMs 20, 21, 22, 24, 25, 31, 28 and 39, and Mitigation Measures BIO-75 and BIO-166 that will minimize the potential effects of noise and other indirect effects on these species.</p> <p>The commenter states that the RDEIR/RDEIS has not analyzed the combined effects of pile driving and construction noise. This assertion is incorrect. The RDEIR/RDEIS analyzes the total combined effect of construction and pile driving noise on sandhill crane habitat. These numbers are provided in Appendix D, Substantive Revisions, Attachment 5J.D, Indirect Effects of the Construction of the BDCP Conveyance Facility on Sandhill Crane. (See Table 5J.D-5 and in the text throughout Attachment 5J.D). The impact of combined effects of construction noise and pile driving is further discussed under Impact BIO-71: Indirect Effects of the Project on Greater Sandhill Crane, which concludes that Alternative 4A would have a less-than-significant impact on greater sandhill crane under CEQA.</p>
2629	28	<p>[Friends of Stone Lakes] FSL still has concerns about the timing of crane conservation actions in general, which are exacerbated by the abandonment of the project as an HCP [habitat conservation plan]. There has been no specificity provided for when the two new roosting ponds, that will be created to connect the Cosumnes crane populations to those of the [Stone Lakes National Wildlife] Refuge, will be constructed. Beyond the concerns already expressed about funding certainty and timing of mitigations in relation to impacts, it is imperative to have the timing for these conservation actions mapped out to ensure that the Refuge can incorporate the presence of these actions into its own conservation management and monitoring schedule, and so that the timing can be analyzed in the context of the impacts from the Tunnels. When the conservation actions will be done, this needs to be as fully explicated as what they will be. To that end, a monitoring and management plan needs to be in place before construction begins, and the framework for that plan needs to be included in Alt. 4A so that it can be analyzed for completeness and appropriateness.</p> <p>Of equal concern to the timing of mitigations, is the timing of Alt. 4A construction activities. Narrower construction windows would limit the impact on cranes but the "to the extent practicable" language would seem to greatly diminish the likelihood that any restrictions would be adhered to, and that take would be avoided as now claimed in the RDEIR/S. We understand that there will be construction window limitations to protect greater sandhill crane populations on Staten Island, and request those same restrictions</p>	<p>The commenter asks that the timing for specific conservation actions be disclosed in the EIR/EIS. It is premature to present specific schedules for the implementation of conservation actions at the EIR/EIS stage. The commitment to do so prior to construction of the water conveyance facilities is sufficient under NEPA/CEQA.</p> <p>Developing a management plan for a specific mitigation action is premature under NEPA/CEQA and is not required in order to determine whether the commitment is sufficient. Any such plan would have to be approved by the agencies and will be developed prior to initiating any specific conservation action. The Environmental Commitments together with the resource restoration and protection principles under Alternative 4 rely on the guidance outlined under the equivalent Conservation Measures in the Draft BDCP. Conservation Measure 11 (Environmental Commitment 11) requires that management plans are developed for protected lands. Under Alternative 4A, these plans will be subject to the approval of the resource agencies and will be developed prior to or concurrent with project related impacts. Please refer to Response to Comment 2629-9 for more information about implementation of environmental commitments regarding environmental restoration and protection of sensitive species and habitat.</p> <p>Construction window limitations would be applicable to the entire sandhill crane winter use area (not only Staten Island) as described in AMM20.</p>

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		on construction in the vicinity of the Refuge.	
2629	29	<p>While the current Alt. 4 BDCP still refer to 1.3 million acre feet of water transfers (RDEIR/S, App. D, pp. D.3.83 to 85), it is unclear what amount of water transfers are contemplated under Alt. 4A. FSL [Friends of Stone Lakes] is also concerned that the use of the Tunnels to facilitate additional transfers will threaten water supplies for other important Pacific Flyway habitat in the Sacramento Valley.</p> <p>Over 90 percent of the wetlands in the Central Valley has been lost since the 1850s. Surveys in the Central Valley indicate that in the 1850s there were over four million acres of wetlands in the valley. These wetlands historically supported more than 4 million acres of wetland habitats, supporting an estimated 20 to 40 million waterfowl annually. Today, just over 205,000 acres of managed wetlands remain in the Central Valley, and of these, two thirds are in private ownership.</p> <p>The Central Valley Joint Venture ("CVJV") was created to address the need to conserve and restore wetland habitats in the Central Valley. Through legislative action to mandate a portion of Central Valley Project Improvement Act water for conservation, the CVJV has protected, restored and enhanced over 434,000 agricultural acres. But the water supplies for these wetlands are not secure, and the purchase of water is often not feasible given the increase in costs and the decrease of federal and state budgets. Furthermore, the search for additional municipal and industrial and agricultural water supplies continues, and water agencies have become very active in locating and acquiring water supply options, both north and south of the Sacramento San Joaquin River Delta ("Delta"), to help meet demands for its service area. Typically, urban water users can pay prices that are an order of magnitude greater than can be afforded by government agencies, conservation organizations, and private landowners, resulting in the unintended consequence of "out-bidding" wetland managers.</p> <p>The Tunnels, once built, will facilitate the transfer of water from the Sacramento Valley and the Delta to Southern California, essentially building a "water transfer pipeline." As California moves towards a drier climate, these increases in water transfers will result in major shifts in agriculture away from crops that now support hundreds of thousands of waterfowl and waterbirds that depend on these habitats during the winter and migration. We have already lost over 95% of wetlands in the state, and the Project as it is now envisioned with its ability to move water and facilitate water transfers could potentially erase the gains made by the CVJV and other federal and state efforts to restore and protect habitat.</p> <p>If the Tunnels will be used to transfer water, the RDEIR/S should have clearly analyzed the impacts of those transfers on Pacific Flyway resources. As a result of this omission of information regarding the Project and its likely impacts, the RDEIR/S is deficient.</p>	<p>As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The water supply consequences in the Delta of water transfers for all alternatives are considered in Chapter 5, Water Supply. Other environmental impacts of water transfers are addressed in Chapter 30, Growth Inducement and Other Impacts (see section 30.3.6 ("Environmental Impacts Relating to Water Transfers")). The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the Draft BDCP EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and this EIR/EIS does not constitute the CEQA/NEPA coverage required for any specific transaction. Rather, it provides an analysis of how transfers relate to the project facilities. As indicated in Appendix 5D, the analyses are conservative because it is not known if adequate water would be available from other water users for transfer. As shown in Table 5D-8, the maximum cross-Delta transfers under the action alternatives would be greatest under Alternative 8 because there would be the most available capacity. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed. For more information about evaluation of water transfers in this EIR/EIS, please also see Master Response 43 (Water Transfers).</p> <p>The lead agencies acknowledge the importance of preserving wetlands. Although Preferred Alternative 4A includes only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan. Proposition 1 funds and other state and public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.</p> <p>Additional priority restoration projects will be identified through regional and locally-led planning processes facilitated by the Delta Conservancy. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the Delta.</p>
2629	30	ATT1: Exhibit 1: Map of Permanent Surface Impacts for BDCP Alternative 4A	This comment describes an attachment to the comment letter that is connected to comments addressed in other responses to letter 2629.
2629	31	ATT2: Exhibit 2: Map of Permanent Surface Impacts for BDCP Alternative 4A	This comment describes an attachment to the comment letter and addressed when relevant to a comment in the letter.
2629	32	ATT3: Exhibit 3: Analysis of Potential Bird Collisions at Proposed BDCP Powerlines	The comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not

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			already addressed in comment referencing the attachment or the Final EIR/EIS.
2629	33	ATT4: Pictures of bird diverters on Staten and Woodbridge Islands	The comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2629	34	ATT5: Map of Electrical lines near Stone Lakes National Wildlife Refuge	The comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2629	35	ATT6: Map of WaterFix impacts to U.S. waters	The comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2629	36	ATT7: Map of project showing intakes and tunnel alignment	The comment describes an attachment to the comment letter. The attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2630	1	<p>The SolAgra Water Solution, previously known as the SolAgra West Delta Intake Plan, is a viable alternative to the CWF that must be considered under not only NEPA and CEQA, but also the Clean Water Act.</p> <p>SolAgra is disappointed that the RDEIR/S did not include additional analysis of alternatives that would meet water supply needs without damaging the Delta environment and communities. Since we received no response to our previously provided comments, there is also no publicly available basis for this omission. Our July 28, 2014 comment letter [ATT5] provided a detailed discussion of the various legal requirements to consider alternatives, including the SolAgra West Delta Intake Plan. All alternative solutions that proposed intakes in the west Delta were summarily dismissed without further analysis or consideration. The Pyke Plan (aka: West Delta Intake Concept) which was discussed in DEIR/S Appendix 3A, was preliminarily considered but not included for further analysis in the DEIR/S due to a presumed lack of viability. SolAgra's prior comment letter discussed the reasons why the SolAgra alternative is completely different from the Pyke Plan. The only similarities between the two alternatives are similar names and the use of Sherman Island for water intakes. To prevent the confusion between alternatives, we have renamed the SolAgra West Delta Intake Plan the SolAgra Water Solution (SWS). All of the comments made in our July 28, 2014 comment letter continue to apply in the context of the new preferred alternative, 4A, and it was a legal error for the RDEIR/S to omit consideration of the SolAgra Water Solution.</p> <p>An additional basis for consideration of the SolAgra Water Solution, in addition to the requirements of CEQA and NEPA, is for purposes of determining the Least Environmentally Damaging Practicable Alternative (LEDPA). (See 33 U.S.C. [Section] 1344(b)(1).) An application was recently submitted to the U.S. Army Corps of Engineers (USACE) to fill almost 800 acres of wetlands with up to 30 million cubic yards of excavated material to construct Alternative 4A. USACE regulations provide, "[N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem." (40 C.F.R. [Section] 230.10(a).) USACE regulations specifically require the applicant to identify possible practicable alternatives especially including</p>	<p>Please see Master Response 4 for discussion of the scope of the proposed project and alternatives that were not carried forward for analysis in this document due to the fact that required actions beyond the scope of the proposed project. The alternatives included in the EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1. Appendix 3A thoroughly explains why various proposals were not analyzed in the EIR/EIS, including the NRDC Portfolio-Based Proposal, Congressman Garamendi's Water Plan, a proposal from the Water Advisory Committee of Orange County, the so-called Pyke proposal, and other similar concepts that would require actions that are beyond the scope of the proposed project.</p> <p>Please see Master Response 45 for additional details on the project purpose and need.</p> <p>Appendix 3A thoroughly explains why various proposals were not analyzed in the EIR/EIS, including the NRDC Portfolio-Based Proposal, Congressman Garamendi's Water Plan, a proposal from the Water Advisory Committee of Orange County, the so-called Pyke proposal, and other similar concepts that would require actions that are beyond the scope of the proposed project. As explained in Appendix 3A, the Lead Agencies, in developing the EIR/EIS alternatives, considered all of these options, including potential desalination, and explained why such potential alternatives were not carried forward for detailed analysis in the EIR/EIS. SolAgra's proposed West Delta Intake Plan (WDIP) is substantially similar to other proposals recommending the treatment of brackish or near-brackish water and the export of treated water from a location considerably downstream from the proposed North Delta diversion locations. The Lead Agencies have already considered and rejected such concepts for various reasons, including failure to achieve the project's purposes, as well as costs and technical challenges. Notably, moreover, any diversion location that today is just near the point where fresh water mixes with brackish water will be subject to sea level rise over the coming decades. Such locations will be dealing with purely brackish water at some point in the future, substantially increasing treatment costs.</p> <p>By being located further upstream on the Sacramento River, the new diversions included under the proposed project would help protect critical water supplies against the threats of sea level rise and earthquakes, among numerous environmental benefits. As explained in EIR/EIS Chapter 2, Project Objectives and Purpose and Need, and Master Response 3, Project Objectives and Purpose and Need, the project</p>

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		those alternatives that do not involve the discharge of fill material. (40 C.F.R. [Section] 230.10(a)(i).)	<p>objectives include:</p> <ul style="list-style-type: none"> To make physical improvements to the conveyance system in anticipation of rising sea levels and other reasonably foreseeable consequences of climate change. To make physical improvements to the conveyance system that will minimize the potential for public health and safety impacts resulting from a major earthquake that causes breaching of Delta levees and the inundation of brackish water into the areas in which the SWP and CVP pumping plants operate in the southern Delta. <p>Locating new intakes in the western Delta at the mixing zone of high-salinity water and freshwater outflows, as proposed by the commenter, would not achieve these objectives.</p> <p>The Final EIR analyzes 18 project alternatives representing a reasonable range of alternatives for CEQA and NEPA purposes. For more information regarding alternatives to the proposed project please see Master Response 4 (Alternatives Development).</p> <p>Please note that Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred Alternative. Alternative 4A is also the NEPA Preferred Alternative, a designation that was not attached to any of the alternatives presented in the 2013 Public Draft EIR/EIS. Alternative 4 (BDCP) remains a potentially viable alternative and was carried forward in this RDEIR/SDEIS and Final EIR/EIS because it represents the original habitat conservation plan/natural community conservation plan (HCP/NCCP) alternative approach, and because it provides an important reference point from which the Alternative 4A, 2D, and 5A descriptions and analyses were developed and presented for public and agency review and comment in the RDEIR/SDEIS. If the Lead Agencies ultimately choose the alternative implementation strategy and select an alternative analyzed in the RDEIR/SDEIS and Final EIR/EIS after completing the CEQA and NEPA processes, elements of the conservation plan contained in the alternatives in the 2013 Public Draft EIR/EIS may be utilized by other programs for implementation of the long term conservation efforts. For further responses to comments on the BDCP, please see Master Response 5 (BDCP).</p>
2630	2	The project purpose and need can be met by the SolAgra Water Solution. (See RDEIR/S, pp. I-9 to I-12.) In particular, diversions from the Delta under the SolAgra Water Solution can occur in a manner that "minimizes or avoids adverse effects to listed species, and allows for the protection, restoration and enhancement of aquatic, riparian and associated terrestrial natural communities and ecosystems."	A wide range of alternatives have been considered for analysis in the EIR/EIS. Appendix 3A, provides a screening analysis of alternatives considered but not included in the EIR/EIS, including discussion of alternative proposals received during public review of the Draft EIR/EIS and RDEIR/SDEIS. While this potential alternative was not identified in Appendix 3A and is not carried forward into this EIR/EIS, a reasonable range of alternatives have been considered and evaluated. Please refer also to Master Response 4, related to alternatives development.
2630	3	Due to the location of the SolAgra intakes in the western Delta, diversions can "[r]estore and protect the ability of the SWP and CVP to deliver up to full contract amounts when hydrologic conditions result in the availability of sufficient water." (See RDEIR/S, pp. I-9.) Even in the case of insufficient available water quantities, as California has experienced during the most recent and ongoing four year drought, the SolAgra Water Solution would provide up to 1 million acre-feet/year (MAF) of newly created water via a large desalination plant on Sherman Island. Using state-of-the-art desalination technologies, this water supply would be drought-proof and would be immune to projected sea level rise.	Please refer to Master Response 6 for additional details on demand management. Also, please see Master Response 7 on the subject of desalination generally, Master Response 3 for additional details on the project purpose and need, and Master Response 4 for additional details on the selection of alternatives.
2630	4	The SolAgra Water Solution [SWS] is a practicable alternative that would have a less adverse effect on the aquatic ecosystem than the currently preferred Alternative 4A. (40	Appendix 3A of this Final EIR/EIS addresses this potential alternative and why it was not considered for detailed EIR/EIS review. Please also refer to Master Response 4 for additional details on the selection of

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		<p>C.F.R. [Section] 230.10(a.) In particular, the SWS requires only one 19-mile long tunnel instead of two 35-mile long tunnels, plus the SolAgra tunnel would have a borehole diameter of 32 feet, appreciably smaller than the 46-foot borehole diameter tunnels proposed under Alternative 4A. Moreover, since the SolAgra tunnel would run primarily south of the Delta, from Sherman Island to the SWP facilities at Bethany Reservoir, no waters/wetland fill would be necessary. CWF Alternative 4A proposes more than 30 million cubic yards of tunnel excavation/fill material to be deposited in pristine areas of the Delta, the SolAgra Water Solution would deposit less than 1.5 million cubic yards of fill material, and this material would all be deposited on Sherman Island in areas that are currently upland grazing areas (not wetlands). This quantity of fill material can be deposited on 310 acres at a depth of only 3 feet. This quantity of fill material would be beneficial to the environment by offsetting the land subsidence that has occurred on Sherman Island over many years. When graded and re-compacted, this fill area can be re-seeded and returned to grazing with no impact to the environment. The SWS produces less than 10% the amount of fill material as the Preferred Alternative 4A. The SWS tunnel path uses existing easements and rights of way so that no private lands must be purchased or "taken" by eminent domain. Due to the location of the SolAgra tunnel, approximately 50% of the material removed from the tunnel will be rock that is sourced from beneath the foothills of Mt. Diablo. This rock will be used to produce the fish screening permeable levee sections that allow fresh and brackish water to be brought onto Sherman for processing and desalination.</p> <p>The total tunnel length proposed in the Preferred Alternative 4A is more than 70 miles. This exceeds by more than 3 times the length of the single SolAgra tunnel shown in the SolAgra Exhibit 2. The SolAgra plan would be constructed near existing high capacity powerlines and ultimately be powered in large part by SolAgra's Ryer Island Solar Power plant and other locally generated renewable energy. Thus, the upcoming LEDPA [Least Environmentally Damaging Practicable Alternative] determination that will occur with the USACE [U.S. Army Corps of Engineers] review provides an additional basis for full consideration of the SolAgra Water Solution.</p>	<p>alternatives. For more information regarding Reusable Tunnel Material please see Master Response 13. The Least Environmentally Damaging Practicable Alternative will be determined as part of the U.S. Army Corps of Engineers Section 404 permitting process.</p>
2630	5	<p>[SolAgra is] responding to Governor Brown's stated willingness to hear better ideas to improve our Delta water supply system to support all of California. When it was announced that the Bay Delta Conservation Plan (BDCP) was being abandoned and replaced by the California WaterFix (CWF), he said, "If somebody has a better alternative, certainly we'll hear it. This is an imperative. We must move forward."</p> <p>SolAgra Corporation has a better alternative and requests that it be heard and given serious consideration. The SWS [SolAgra Water Solution] is a reasonable and superior alternative to the BDCP/CWF. It is a legal imperative that practicable alternatives be fairly evaluated.</p> <p>A description of the SolAgra WDIP [West Delta Intake Plan] was previously submitted as a superior alternative to the many potential project configurations considered in the BDCP's Draft EIR/EIS. As explained in our prior letter (copy attached [ATT5]), the WDIP is designed to better accomplish the tasks for which the BDCP, and the now rebranded "California WaterFix," was designed.</p>	<p>The Lead Agencies appreciate the commenter's desire to assist the State in its water management challenges. The commenter has devised a commendable concept for desalinating brackish water through solar power. Going forward, projects of this kind may be important parts of the overall water supply solution for California. The use of solar power would make them consistent with the State's climate policies. Depending on the particular circumstances facing a particular water agency, such a project could well be feasible. But, in the context of fixing the problems facing the State Water Project as one part of the State's overall water infrastructure, the concept of a major desalination project significantly downstream from the proposed locations of the three diversion structures associated with the proposed California Water Fix has previously been carefully considered, although none of these proposals was identical to what the commenter is suggesting. Such a concept was not carried forward for full analysis. Please refer to Master Response 4 and Appendix 3A of the EIR/EIS for additional details on the selection of alternatives.</p>
2630	6	<p>State and federal endangered species acts and environmental review statutes require that every project must fully consider alternatives to minimize take of endangered species and investigate means to avoid significant environmental impacts. The SWS</p>	<p>The alternatives included in the Draft EIR/EIS, RDEIR/SDEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the</p>

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		<p>[SolAgra Water Solution] accomplishes these tasks without the un-mitigatable economic, environmental and social impacts of the twin-tunnels proposed by the CWF.</p> <p>The current CWF tunnel plan to divert up to 9,000 cfs [cubic feet per second] of freshwater from the upper Sacramento River at Clarksburg produces unacceptable water quality in the lower Sacramento River. This plan also increases salinity downstream of the Clarksburg intakes, thus violating basic clean water requirements by moving X2 upstream. This was recently explained in the letter by the U.S. Environmental Protection Agency. The BDCP's severe impacts to fish in the northern Delta are one of the main reasons that the project could not be permitted as a 50-year conservation plan, and it was ultimately abandoned and replaced by the California WaterFix/EcoRestore.</p>	<p>scoping process and during time of preparation of the EIR/EIS. Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project's objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies. For additional information regarding the formulation and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4.</p> <p>Salinity in the Delta is a function of the amount and timing of freshwater input from the major tributaries, tidal action from San Francisco Bay, and exports from the Delta. During the late winter and spring months of seasonally elevated flows, and in wet years, seawater intrusion is limited and the Delta has mostly low salinity. During low-flow summer and fall months, and during dry years, lower freshwater flows result in greater amounts of seawater intrusion. Staff from DWR and USBR constantly monitor Delta water quality conditions and adjust operations of the SWP and CVP in real time as necessary to meet water quality objectives set by the State Water Resource Control Board protection of agricultural water supply, municipal and industrial drinking water supply, and fish and wildlife beneficial uses. See RDEIR/SDEIS Section 4.3.4 for a discussion on the proposed projects effects on water quality, salinity and electrical conductivity.</p> <p>Effects of the alternatives on salinity levels are described in Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity, EIR/EIS and Appendix A of the RDEIR/SDEIS. See tables in Appendices 8E through 8N for specific results related to various water quality constituents (including EC, bromide, and chloride).</p> <p>In addition to potential effects associated with the project and alternatives, modeling results for the No Action Alternative indicate that, with or without the proposed project, rising sea levels will bring saline tidal water further into the Delta than occurs at present.</p> <p>See Master Response 14 regarding water quality.</p>
2630	7	<p>Water from [SolAgra's] proposed Sherman Island water processing and desalination plant is not vulnerable to drought or projected sea level rise. It will provide greater reliability to ensure as much (or more) than the quantity proposed by the BDCP/CWF.</p>	<p>Potential alternatives that included intakes in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) were addressed in Appendix 3A, Identification of Water Conveyance Alternatives Conservation Measure 1. The ability to divert water in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) could be limited due to the presence of delta smelt in the winter and spring months by requirements of the U.S. Fish and Wildlife. In July through November, salinity could be too high for diversion into the SWP and CVP facilities, especially as sea level rise progresses through the end of the study period in 2060. Therefore, these alternatives were not evaluated in detail in the EIR/EIS.</p>
2630	8	<p>The SolAgra Water Solution can be built in half the time and at far less cost both financially and environmentally. (See attached Exhibits [ATT1, ATT2, ATT3, ATT4] for project specifics.)</p> <p>The water quality in the Sacramento River at Sherman Island is far superior to the San Joaquin River water that is currently drawn into the Clifton Court Forebay by the Banks Pumping Plant. The desalinated water produced by the Sherman Island Desalination Facility will be far superior to the Sacramento River water. Therefore, the blended output from the Sherman Island Desalination Facility will far exceed the water quality that can be diverted by the CWF from the Sacramento River at Clarksburg.</p>	<p>The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>Please see Master Response 4 for additional details on the selection of alternatives. For more information regarding purpose and need please see Master Response 3.</p> <p>See response 2630-7 regarding why potential alternatives in the western Delta were not evaluated in detail.</p>
2630	9	<p>Since the beginning of construction of the State Water Project (SWP) in the 1950s, California has relied upon high risk "serial engineering." This means undertaking quick-fix solutions -- reasoning that "the end justifies the means" or "let's get the water</p>	<p>The alternatives included in the Draft EIR/EIS, RDEIR/SDEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the</p>

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		<p>flowing south and we'll worry about the consequences later." "Later" has now arrived and the consequences are dire. Each new engineering solution attempts to remediate the disastrous conditions created by the previous "solution." This is also the case with the currently proposed CWF. SWS [SolAgra Water Solution] will better restore Sacramento River flow pathways and volumes, resulting in significant benefits to native fish species and other wildlife in the Delta. It will also benefit fishermen, local residents and farmers. SWS would pump the SWP's entitlement through intakes on state-owned land at Sherman Island.</p>	<p>scoping process and during time of preparation of the EIR/EIS. Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project's objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies. For additional information regarding the formulation and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4. Please also see the response to Comment 1609-1.</p>
2630	10	<p>SWS [SolAgra Water Solution] would increase the SWP's capabilities to export water to the rest of California. In fact, the SWS is the only alternative offered with the capability of generating approximately 1 million acre-feet of "new" drinking water each year by filtering and desalinating brackish water arriving on the tides from Suisun Bay. The SWS provides this capability irrespective of drought conditions.</p>	<p>As described in response to Comment 2630-7, potential alternatives that included intakes in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) were addressed in Appendix 3A, Identification of Water Conveyance Alternatives Conservation Measure 1. The ability to divert water in the western Delta (e.g., near Rio Vista, Decker Island, or Sherman Island) could be limited due to the presence of delta smelt in the winter and spring months by requirements of the U.S. Fish and Wildlife. In July through November, salinity could be too high for diversion into the SWP and CVP facilities, especially as sea level rise progresses through the end of the study period in 2060. Therefore, these alternatives were not evaluated in detail in the EIR/EIS.</p>
2630	11	<p>SWS [SolAgra Water Solution] would employ a public-private partnership similar to the business structure that was used by IDE Technologies to design and build the largest seawater desalination facility in the western hemisphere in Carlsbad, California -- just north of San Diego. Desalinating brackish water from eastern Suisun Bay, with only 2-4% the salinity of seawater, can be up to 25 times more efficient and far less power intensive than desalinating 100% seawater.</p> <p>The SWS would produce the same quantity of water (2.4 million [acre-feet]/year) at Sherman Island than is currently pumped from the south Delta at the Banks Pumping Plant (Banks) during a normal water year. However, our use of desalination produces higher quality water than is pumped at Banks.</p>	<p>Please see Master Response 4 for discussion of the scope of the proposed project and alternatives (such as desalination) that were not carried forward for analysis in this document due to the fact that required actions beyond the scope of the proposed project. However, nothing in the proposed project would prevent other entities from pursuing innovative approaches to desalination or other water supply solutions. As described in Appendix 3A, Section 3A.7, Results of Initial Screening of Conveyance Alternatives, EIR/EIS (2013), desalination was included as part of Alternative B7. Issues related to desalination include land use impacts, costs, and substantial energy use requirements. Advances in technology have improved feasibility of desalination and as a statewide water use planning component; it will be evaluated by water agencies on a local/regional level.</p> <p>Desalination, the process of removing salt and other minerals from seawater to make it suitable for drinking or irrigation, is being implemented in several California communities. However, it has not proven viable to secure adequate water supplies to meet California's needs due to high costs and energy demands.</p> <p>Today, desalination creates an estimated 84,000 acre-feet of potable water a year in the state, mostly through treatment of brackish groundwater, which is less salty and cheaper to treat than sea water. In comparison, the proposed project would secure an estimated 4.7 to 5.2 million acre-feet of water to supply more than 25 million people and 3 million acres of farmland.</p> <p>Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline. Local water agencies will need to invest in additional strategies and technologies, including desalination, to meet future water demand.</p> <p>The proposed project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for increased commitments to other water supply solutions, including recycling, desalination, water conservation and storage.</p> <p>Please see Master Response 7 regarding desalination.</p>
2630	12	<p>The water production and pumping to the SWP is accomplished using renewable hydroelectric power. The SWS [SolAgra Water Solution] would also be powered by 100% renewable energy from SolAgra's locally proposed Ryer Island Solar Power Plant. When</p>	<p>The issue raised by the commenter addresses the merits of other potential energy projects and water supply projects but does not raise any issues with the environmental analysis provided in the EIR/S.</p>

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		<p>required, that solar power could be augmented by wind power from the existing nearby Montezuma Hills (Rio Vista) wind farms. All power would be delivered via existing power corridors. No additional easements or rights of way would be required.</p> <p>Banks [Pumping Plant] currently uses eleven 26,000-horsepower pumps to pump water from the Clifton Court Forebay up to Bethany Reservoir, where it enters the SWP. This is a vertical rise of 244 feet. The SWS would use pressure created by the desalination process to pump water directly from Sherman Island to Bethany Reservoir, thereby bypassing Banks. This allows the current power used at Banks to become available for other uses while Banks is on standby, and it makes Banks available for a better use.</p>	
2630	13	<p>The needs of the Central Valley Project (CVP) can be addressed by:</p> <p>-In high water years, when water is plentiful and local hydroelectric power is available to power Banks [Pumping Plant], that pumping plant would be used, as needed, to create surge pumping capacity that has never before existed. This accomplishes the "Big Gulp" aspired to in the BDCP, and it does so with renewable energy.</p> <p>-The SWS [SolAgra Water Solution] bypassing Banks would enable this increased surge capacity. This capacity, combined with the prudent design and construction of additional high-capacity "plumbing," could move large quantities of water during the infrequent flood stages when reservoirs throughout the state are releasing water to avoid overtopping. This "Big Gulp" flow can be stored in Tulare Lake for later redistribution to San Joaquin Valley water districts. This provides a complete, environmentally superior alternative to the BDCP/CWF proposals.</p>	<p>The issue raised by the commenter addresses the merits of other potential energy projects and water supply projects but does not raise any issues with the environmental analysis provided in the EIR/S.</p>
2630	14	<p>The SWS [SolAgra Water Solution] would create a dual-plant, interconnected water processing system on state-owned land at Sherman Island. Plant #1 filters and processes incoming fresh water from the Sacramento and San Joaquin rivers via multiple fish-screened intakes around Sherman Island. Plant #2 intakes brackish water through fish-screened intakes on Sherman Lake and Mayberry Slough and then effectively desalinates this low salinity brackish water. After processing, desalinated water from Plant 2 is blended with fresh, filtered water from Plant #1. The combining of fresh water with the treated and desalinated brackish water will replace the 2.4 million acre-feet/year of fresh water that is currently conveyed through the SWP in a normal water year. The water produced at Sherman Island will be of higher quality than the water that is pumped from the Clifton Court Forebay in the south Delta via Banks [Pumping Plant] because it will be processed at Sherman Island, not just screened and pumped. This means the state water contractors that receive the water from the SWP will receive higher quality water than they are currently receiving from Banks, or that they would receive from the twin tunnels of the proposed CWF. The SolAgra Water Solution is the only alternative that processes and desalinates the water before supplying that water to the SWP.</p> <p>The SWS can augment the low flow of fresh river water in years of reduced river flow due to drought or other issues. The output volume of the desalination plant can be increased to provide additional desalinated water to make up for reduced quantities of available fresh water caused by drought or sea level rise.</p> <p>The separation of processing functions into two discrete, but interconnected plants, allows both plants to operate at peak efficiency, while still accomplishing the end result of producing 2.4 million acre-feet/year of fresh water for the SWP irrespective of</p>	<p>Please see Master Response 4 regarding the range of alternatives selected.</p> <p>The alternatives included in the Draft EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the Draft EIR/EIS. In response to public input, several new alternatives have been studied in the Recirculated DEIR/EIS and a new Preferred Alternative (4A) identified.</p> <p>The alternatives included in the FEIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A of the DEIR/EIS, Identification of Water Conveyance Alternatives, Conservation Measure 1. Appendix 3A thoroughly explains why various proposals were not analyzed in the EIR/EIS, including proposals similar to the SolAgra Water Solution.</p> <p>Please also see Master Response 3 for information on the purpose and need for the proposed project. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p>

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		drought conditions.	
2630	15	The fresh water that is produced at Sherman Island would be pumped through a single, 28-foot ID [internal diameter]/32-foot OD [outside diameter] pressure tunnel that is only 19 miles long (see Exhibit 2 [ATT4]). This is far superior to the twin tunnels proposed by the BDCP/CWF, which are each 40-foot ID/46-foot OD. Due to the tunnel liner thickness, the proposed CWA tunnels require borehole diameters that are a minimum of 46 feet in diameter. Each tunnel is proposed to be 35 miles long!	<p>Please see Master Response 4 regarding the range of alternatives selected.</p> <p>The alternatives included in the Draft EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the Draft EIR/EIS.</p> <p>The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A of the DEIR/EIS, Identification of Water Conveyance Alternatives, Conservation Measure 1. Appendix 3A thoroughly explains why various proposals were not analyzed in the EIR/EIS.</p>
2630	16	<p>The principle objectives and benefits of intake relocation to Sherman Island as proposed in the SWS [SolAgra Water Solution]:</p> <p>By placing the Banks Pumping Plant on standby, the 2.4 million acre-feet/year (MAF) being drawn into the Banks' intakes is instead permitted to once again flow completely through the Sacramento and San Joaquin Rivers. This restores more natural east-to-west flow through the Delta, closer to what occurred before the State Water Project began pumping operations in 1960.</p> <p>After flowing completely through the Delta, 1.4 MAF is brought onto Sherman Island and added to 1.0 MAF of desalinated brackish water that is in taken from Sherman Lake on the south end of Sherman Island. The additional 1.0 MAF of fresh water that is not brought onto Sherman Island continues its flow into the San Francisco Bay/Delta Estuary (SFBDE). This additional flow supports the retention of X2 at its historic range or even moves it further west. This improves water quality in the SFBDE and facilitates the recovery of natural breeding and feeding grounds for aquatic species of concern. This meets the recommendations for increased minimum Delta outflow that the EPA, State of the Estuary Report, State Water Resources Control Board and many other analyses have clearly shown are necessary to restore the Bay-Delta and its fisheries.</p> <p>Improves both in-Delta and export water quality, rather than improving export water quality at the expense of in-Delta water quality.</p>	<p>The alternatives included in the EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered by the Lead Agencies are discussed in Appendix 3A of the EIR/EIS. Appendix 3A explains why various proposals were not analyzed in the EIR/EIS, including concepts that include diversion facilities near Rio Vista, including a potential alternative with an intake at Sherman Island and intakes near City of Antioch. The ability to divert water in the western Delta (e.g., near Rio Vista, Antioch, Decker Island, or Sherman Island) could be limited due to the presence of delta smelt in the winter and spring months by requirements of the U.S. Fish and Wildlife. In July through November, salinity could be too high for use by the SWP and CVP facilities, especially as sea level rise progresses. It should be noted that Delta exports are diverted for conveyance through both SWP Banks Pumping Plant and CVP Jones Pumping Plant to provide over 6.6 million acre-feet/year in wet years.</p> <p>Please also see Master Response 3 for information on the purpose and need for the proposed project. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such it is intended to be environmentally beneficial, not detrimental. By establishing a point of diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p> <p>The project proposes to stabilize water supplies, and exports could only increase under certain circumstances. Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline. It is intended to improve both in-Delta and export water quality.</p>
2630	17	<p>The principle objective and benefit of intake relocation to Sherman Island as proposed in the SWS [SolAgra Water Solution]:</p> <p>Avoids significant impacts to the Sacramento Region, including north Delta communities, farmers, water supplies and flood control facilities.</p>	No issues related to the adequacy of the environmental impact analysis in the REIR/SEIS were raised.
2630	18	New capability can be created by SolAgra using renewable energy, with no need to build additional fossil fuel power plants, nuclear plants, or to import "brown" power from other states. The SolAgra approach is thus fully consistent with groundbreaking statewide efforts to reduce greenhouse gas emissions.	See responses to comments 2630-5 and 2630-13. The Lead Agencies recognize that the commenter has devised a commendable concept for desalinating brackish water through solar power. Going forward, projects of this kind may be important parts of the overall water supply solution for California. The use of solar power would make them consistent with the State's climate policies. Depending on the particular circumstances facing a particular water agency, such a project could well be feasible. But, in the context of fixing the problems facing the State Water Project as one part of the State's overall water infrastructure, the concept of a major desalination project significantly downstream from the proposed locations of the three diversion structures associated with the proposed California Water Fix has previously been carefully considered, although none of these proposals was identical to what the commenter is suggesting. Such a

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			concept was not carried forward for full analysis.
2630	19	The power easements [and] water conveyance rights-of-way currently exist. No additional purchases of easements or rights-of-way are required. The State of California owns 8,776 acres on Sherman Island that are more than adequate for the facilities that are proposed by the SolAgra Water Solution. No additional land must be condemned or acquired. No Delta property owners must be displaced or have their lives and/or farming operations temporarily or permanently impacted.	See responses to comments 2630-1, 2630-5, and 2630-16. Throughout this process, the lead agencies have worked through refinement of the proposed project to lessen impacts on stakeholders in response to comments to the extent feasible.
2630	20	The SolAgra Water Solution [SWS] better restores Bay-Delta ecosystems than the alternatives studied in the RDEIR/S while equaling or exceeding the water quantities projected by the CWF with far less cost, in far less time and without environmental impact. This reduces or eliminates expensive environmental mitigation requirements. Under the SWS, Sherman Island can become the center of the "California Water Solution."	See responses to comments 2630-1, 2630-5, and 2630-16. The alternatives evaluated in the EIR/EIS were the result of an extensive alternatives screening and development process. This process is described in detail in Appendix 3A Identification of Water Conveyance Alternatives, Conservation Measure 1. Please also see Master Response 4. Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP. Alternative 4A has been developed in response to public and agency input.
2630	21	SolAgra has evaluated the construction methodology in the Final Draft of the DWR's Conceptual Engineering Report [CER] for the CWF that is dated July 1, 2015. Barry Sgarrella, CEO of SolAgra is an experienced tunnel engineer. He has major reservations and concerns regarding the viability of the construction methodology in the CER, and particularly in Chapter 11 - Tunnels. SolAgra will be submitting his evaluation of the CER under separate cover for evaluation and consideration by DWR.	No specific issues related to the adequacy of the environmental impact analysis in the EIR/S or related documents were raised.
2630	22	[ATT1: BDCP/CWF Compare/Contrast with SolAgra Water Solution table.]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2630	23	Outline of the SolAgra Water Solution [SWS]: Historic maximum water shipments from the State Water Project (SWP) via Banks Pumping Plant/California Aqueduct is 2.4 million acre-feet/year (MAF). This 2.4 MAF never reaches the confluence of the San Joaquin and Sacramento Rivers. It increases and moves X2 east (upriver), especially in droughts. The BDCP/CWF would seriously exacerbate the salinity issues in the lower Sacramento River, impacting fish and other marine life. The SolAgra Water Solution turns off the Banks Pumping Plant. This allows that 2.4 MAF to flow to the confluence of the rivers at Sherman Island. SolAgra captures 1.4 MAF of fresh water from the rivers and brings it onto Sherman Island using low-velocity fish screen section that total 8 miles in length. The additional 1.0 MAF flowing downstream in the rivers continue flowing toward Suisun Bay, significantly improving environmental conditions in the SFBDE [San Francisco Bay-Delta Estuary]. SolAgra intakes brackish water from Sherman Lake using low-velocity intakes (permeable levees) adjacent to and through Mayberry Slough. The brackish water is desalinated using renewable energy from the SolAgra Solar Power Plant on Ryer Island, producing 1.0 MAF of high quality water. Desalination of low-salinity brackish water is done with greater through-put and far less energy than desalinating seawater. Brine from desalination process is greatly reduced due to low-salinity intake water. Brine from desalination will no significantly influence salinity in the SFBDE. With 1.0 MAF of fresh water flowing west, X2 will move west (downriver), improving conditions in the SFBDE. The fresh water from north Sherman Island is blended with desalinated water from the	See responses to comments 2630-1, 2630-5, and 2630-16. The alternatives included in the Draft EIR/EIS, RDEIR/SDEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the EIR/EIS. Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project's objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies. For additional information regarding the formulation and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4.

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		south end of Sherman. A total of 2.4 MAF is pumped into a new tunnel. This new single tunnel, 28-foot inside diameter, extends 19 miles to Bethany reservoir where it enters the SWP after completely bypassing the Banks Pumping Plant. The path of the new tunnel uses existing easements and rights-of-way beneath SR-160 and SR-4 to access open space beneath Mt. Diablo -- no new easements of rights-of-way are needed. Banks Pumping Plant is places on standby, but held in reserve for "Big Gulp" years when it can pump an additional 2.4 MAF during periods of heavy rainfall. The SWS provides direct solutions to the SWP side of the equation. The CVP is aided via "Big Gulp" transfers when water is available.	
2630	24	<p>Creating 1.0 MAF [million acre-feet] of new water and adding it to the captured 1.4 MAF equals the 2.4 MAF currently pumped by Banks [Pumping Plant] but with not environmental impacts. Using Banks to pump an additional 2.4 MAF during "Big Gulp" times of available heavy rains brings the SolAgra Water Solution [SWS] to 4.8 MAF/year.</p> <p>Alternatively, the 2.4 MAF available during the "Big Gulp" times enters the Clifton Court Forebay. It could be used by SWP (via Banks) or CVP (via Jones Pumping Plant). The SolAgra Water Solution requires no private land to be condemned and/or acquired. SWS uses only public lands on Sherman Island and highway rights-of-way. The SWS supports: 3.7 MAF to CVP plus 2.4 MAF to SWP via Sherman Island plus 2.4 MAF Big Gulp water -- while adding 1.0 MAF to the San Francisco Bay-Delta Estuary.</p>	See responses to comments 2630-1, 2630-5, and 2630-16. The alternatives included in the Draft EIR/EIS, RDEIR/SDEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the EIR/EIS. Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project's objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies. For additional information regarding the formulation and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4.
2630	25	[ATT2: SolAgra Water Solution plan area map.]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2630	26	[ATT3: Exhibit 1, SolAgra Water Solution power path map.]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2630	27	[ATT4: Exhibit 2, SolAgra Water Solution water path map.]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2630	28	[ATT5: Previously submitted SolAgra comments, BDCP Letter #1609.]	This comment describes an attachment to the comment letter. Please see above responses to comments.
2631	1	An overarching concern with and flaw in the RDEIR/SDEIS is that it completely fails to adequately address or answer basic questions regarding short- and long-term impacts to the American River region and its water supplies. The improper narrow focus of the RDEIR/SDEIS ignores the reasonably foreseeable and inevitable changes to upstream operations, including changes in operation of Folsom Reservoir and the impacts associated with those changes, including water supply impacts and impacts to environmental resources in the Lower American River.	The proposed project would not affect upstream water rights. Senior water rights deliveries to Placer County users in the Bear and American River watersheds are included in the basic hydrologic assumptions in the CALSIM II model. For deliveries from SWP and/or CVP facilities or downstream of SWP and/or CVP reservoirs, the CALSIM II model prioritized deliveries to senior water rights holders (e.g., Placer County Water Agency) prior to meeting environmental criteria for SWP and CVP operations or deliveries to SWP and CVP water contractors. The CALSIM II model for the No Action Alternative and action alternatives includes projected changes in hydrology upstream of the Folsom Lake due to climate change which is anticipated to reduce snowfall and increase rainfall as compared to Existing Conditions. The CALSIM II model for the No Action Alternative and action alternatives includes projected changes due to increased use of senior water rights and higher priority CVP water for municipal and industrial users due to projected population growth which is consistent with water demand projections in the Urban Water Management Plans and Agricultural Water Management Plans submitted to DWR by 2012 which include approaches to meet the 20 percent per capita urban water use by 2020. The majority of the projected increased municipal and agricultural water demand north of the Delta is predicted to occur in the American and Bear rivers watersheds. The Final EIR/EIS evaluates the changes in hydrology due to climate change and increased water demand that would occur with or without the Project through the comparison of conditions under the Existing Conditions to conditions under the No Action Alternative, including changes to end of September Folsom Lake water elevations, as shown in Appendix 5A, Section C, of the EIR/EIS. The climate change and water demand assumptions would be the same in the No Action Alternative and all of the action alternatives. The changes due to implementation of the action alternatives on Folsom Lake surface water elevations and American

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			<p>River flows are presented in Appendix 5A, Section C, and changes in water temperatures are presented in Appendix 11D of the Final EIR/FEIS.</p> <p>Please see Master Response 26, Area of Origin and Master Response 25, which addresses upstream reservoir effects.</p> <p>For information on water rights please see Master Response 32.</p>
2631	2	<p>The RDEIR/RDEIS itself is virtually unusable to the average citizen or expert. Its unwieldy and confusing structure and organization, along with internal errors in editing make it, at best, difficult to understand and make understanding the project and its impacts impossible. The RDEIR/RDEIS does not provide meaningful information about many of the Project's adverse effects and it omits consideration of many impacts of concern to PCWA [Placer County Water Agency]. In these ways the RDEIR/SDEIS fails to summarize and convey information essential to the PCWA's and the public's understanding of Project impacts in a manner reasonably calculated to inform the readers and decision makers, in violation of the National Environmental Policy Act (NEPA) readability requirement and in violation of the California Environmental Quality Act (CEQA).</p>	<p>To assist reviewers, the Lead Agencies provided a "Document Review Road Map" at the beginning of the RDEIR/SDEIS. Chapter 1, Section 1.3, of the RDEIR/SDEIS describes the contents of the document and provides references to the locations where readers may find specific discussions and analyses. Table 1-2 in the RDEIR/SDEIS identifies the exact portions of the Draft EIR/EIS that are modified in the RDEIR/SDEIS. To avoid presenting thousands of pages of unchanged content, the Lead Agencies did not provide the entire Draft EIR/EIS within the RDEIR/SDEIS. Because the entire Draft EIR/EIS was not presented a second time, the RDEIR/SDEIS contains cross-references to the earlier document. The Final EIR/EIS contains the full contents of the Draft EIR/EIS and RDEIR/SDEIS without references to earlier documents. See Master Response 38 for further discussion on the length of the environmental document.</p> <p>For information on public outreach please see Master Response 40. Transparency is discussed in Master Response 41.</p>
2631	3	<p>A major criticism of the initial DEIR/DEIS for the BDCP was that it failed to summarize and convey information essential to the understanding of Project impacts in a manner reasonably calculated to inform the readers and decision makers, in violation of NEPA's readability requirement and CEQA. The RDEIR/SDEIS repeats and compounds these problems. The RDEIR/RDEIS contains a confusing mix of new, old and partially edited impact sections; lack of clear and concise summary tables; omission of blocks of text from the revised impact chapters (without any strikeout to inform the reader which sections were deleted from the prior draft); failure to integrate figures into text; reliance on multiple appendices and exhibits to appendices; and cross references to old (DEIR/DEIS and BDCP) and new (RDEIR/SDEIS) documents. This confusing collection of disconnected information places the burden on readers to independently determine where the actual document revisions are and to make assumptions regarding which portions of the prior draft DEIR/DEIS survived the edits and recirculation. This makes it impossible for even the most able analysts to piece together all the information the RDEIR/SDEIS contends supports its impact assessments and determinations.</p>	<p>The RDEIR/SDEIS fulfills two different but related roles: It describes and analyzes three new alternatives (Alternatives 4A, 2D, and 5A) and it provides revisions to the Draft EIR/EIS and Draft BDCP that were released in 2013. Please see response to comment 2631-2 for more information.</p>
2631	4	<p>PCWA [Placer County Water Agency] is not alone in expressing significant concern with the readability and presentation of information in the RDEIR/SDEIS. The Delta Independent Science Board (ISB), which is comprised of 10 PhD experts in the areas of hydrodynamics and fisheries biology, found the RDEIR/SDEIS "sufficiently incomplete and opaque to deter its evaluation and use by decision makers, resource managers, scientists and the broader public." (September 30, 2015 correspondence to R. Fiorini et al from Delta Independent Science Board Re. Review of environmental documents for California WaterFix.) As a result of these fundamental flaws in the RDEIR/RDEIS, the ISB concluded that the RDEIR/SDEIS "fails to adequately inform weighty decisions about public policy." (Id at p.4.)</p> <p>A draft EIR must be recirculated when it is "so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded."</p>	<p>The size and complexity of these drafts reflect an unprecedented effort to analyze a proposed project under both state and federal laws for endangered species along with 17 action alternatives. Please refer to Master Response 38 for comments pertaining to the length and complexity of the EIR/EIS. Please refer to Chapter 32 of the Final EIR/EIS and Master Response 40 for information regarding outreach conducted for California WaterFix (and previously the BDCP). Please also see response to comment 2631-2.</p> <p>Please refer to comment letters #1448 and #2546 to see responses to the Delta Independent Science Board's comments.</p>

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		<p>(CEQA Guidelines, [Section] 15088.5(a)(4).) An EIR that is a "mass of flaws" must be redone completely and recirculated. (San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 741-742.) The RDEIR/SDEIS is so fundamentally and basically inadequate and contains a "mass of flaws" as to render it useless in informing the public of the impacts of the Project. The Project EIR must be completely rewritten and recirculated for public review and comment so that PCWA and the rest of the public can begin to understand the true impacts of the Project -- and in turn, provide detailed, consequential comments to help inform the Project and EIR/EIS.</p>	
2631	5	<p>The RDEIR/SDEIS Fails to Summarize or Resolve Disagreements among Technical and Scientific Experts Regarding its Underlying Data and Methodologies:</p> <p>The CEQA Guidelines specify that when experts disagree about an EIR's data or methodology, the EIR should summarize the main points of disagreement. (CEQA Guidelines, [Section] 15151.) When the EIR's discussion and analysis is not modified to incorporate the suggestions made in comments on the draft document, the EIR must acknowledge the conflict in opinions and explain why they have been rejected, supporting its statements with relevant data. (Berkeley Keep Jets Over the Bay Comm. V. Bd. Of Port Commissioners (2001) 91 Cal.App.4th 1344, 1367, 1371.) An EIR that fails to explain major discrepancies in critical data and fails to resolve the conflict with substantial evidence is legally inadequate. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260.) Likewise, CEQA Guidelines state that "[a]ccurate scientific analysis" is essential to implementing NEPA. (40 C.F.R. [Section] 1500.1(b).) Agencies must ensure the scientific integrity of analyses in environmental impact statements. (40 C.F.R. [Section] 1502.24.) In doing so they must discuss any responsible opposing view and indicate the agency's response to the issued raised. An EIS "must respond explicitly and directly to conflicting views in order to satisfy NEPA's procedural requirements." (Earth Island Institute v. Carlton (9th Cir. 2010) 626 F.3d 462, 472.) Here, qualified experts (including, but not limited to, the Delta ISB [Independent Science Board] and NSWA [North State Water Alliance] experts MBK Engineers, Cardno, Dave Vogel and Robert Latour) provided detailed comments constituting substantial evidence that showed why and how the DEIR/DEIS's hydrologic modeling and fisheries analyses were flawed and inadequate to support the DEIR/DEIS's analysis, impact determinations, public participation or agency decision making. These expert comments raised issues of such significance regarding the fundamental assumptions, data and methodology used in the DEIR/DEIS as to merit discussion in a revised and recirculated Draft EIR/EIS. The RDEIR/SDEIS does not address these fundamental expert criticisms of the DEIR/DEIS.</p> <p>By deferring any discussion of these issues to the Final EIR/EIS, the lead agencies have effectively precluded informed public participation on some of the most important aspects of the environmental review documents and [have] failed to incorporate the best available science into the environmental review of the proposed project. Given the magnitude of the criticisms levied at the DEIR/DEIS data and methodologies, and the fact that the same errors appear to have been repeated in the RDEIR/SDEIS, it was an abuse of discretion for the lead agencies to fail to directly address the key expert criticisms in the RDEIR/SDEIS so the public and decision makers could understand and weigh the agencies' views and supporting evidence in their evaluation of the RDEIR/SDEIS.</p>	<p>The Lead Agencies acknowledge that uncertainty is inherent in any planning effort of this geographic and temporal scale. However, DWR strived to use the best available science throughout the effects analysis, consistent with the requirements of the ESA. Additionally, the official public review process for the proposed project provides an opportunity for formal public comment on the proposed project and project alternatives. Public and agency comments on the public draft have led to further refinement of the proposed project, as evidenced in the RDEIR/SDEIS and this Final EIR/EIS.</p> <p>See Chapter 1 of the Final EIR/EIS summarizing points of known controversy.</p> <p>Also see Appendix 5A, and Master Response 30, regarding modeling.</p>
2631	6	<p>PCWA [Placer County Water Agency] commented previously on the numerous errors and omissions in the BDCP and DEIR/DEIS's hydrologic modeling. The RDEIR/SDEIS fails</p>	<p>Responses to comments on the Draft EIR/EIS are presented in this Final EIR/EIS. For information on public</p>

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		<p>to correct these problems, as demonstrated by the further expert report prepared by MBK Engineers and submitted on behalf of the NSWA [North State Water Alliance]. Expert reports evaluating the RDEIR/SDEIS submitted previously by PCWA as part of its July 28, 2014 comment letter and being submitted on behalf of the NSWA as part of comments on the RDEIR/SDEIS demonstrate that the same questions and concerns about the impacts of the previously preferred project apply to the new alternatives, including Alternative 4A.</p> <p>CEQA requires that an EIR analysis and impact determinations be based on substantial evidence. CEQA "[c]ase law defines 'substantial evidence' supporting an agency's decision as 'relevant evidence that a reasonable mind might accept as adequate support for a conclusion' " [citation] or 'evidence of "ponderable legal significance . . . reasonable in nature, credible, and of solid value"' [citation]. (Banker's Hill, Hillcrest, Park West Community Preservation Group v. City of San Diego (2006) 139 Cal.App.4th 249, 26, fn. 10.)</p> <p>NEPA likewise requires a record of sufficiently detailed information to fully assess significant environmental impacts so as to allow determinations by informed, reasoned choice. "Accurate scientific evidence remains essential to an Environmental Impact Statement . . . [and] an agency [can] not rely on 'stale' scientific evidence or 'ignore reputable scientific criticism' in its Environmental Impact Statement.'" (City of Carmel-by-the-Sea v. U.S. Dept. of Transp. (9th Cir. 1997) 123 F.3d 1142, 1151, quoting Seattle Audubon Soc. v. Espy (9th Cir. 1993) 998 F.2d 699). The technical analyses supporting the RDEIR/SDEIS do not meet this standard; their flaws are so substantial as to invalidate the RDEIR/SDEIS analysis and impact determinations upon which they are based.</p>	<p>comments please see Master Response 42.</p> <p>The Final EIR/EIS includes model runs for the proposed project, Alternatives 2D and 5A, and the model results presented in the Draft EIR/EIS. The text of the EIR/EIS also has been modified to provide additional clarification and information to allow comparison of the proposed project and the action alternatives to Existing Conditions and the No Action Alternative.</p> <p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>Also see Appendix 5A and Master Response 30, regarding modeling.</p>
2631	7	<p>The EIR is Inadequate to Support Responsible Agency Decision Making:</p> <p>The numerous flaws with the DEIR/DEIS and RDEIR/SDEIS, including but not limited to the lack of essential information about the Project's effects on upstream water supplies and impacts to threatened and endangered fish species, render the document inadequate to meet the needs of the state responsible agencies and federal agencies with permitting jurisdiction over the Project. For example, as a CEQA responsible agency the State Water Resources Control Board (SWRCB) must rely on the Project EIR when considering the required water rights changes necessary to implement the Project. The DEIR/RDEIR/DEIS/SDEIS cannot support the SWRCB's required findings for petitions to change because there is insufficient evidence to conclude the Project will not injure other legal users of water. The specific bases for this concern have been stated previously in the July 28, 2014, comments of PCWA [Placer County Water Agency], the ARWA [American River Water Agencies], and the NSWA [North State Water Alliance], among many others. With respect to the current RDEIR/SDEIS, for example, to the extent the new preferred project (Alternative 4A) includes provisions for additional Delta outflow, the effect of that component on upstream hydrology, and the ability of upstream water users to exercise their water rights, has not been evaluated.</p>	<p>As already stated above, the Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>As indicated in Chapter 5, Water Supply, the California WaterFix would not affect any water rights permits other than the SWP/CVP water. The EIR/EIS in Chapter 8, Water Quality, provides detailed information about water quality effects upstream of the proposed north Delta diversions and concludes that changes in water quality constituent concentrations in these areas would be less than significant/not adverse. Chapter 6, Surface Water, addresses changes in river flow and reservoir storage issues.</p> <p>See Master Response 14 regarding water quality, Master Response 25 regarding upstream reservoirs, and Master Response 32 regarding water rights.</p> <p>For information on operational criteria and adaptive management please see Master Response 28 and Master Response 33, respectively.</p>
2631	8	<p>Substantial flaws in the analysis of impacts to threatened and endangered fish species fail to satisfy the informational requirements necessary to support issuance of a Clean Water Act section 404 permit for the proposed diversion structures.</p>	<p>The 404 permit compliance approach will utilize this EIR/EIS to the extent possible, but additional documentation may be required depending on final design, final determination of impacts to wetlands, and/or final determination of mitigation sites. However, for purposes of the action proposed by Reclamation and DWR, the analysis provides sufficient information to identify potentially significant and adverse impacts,</p>

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			and identify mitigation as appropriate. For more information on permitting please see Master Response 45.
2631	9	<p>The RDEIR/RDEIS Fails to Consider Reasonable Alternatives:</p> <p>The Project is a significant departure from the original Draft BDCP. The prior project was a Habitat Conservation Plan purporting to be prepared in accordance with Section 10 of the federal Endangered Species Act. California WaterFix significantly departed from the BDCP, altogether abandoning the habitat conservation portion of the project, moving to a "conveyance"-only project. The change is so significant that the Project no longer qualifies for inclusion into California's Delta Plan. (Water Code section 85320.) As the scope and purpose of the project has changed to eliminate the restoration of the Delta ecosystem as a part of the project, the project proponents must analyze a reasonable range of alternatives to satisfy NEPA. (40 C.F.R. [Section] 1505.1(e).) The Council on Environmental Quality, in its Memorandum For Federal NEPA Liaisons, Federal, State, and Local Officials and Other Persons Involved in the NEPA Process, dated March 16, 1981 (CEQ Memorandum), explains that the range of alternatives "include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." (CEQ Memorandum, π 2a.) The RDEIR/RDEIS fails to consider a reasonable range of practical or feasible alternatives that focus solely on conveyance. As such, the RDEIR/RDEIS fails to satisfy NEPA's mandate that a range of alternatives be considered.</p>	<p>Since 2006, the proposed has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings. In the RDEIR/SDEIS, refinements to the Project Objectives and Purpose and Need statements were made that are consistent with the purposes and requirements of CEQA and NEPA. Please see Master Response 3 for additional information on the project's purpose and need.</p> <p>The alternatives included in the Draft EIR/EIS, RDEIR/SDEIS, and Final EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the EIR/EIS. Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project's objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies. The Final EIR/EIS, along with many other documents developed through the project planning (e.g., engineering, economic, and other technical studies) and other environmental compliance processes (e.g., Endangered Species Act, Clean Water Act, and water rights compliance), will serve as the basis for the Federal and State Lead Agencies' review and consideration of the proposed project. For additional information regarding the scoping process and selection of alternatives for evaluation in the EIR/EIS, please see Master Response 4.</p> <p>For more information regarding the Delta Reform Act refer to Master Response 31, Appendix 3I and Appendix 3J of the Final EIR/EIS.</p>
2631	10	<p>The RDEIR/RDEIS Fails to Consider Impacts to Upstream Operations and Fails to Analyze the Impacts Associated with the U.S. Bureau of Reclamation's Commitment to Participate in the California WaterFix:</p> <p>It should be beyond dispute that the participation by the U.S. Bureau of Reclamation (USBR) in the California WaterFix is required in order to make the project economically feasible. This is perhaps best demonstrated by the fact that the USBR has joined the California Department of Water Resources (DWR) in submitting Petitions for Change of the points of diversion and/or to add points of rediversion to allow the USBR to move water diverted and stored by the Central Valley Project (CVP) through the new conveyance facility proposed as part of the California WaterFix. Indeed, the prior iteration of the Project, the BDCP, included draft proposed funding and other commitments that provided for a "wheeling" agreement between the USBR and DWR.</p>	<p>For information on funding for the proposed project see Master Response 5 and for information on upstream operations see Master Response 25.</p> <p>Regarding agency roles and responsibilities please see Chapter 1 of the Final EIR/EIS.</p> <p>For information on water rights please see Master Response 32.</p>
2631	11	<p>The RDEIR/RDEIS fails to acknowledge, disclose, study, and analyze the effects of an agreement or commitment to move federal Central Valley Project (CVP) water through the new conveyance facility. By failing to adequately disclose and analyze this commitment and agreement to move federal CVP water through the new conveyance facilities, the USBR has failed to disclose how it proposes to operate the CVP as part of the California WaterFix.</p>	<p>Regarding agency roles and responsibilities please see Chapter 1 of the Final EIR/EIS.</p> <p>The project purpose includes the following: "The construction and operation of facilities and/or improvements for the movement of water entering the Delta from the Sacramento Valley watershed to the existing SWP and CVP pumping plants located in the southern Delta." (2013 DEIR/S Executive Summary section ES.2.2.1) Since one of the purposes of the project is to construct facilities and/or improvements for the movement of water, or conveyances, to SWP and CVP pumping plants, CVP water is expected to be</p>

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			<p>moved through the new conveyances.</p> <p>For information on operational criteria and adaptive management please see Master Response 28 and Master Response 33, respectively.</p> <p>Regarding the project's purpose and need please also see Master Response 3 and Chapter 2 of the Final EIR/EIS.</p>
2631	12	<p>The lack of any available operations plan precludes any review, let alone meaningful review, of the Project on upstream reservoirs and facilities and the ecosystems affected by those operations. For example, adverse impacts associated with changes to operations at Folsom Reservoir, on the ecosystem of the Lower American River, were discussed in the previously submitted technical memorandum prepared by Cardno and attached hereto [ATT2]. The issues raised by that memorandum were not addressed in the RDEIR/RDEIS.</p>	<p>Responses to comments on the Draft EIR/EIS are presented in this Final EIR/EIS. For more information on public comments please see Master Response 42.</p> <p>The Final EIR/EIS includes additional information related to the assumptions for the operations of the proposed project (please see Chapter 3 and Appendix 5A, Section B of the EIR/EIS) and results of specific model runs that analyzed these assumptions, including results of CALSIM II and DSM2 model runs for Alternative 4A (proposed project) as compared to the No Action Alternative (please see Appendix 5A, Section C).</p> <p>See response to comment 2631-1 regarding upstream reservoirs..</p> <p>For information on operational criteria and adaptive management please see Master Response 28 and Master Response 33, respectively.</p>
2631	13	<p>It is well established that "[T]he purpose of an EIR is not only to protect the environment but to demonstrate to the public that it is being protected." (County of Inyo v. Yorty (1973) 32 Cal.App.3d 795, 810.) As explained in PCWA [Placer County Water Agency]'s comments, the RDEIR/SDEIS, like the DEIR/DEIS before it, does not provide sufficient information, nor does it present information in a way that allows the public a meaningful opportunity to understand and comment on the California WaterFix Project's substantial adverse impacts. To date, the EIR/EIS has failed to demonstrate to the rate payers of PCWA that they, their water supplies, and the environment in the American River watershed, will be protected from the significant impacts of constructing and operating the California WaterFix Project. Due to the fundamental changes in the project since publication of the DEIR/DEIS, the significant changes needed to the underlying technical studies and analyses, and the extensive comment and criticism of these documents, further edits and revisions or partial recirculation of the current DEIR/DEIS or RDEIR/SDEIS will not satisfy CEQA and NEPA's informational mandate. The state and federal lead agencies must start over and prepare a new draft EIR/EIS that addresses the concerns raised in comments on the DEIR/DEIS and RDEIR/SDEIS.</p>	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies readily acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>For information on recirculation and scoping please see Master Response 46. See Master Response 38 for more information about document length and organization. Also see Master Response 40 regarding public outreach and Master Response 41 regarding transparency.</p>
2631	14	<p>[ATT1: Technical Memo from MBK Engineers previously coded for BDCP under Letter #1511.]</p>	<p>The comment describes an attachment to the comment letter. Please see letter 1511 for responses to this technical memo. Please refer to Master Response 30.</p>
2631	15	<p>[ATT2: Technical Memo from Cardno ENTRIX previously submitted for BDCP under Letter #1511.]</p>	<p>The comment describes an attachment to the comment letter. Please see letter 1511 for responses to this technical memo.</p>
2633	1	<p>The following statements from the Suisun Marsh Preservation Agreement (SMPA) acknowledge the importance of water quality to the health of the Marsh and wildlife, and the threat posed by increased salinity levels:</p> <p>A supply of adequate quality water is necessary to protect wildlife habitat in the Marsh. The Parties consider it to be in the public interest to manage the wetlands of the Marsh to produce adequate quality waterfowl habitat and grow certain waterfowl food</p>	<p>Please see Master Response 14 regarding water quality. The modeling results for salinity (EC) in the Final EIR/EIS in Chapter 8, Water Quality, Impact WQ-11 show that EC levels in Suisun Marsh would not be substantially different from Existing Conditions or the No Action Alternative.</p>

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		<p>plants.(2005 Revised SMPA Agreement , p. 2.)</p> <p>Upstream water use, including diversions by the Central Valley Project ("CVP") and the State Water Project ("SWP") has, at times, reduced outflow from the Delta, resulting in increased salinity in the Marsh. The higher salinity levels have , at times, degraded waterfowl habitat in the Marsh . The Marsh has a salinity gradient between its western portion and its eastern portion, with ocean-derived salinity being greatest in the westerly portion . (Id.)</p> <p>The 1977 Suisun Marsh Preservation Act is intended "to preserve the integrity and assure continued wildlife use of the Suisun Marsh, including the preservation of its waterfowl-carrying capacity and retention of the diversity of its flora and fauna ." To achieve the objectives of the 1977 Suisun Marsh Preservation Act, the Bay Conservation and Development Commission (BCDC) established policies and regulations in the Suisun Marsh Protection Plan , and DWR also developed the 1984 Plan of Protection for the Suisun Marsh to mitigate the effects of the Federal CVP and the SWP on the Marsh. To protect Fish and Wildlife Beneficial Uses in the Eastern and Western Suisun Marsh , the State Water Resources Control Board (SWRCB) established and has required USBR and DWR to meet numeric and native salinity standards for the Suisun Marsh in Water Rights Decision 1485 (D 1485), Order 95-6, and Decision 1641 (D 1641). These salinity standards were further reinforced with execution of the SMPA by and between DWR, USBR, Department of Fish and Wildlife (DFW) and Suisun Resource Conservation District. Any action of BDCP/CA Water Fix that reduces existing Delta outflows, increases tidal mixing of salts into the Suisun Marsh, or causes an exceedance of the 01641 or SMPA salinity standards would be detrimental to the existing ecological values of the Marsh and a violation of 0 1641 and the SMPA salinity standards and contractual agreements.</p>	
2633	2	<p>Suisun Resource Conservation District has reviewed the BDCP/CA WaterFix RDEIR/SDEIS, and has evaluated the proposed Project's future significant and unavoidable negative impacts to the wetland and wildlife resources of the Suisun Marsh from further degradation of water quality conditions (increased salinity) and habitat conversion in the Suisun Marsh from the Project and meeting the mitigation obligations of the existing CVP and SWP operations. The SRCD Board of Directors, which represents the private landowners of Suisun Marsh, cannot support a proposed BDCP/CA WaterFix Project that has identified significant</p> <p>increases in Suisun Marsh channel water salinity and unidentified impacts and degradation of Suisun Marsh water quality and existing habitat conditions from the Project, which will have cumulative adverse effects with future tidal restoration actions to</p> <p>meet existing CVP and SWP Biological Opinion obligations (now presented as Eco Restore Program). Not only does the RDEIR/SDEIS fail to adequately evaluate and disclose significant Project-specific and cumulative salinity impacts to the Marsh, but it also offers no commitment or regulatory assurances how these impacts will be avoided, minimized, or adequately mitigated. These undisclosed Project-specific and/or cumulative impacts include modification of the Suisun Marsh salinity regime, the degradation of the water quality conditions, the direct conversion and loss of existing</p>	<p>Effects to EC in Suisun Marsh identified for Alternative 4 were significant, but would be less than significant with implementation of the proposed mitigation; for Alternative 4A, effects would be less than significant. The modeling results provided in the RDEIR/SDEIS are based on modeling that assumed no operation of the Montezuma Slough Salinity Control Gates, and that assumption contributed to showing substantial EC increases at certain marsh compliance locations relative to Existing Conditions and the No Action Alternative. As explained in the RDEIR/SDEIS, Appendix A, Chapter 8, Water Quality, Impact WQ-11, the project description includes continued operation of the gates. Thus, the results were qualified based on sensitivity analyses to reach the conclusion that the impact to Suisun Marsh EC would be less than significant. The modeling results for EC in the Final EIR/EIS in Chapter 8, Water Quality, Impact WQ-11, which assumed continued gate operation, show that EC levels in Suisun Marsh at the compliance locations would not be substantially different from Existing Conditions or the No Action Alternative, confirming the conclusion presented in the RDEIR/SDEIS that effects of Alternative 4A (and 2D and 5A) on Suisun Marsh EC would be less than significant.</p> <p>For more information on mitigation please see Master Response 22. Also see Master Response 14, Water Quality.</p> <p>Regarding significant and unavoidable impacts please see Master Response 10. Cumulative Impact Analysis is discussed in Master Response 9.</p>

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		managed wetland values and functions, dampening of the tidal stage, redirection of tidal energy, and consequent degradation of the existing ecological characteristics of over 58,000 acres of tidal and managed wetlands in the Suisun Marsh.	
2633	3	<p>BDCP/CA WaterFix Will Result in Unacceptable Increases in Suisun Marsh Salinities that are Not Adequately Disclosed or Mitigated in the RDEIR/SDEIS</p> <p>The RDEIR/SDEIS is inadequate because it fails to disclose the impacts of the Project on the salinity of water diverted into Suisun Marsh managed wetlands. In brackish and freshwater tidal marshes, changes in salinity of a few parts per thousand will have substantial adverse effects because the growth, productivity, and survival of most species are highly sensitive to any salinity. (Parker 2011.) Small changes in salinity could significantly affect the diversity and composition of these wetlands. Increases in soil salinity and inundation will differentially affect germination and the physiological limits of species. (Parker 20 11.) A primary effect of salinity is that it delays germination and seedling development. Plant loss during this seedling stage can reduce the plant population density to suboptimal levels and significantly reduce yields. (Mass 1993.) The RDEIR/SDEIS effects analysis repeatedly acknowledges increases in Suisun Marsh salinities from existing baseline conditions (Appendix B Supplemental Modeling Results for New Alternatives) for chloride and electrical conductivity (EC). These increases will result in a direct violation of the Suisun Marsh Preservation Agreement and D1641 Suisun Marsh salinity standards and degrade existing wetland habitats in the Suisun Marsh.</p>	Please see Response to Comment 2633-2.
2633	4	<p>The RDEIR/SDEIS Fails to Quantitatively Analyze Project Impacts to the Suisun Marsh. The RDEIR/SDEIS discussion of salinity increases is insufficient to properly evaluate impacts to the Marsh, however, due to fundamental insufficiencies and flaws in the modeling approach. Chapter 8 page 8-71 line 9-11 states, "Assessment of the Suisun Marsh electrical conductivity (EC) was conducted qualitatively, using average EC for the entire period modeled (1976-1991) to determine the overall change and degree to which EC could be affected by the alternatives." (Emphasis added.) Thus, the RDEIR/SDEIS relies entirely on an insufficient qualitative analysis of the Project's salinity and EC impacts, but fails to perform crucial quantitative analysis? Quantitative analysis is imperative to presenting a reasoned analysis of the environmental impacts associated with the Project, and DWR and U.S. Bureau of Reclamation have Suisun Marsh water quality monitoring data since 1977 as required under D 1485.</p>	<p>The assessment of EC changes in Suisun Marsh was conducted quantitatively to the extent the modeling results could reasonably and appropriately be interpreted. Appendix 5A, Section C of the Final EIR/EIS, "Appropriate Use of Model Results" states that: "Due to the assumptions involved in the input data sets and model logic, care must be taken to select the most appropriate time-step for the reporting of model results. Sub-monthly (e.g., weekly or daily) reporting of model results is inappropriate for all models and the results should be presented on a monthly basis." The models contain various assumptions and limitations that preclude use of daily or sub-daily modeling results for most assessments, particularly those that compare modeling results to specific thresholds. Additional discussion of modeling limitations can be found in Appendix 5A of the Draft EIR/EIS, as well as in Chapter 8, Water Quality, Sections 8.3.1.1 and 8.3.1.3 of the Final EIR/EIS. Given the models used and the associated limitations in interpreting the output, it is not possible to use model results to interpret changes relative to Bay-Delta Water Quality Control Plan objectives for Suisun Marsh, which are established as monthly average of the two daily high tide values. While a monthly average is a coarser time-step than the objectives, comparison of the degree to which monthly average EC levels would change under the alternatives provides an indication of the effect of the alternative on marsh EC levels.</p>
2633	5	<p>The Salinity Modeling Improperly Relies on Monthly Averages. The modeling approach presents salinity as the average monthly salinities (as represented by electrical conductivity [EC]). This provides a very coarse level of evaluation, which is inadequate to assess daily, monthly and seasonal impacts of the proposed Project operations on the Suisun Marsh salinities and water users. California water quality regulators have determined that protection of beneficial uses from salinity impacts requires assessment high tide salinities, and in this regard the Water Quality Objectives For Fish and Wildlife Beneficial Uses measure the Suisun Marsh salinity objective's compliance as the, "maximum monthly average of both daily high tide EC values" (Water Rights D 1641 - Table 3, emphasis added.). D 1641 requires measuring salinity compliance at high tide because this is the period when channel water salinities are the highest and when</p>	Please see Response to Comment2633-4.

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		<p>managed wetlands are diverting water (by gravity) for habitat management and performing leaching cycles to reduce soil salinities during the spring growing season . In most regions of the Suisun Marsh, the channel water salinity is lowest at low tide, with highest salinities at high tide. Therefore, impact analysis using monthly average salinity (EC) underrepresents impacts of the proposed BDCP/CA WaterFix on Suisun Marsh water users and habitat management capabilities. Additionally using average salinity provides Suisun Resource Conservation District no way to compare the ability of the Project to meet regulatory compliance requirements or determine the potential extent of violation of the D 1641 and the Suisun Marsh Preservation Agreement numeric salinity standards. The decision to qualitatively assess the Suisun Marsh salinities and present the data as average salinities suggests a strategy to diminish, conceal and underreport the direct, indirect and cumulative impacts of the Project on the Suisun Marsh salinities and existing wetland habitats.</p>	
2633	6	<p>Chapter 2.2.1 – Page 2-8 of the RDEIR/SDEIS states, “Another modeling run with the gates operational and restoration areas removed resulted in EC levels nearly equivalent to those found in Existing Conditions and the No Action Alternative, indicating that design and siting of restoration areas has notable bearing on EC levels at different locations within Suisun Marsh. These analyses also indicate that increases in EC levels shown in the modeling conducted for the Draft EIR/EIS were related primarily to the hydrodynamic effects of CM4 under the alternatives assessed (1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9), not operational components of CM1. Based on the sensitivity analyses, optimizing the design and siting of restoration areas for these alternatives consistent with proposed environmental commitments, avoidance and minimization measures, and mitigation measures is expected to be able to reduce EC increases, relative to Existing Conditions and the No Action Alternative, to levels that would be less than significant. The new alternatives 2D, 4A, and SA, contain much lower acreage of tidal restoration, and thus are anticipated to not have significant impacts</p> <p>-with respect to EC and chloride in Suisun Marsh.”</p> <p>The modeling simulations for the new Alternative 4A- show that, "EC levels are still somewhat higher for several locations in the Marsh and for several months", yet the increase in EC levels "would be less than significant" and "are anticipated to not have significant impacts ." SRCD [Suisun Resource Control District] strongly disagrees with this determination, which is contradicted by the results of Appendix B Supplemental Modeling Results for New Alternatives (Pages B-114 to 116 and B-131 to 133), which presents average EC levels (mS/cm) in Tables EC-5 for Montezuma Slough at Beldon's Landing, EC-6 for Chadborne Slough near Sunrise Duck Club, and EC-7 Suisun Slough 300 feet south of Volanti Slough. The four simulations are:</p> <p>-Existing Conditions</p> <p>-No Action Alternative</p> <p>-Proposed Project Alternative 4A, (H3) Early Long Term</p>	Please see Response to Comment 2633-2.

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		<p>-Proposed Project Alternative 4A, (H4) Early Long Term</p> <p>The information in the RDEIR/SDEIS tables disclose salinity levels predicted to result from the Project but provide no context for assessing the degree of change. SRCD has added four columns to Tables EC-5 [ATT: 1], 6 [ATT: 2], and 7 [ATT: 3] showing the percent increase of salinity at each modeled locations. As this evidence demonstrates, and contrary to the RDEIR/SDEIS's suggestion, the Project will result in very large increases in salinity levels in the Marsh.</p>	
2633	7	[ATT:1] Table EC-5: Period Average EC Levels (mS/cm) for Montezuma Slough near Beldon Landing, Suisun Marsh for Existing Conditions, the No Action Alternative, and Alternative 4A ELT. This represents an overall average salinity increase of 62%.	This comment describes a table in an attachment to the comment letter. See Response to Comment 2633-2. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	8	[ATT: 2] Table EC-6: Period Average EC Levels (mS/cm) for Chadbourne Slough near Sunrise Duck Club, Suisun Marsh for Existing Conditions, the No Action Alternative, and Alternative 4A ELT. This represents an overall average salinity increase of 29%.	This comment describes a table in an attachment to the comment letter. See Response to Comment 2633-2. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	9	[ATT: 3] Table EC-7: Period Average EC Levels (mS/cm) for Suisun Slough 300 Feet South of Volanti Slough, Suisun Marsh for Existing Conditions, the No Action Alternative, and Alternative 4A ELT. This represents an overall average salinity increase of 28%.	This comment describes a table in an attachment to the comment letter. See Response to Comment 2633-2. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	10	These BDCP/ CA Water Fix modeling simulations (Tables EC- 5 [ATT: 1], 6 [ATT: 2] and 7 [ATT: 3] and Fig. CI-4, 5 and 6) show that the Project will have a substantial adverse effect on Suisun Marsh salinity levels, resulting in significant adverse impacts to salinity from the proposed Project for both Alternatives 4A H3 Early Long-term and 4A H4 Early long- term. Project-related increases in the average salinity of the Suisun Marsh tidal sloughs range from 3% to 162% increase. These potential increases in salinity portray only half of the Project's potentially significant impacts of increased salinity, however. The RDEIR/SDEIS has omitted future tidal restoration projects impacts from the effects analysis, by omitting the Suisun Marsh region from the analysis.	Please see Response to Comment 2633-2.
2633	11	<p>The RDEIR/SDEIS Falsely States That the Suisun Marsh Salinity Gates Will Mitigate Any Salinity Increases Associated With The Project - Yet State and Federal Agencies Acknowledge That The Salinity Gates Do Not Effectively Mitigate Salinity Impacts to the Central and Western Suisun Marsh .</p> <p>Not only does the salinity analysis fail to disclose or evaluate the significance of the modeled increases in salinities, but a fundamental assumption underlying the impact analysis in Section 4.3.4 Water Quality for Alternative 4A impacts on the increases of Suisun Marsh salinities is flawed and inaccurate. The RDEIR/SDEIS's conclusion that salinity impacts to Suisun Marsh will be less than significant is based in substantial part on the assumption that operation of salinity control gates will reduce salinity levels throughout the Marsh. This assumption is incorrect. It is well known that Suisun Marsh salinity control gate operation is not an effective control of channel water salinity in the central and western Marsh, as measured at salinity control stations S-35 and S-97 and salinity monitoring stations S-54 and S-37.</p> <p>As shown on the figure above [refer to ATT: 4], DWR has extensive salinity</p>	<p>The assessment of EC changes addresses the effects of the alternatives. Because there are state regulatory compliance locations for protection of beneficial uses, the assessment focused on EC changes at those locations.</p> <p>Also, please see Response to Comments 2633-2 and 2633-4.</p>

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		<p>monitoring stations throughout the Suisun Marsh.</p> <p>-Compliance Stations (C-2, S-64, S-49, S-21, and S-42)</p> <p>-Control Stations (S35 and S-97)</p> <p>-Monitoring Stations (A-96, S-4, S-28, S-33, S-37, S-54, and S-71).</p> <p>Of these long term Suisun Marsh salinity monitoring stations, the RDEIR/SDEIS only modeled C-2 Collinsville, S-64 National Steel, S-49 Beldons Landing, S-21 Sunrise Club, and S- 42 Volanti (Compliance Stations). The modeling supporting the RDEIR/SDEIS did not evaluate locations representing a significant portion of the Suisun Marsh. Omitting water quality modeling of monitoring stations in the central and western Suisun Marsh underestimates and minimizes the Project's potentially significant effects on Suisun Marsh salinities (EC and chloride) in locations where the salinity control gates are known to be ineffective at reducing salinity. These omissions result in modeling that significantly under represents the effects of the proposed Project on the central and western region of the Suisun Marsh, an area ranging between approximately 8,000 and 11,000 acres of prime wetland habitat. The RDEIR/SDEIS's failure to evaluate salinity impacts at salinity monitoring stations S-35 and S-97 is inexplicable because the lead agency, DWR, knows that operation of the salinity control gates does not effectively control channel water salinity in the Marsh at those locations. This fact is acknowledged in the</p> <p>RDEIR/SDEIS, which includes the Suisun Marsh Preservation Agreement Amendment Three Actions as a means to provide equivalent or Better Protection than Channel Water Salinity Standards at the Suisun Marsh Stations S-35 and S-97. On page40 of the DWR-30 Appendix B Demonstration Document states: "The action of converting compliance stations S- 35 and S-97 to monitoring stations is proposed because [Suisun Marsh Salinity Control Gates] SMSCG operation is not an effective control of channel water salinity in the Marsh at these locations."</p> <p>The limited geographic effect of the salinity control gates is acknowledged in other documents as well. For instance, the November 2011 Suisun Marsh Habitat Management, Preservation and Restoration Plan Final EIR/EIS states: "Operations of the SMSCG lowers salinity in some Marsh channels, primarily those in the eastern Marsh, and results in a net movement of water from east to west." (Emphasis added.) Further, the SMPA [Suisun Marsh Preservation Agreement], a document to which DWR is a signatory, provides, "Evaluation of the SMSCG operation has shown that the gates can effectively reduce salinity in Montezuma Slough and the eastern regions of the Marsh, and to a lesser degree in most of the western regions of the Marsh." (2005 Revised Suisun Marsh Preservation Agreement, p. 3 J.I.)</p> <p>These facts fatally undermine the RDEIR/SDEIS's conclusion that, "Alternative 4A in the ELT [Early Long Term] includes operation of the gates, and includes very little tidal restoration area, it is anticipated that chloride increases in Suisun Marsh predicted via the modeling would not occur, and that chloride in Suisun Marsh under Alternative 4A in the ET .T would be very similar to Existing Conditions. For these reasons, any changes in chloride and EC in Suisun Marsh are expected to have no adverse effect on marsh beneficial uses." (RDEIR/SDEIS, Section 4, pp. 4.3.4-15 and 4.3.4-27.)</p>	

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2633	12	ATT 4: Suisun Marsh Preservation Agreement Compliance, Control, and Monitoring Stations	This comment describes figure in an attachment to the comment letter. See Response to Comment 2633-11. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	13	<p>The RDEIR/SDEIS Salinity Mitigation Measures Are Legally Inadequate. The DEIR/DEIS attempted to address potentially significant adverse impacts from EC [electrical conductivity] and chloride by offering Mitigation Measures WQ-7d and WQ-11 d. These mitigation measures have numerous problems due to their lack of a firm commitment to mitigate significant impacts. These mitigation measures are not included in the RDEIR/SDEIS because the impact discussion in the RDEIR/SDEIS concludes that impacts from EC and chloride will not be significant because, it is claimed, the modeled increases in EC and chloride will not occur, or will be minor, due to elimination of restoration areas and operation of salinity control gates. (Sec RDEIR/SDEIS, pp. 4.3.4-15 and 4.3.4-27.) However, these conclusions are based on the assumed effect of major changes in the original preferred project modeled in the DEIR/DEIS. In addition, chloride was not even modeled in the sensitivity analysis, and the salinity analyses were conducted only for the Late Long Term period, not the Early Long Term (ELT) period. The RDEIR/SDEIS provides no evidence or analysis to support its conclusion that such analyses "are expected to generally also apply to the ELT." (RDEIR/SDEIS, p. 4.4.3-15.)</p> <p>Insufficient information is provided in the RDEIR/SDEIS to demonstrate the validity of applying the sensitivity analyses to the DEIR/DEIS model results, and the RDEIR/SDEIS indicates a high degree of uncertainty involved with attempting to extrapolate impacts from Alternative 4 to Alternative 4A, given the level of changes in the project description. Moreover, the generalized discussion of impacts, and failure to quantify the actual changes in EC and chloride in the marsh from the revised CA WaterFix project, do not provide sufficient information for SRCD [Suisun Resource Conservation District] to understand the actual effects to the Marsh. Because modeling of the actual effects of the proposed project did not occur, the RDEIR/SDEIS impact conclusions regarding salinity impacts to the Marsh are based on speculation as to the level of change that the Project would have on Marsh salinity levels, and SRCD is unable to ascertain exactly what level of EC or chloride increase will occur from the Project. Because even minor changes in salinity can have significant adverse impacts, it is insufficient for information and decision making purposes to fail to quantify the actual project operations and mitigate for any increase in EC in the marsh.</p>	Since the time of the RDEIR/SDEIS, the CALSIM/DSM2 modeling has been updated to confirm the analyses presented in the RDEIR/SDEIS that used sensitivity analyses. The modeling assumed conditions at the ELT time period. These analyses did confirm that electrical conductivity effects for Alternative 4A could be reduce to less-than-significant levels with the identified mitigation measures. Mitigation Measure 11e and 11f would be implemented to adaptively manage using real time operations, flow conditions in the Sacramento River and Head of Old River Gate operations to reduce electrical conductivity concentrations at the identified locations during water year types when this impact could occur. For additional information on the electrical conductivity analysis, please also refer to Master Response 14. Chloride analyses for Alternative 4A indicate that impacts would be less than significant because Alternative 4A would not result in substantially increased chloride concentrations in the Delta on a long-term average basis that would result in adverse effects on the municipal and industrial water supply beneficial use. Please refer to Chapter 8, Water Quality in this Final EIR/EIS for updated electrical conductivity and chloride assessments for Alternative 4A, 2D and 5A.
2633	14	Tables EC-5 [ATT: 1], 6 [ATT: 2] and 7 [ATT: 3] demonstrate that there are anticipated significant and unmitigated increases in average EC [electrical conductivity] levels in Suisun Marsh. These actions will have adverse impacts on Marsh beneficial uses by degrading existing wetland conditions and reducing habitat values and functions for resident and migratory wildlife. These types of impacts are well documented in published literature. The most likely effects of salinity on plants is a general stunting of growth. (Mass 1993.) Increased salinity requires plants to expend more energy to obtain water from the soil, thereby reducing the amount of energy available for growth. (Mass 1993.) At high levels, salinity can cause physical damage and mortality. (Mass 1993.) Plant loss during this seedling stage can reduce the plant population density to suboptimal levels and significantly reduce yields. (Mass 1993.) An increase in salinity or modification of Delta outflow that increases Suisun Marsh channel water salinity would be detrimental and result in unmitigated impacts to existing beneficial uses and Suisun	Please see Response to Comments 2633-2 and 2633-4.

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		<p>Marsh wetland habitats.</p> <p>These anticipated impacts of an average increase of Suisun Marsh channel water salinities (from 25% to 62% a year) will seriously impair the ability of Suisun Marsh landowners to effectively manage wetland habitats, will adversely impact fish and wildlife beneficial uses, and reduce wetland diversity and habitat conditions. Small changes in salinity could significantly affect the diversity and composition of these wetlands. (Parker 2011.) The quality of water plants are exposed to has a direct impact on their survival, growth, and overall health. This is particularly true in regard to salinity. (Warrancc and Bauder.) These impacts of increased salinity must be disclosed and mitigated in the RDEIR/SDEIS.</p>	
2633	15	<p>The RDEIR/SDEIS not only fails to adequately evaluate impacts to Suisun Marsh from EC [electrical conductivity] and chloride, relying on speculation about possible effect of major changes in the project description and operation, but it also omits any mitigation should the predicted effects of these Project changes fail to occur. Existing commitments in the RDEIR/SDEIS do not address impacts to the Marsh. Appendix 3B Environmental Commitments, AMMs, and CMs of the (RDEIR/SDEIS) fail to address the project-specific adverse effects and potentially significant</p> <p>cumulative impacts resulting from the Project in conjunction with future tidal restoration projects (Eco Restore) that will result in increased salinities (EC and chloride) and the direct loss of existing managed wetlands from conversion to tidal habitats. Page 3B-73 and 74 Other Commitments states only that, "The following commitments are identified separately from environmental commitments for the purpose of addressing other non-environmental consequences of implementing the project. As with environmental commitments, these other commitments are incorporated into the project and would be implemented in the same or similar manner as proposed mitigation measures. These additional commitments are actions that the project proponents commit to implementing in some manner to reduce or partially reduce potential effects related to the environmental impacts disclosed in this EIR/EIS and caused by implementation of the project, even if the underlying environmental impact is not fully reduced or remains unchanged."</p> <p>Mitigation is included, however, for adverse effects on agricultural water purveyors. (See Section 3B.3 .1 Agricultural Water Purveyors in Developing Methods to Reduce Potential Water Quality Effects, which states "The project proponents commit to assisting in-Delta municipal, industrial, and agricultural water purveyors that will be subject to significant unavoidable water quality effects from operation of Conservation Measure 1 (CMI) and effects on dissolved organic carbon (DOC) due to implementation of Conservation Measures 2-22 (CM2-21). This commitment shall apply specifically to those purveyors affected by significant unavoidable increases in bromide, electrical conductivity, chloride, and DOC concentrations ...".) Also, Section 3B.3.1.1</p> <p>Chloride and Electrical Conductivity, provides: "The following are concepts that affected purveyors could consider to address any significant unavoidable effects of increased chloride concentrations and electrical conductivity ..." These so-called commitments are vague and arguably insufficient to mitigate adverse effects to water purveyors. Still, SRCD [Suisun Resource Conservation District] wonders why a similar acknowledgement of the need for mitigation was not made with respect to Project impacts on the Suisun Marsh, which is equally worthy of attention and required to be protected by the various</p>	<p>Salinity in the Delta is a function of the amount and timing of freshwater input from the major tributaries, tidal action from San Francisco Bay, and exports from the Delta. During the late winter and spring months of seasonally elevated flows, and in wet years, seawater intrusion is limited and the Delta has mostly low salinity. During low-flow summer and fall months, and during dry years, lower freshwater flows result in greater amounts of seawater intrusion. Staff from DWR and USBR constantly monitor Delta water quality conditions and adjust operations of the SWP and CVP in real time as necessary to meet water quality objectives set by the State Water Resource Control Board protection of agricultural water supply, municipal and industrial drinking water supply, and fish and wildlife beneficial uses.</p> <p>Please see Master Response 14 for additional discussion regarding salinity and electrical conductivity. See Master Response 22 for information on the mitigation measures. See Master Response 33 for information on adaptive management and monitoring.</p>

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		<p>legislation and agreements discussed at the beginning of this letter.</p> <p>There are many uncertainties regarding the Project operations and future changes resulting from the Project's vague and undefined "adaptive management." A substantially revised draft EIR/EIS must include mitigation measures that provide, at a minimum, a firm and enforceable commitment to ongoing real-time monitoring of EC and chloride levels in the Suisun Marsh, including observation and mitigation of any adverse effects on marsh plants or wildlife, and a firm commitment to modify Project operations to clearly avoid or substantially lessen any significant impacts due to Project-related or cumulative EC or chloride increases. Mitigation commitments must be consistent with Suisun Marsh Habitat Management, Preservation and Restoration Plan (SMP) environmental commitments, avoidance and minimization measures, and pre and post project salinity modeling and cumulative effects analysis.</p> <p>In conclusion, the RDEIR/SDEIS still has not fully disclosed or mitigated the Project's significant adverse impacts on salinity in the Suisun Marsh channels. Qualitatively assessing Suisun Marsh salinities and averaging salinities (EC) (Appendix A- RDEIR/SDEIS Chapter 8 at page 8-71 line 9 and 10) masks and fails to disclose significant salinity increases in individual months and on individual days. Large salinity increases in a given year cannot be considered insignificant. These salinity increases must be avoided or fully mitigated by the Project proponents.</p>	
2633	16	<p>The RDEIR/SDEIS Inadequately Addresses the Project's Cumulative Impacts From Increased Local and Regional Actions Affecting Salinity</p> <p>The Project threatens to significantly increase salinity levels in the Marsh, where salinity is already an acknowledged problem. These impacts will be compounded by the Eco Restore tidal restoration actions and other actions described in RDEIR/SDEIS Chapter 5. The RDEIR/SDEIS fails not only to adequately evaluate and disclose Project-level and cumulatively considerable significant salinity impacts to the Marsh but it also fails to identify or mitigate for the Project's considerable contribution to this significant cumulative impact.</p> <p>Brackish wetlands are floristically distinctive and contain a greater diversity of plant species than either the salt marshes of San Francisco Bay or the freshwater wetlands of the Sacramento-San Joaquin Delta. (Byrne 200 1.) Since 1978, the SWRCB [State Water Resource Control Board] has maintained Suisun Marsh salinity objectives to "provide water of sufficient quality to the managed wetlands to achieve soil water salinities capable of supporting the plants characteristic of a brackish marsh." (SWRCB 01641, Section 7, p. 40.) It has been shown that, at all sampling scales, the more saline San Pablo Bay sites contained significantly fewer species than the Suisun-Delta sites. San Pablo Bay sites contained approximately half the number of species as Suisun- Delta sites and the greatest contrast in species richness occurs between San Pablo Bay and the Suisun- Delta. (Vasey 20 12.) Additionally, the SMPA [Suisun Marsh Preservation Agreement] was signed to protect the brackish characteristics of the Suisun Marsh from increased salinities from the CVP and SWP and other upstream diversers. These scientific facts reinforce that brackish wetland communities are sensitive to increased salinity, will reduce wetland diversity, and, species richness can be negatively impacted by increased salinities.</p> <p>The Eco Restore program calls for at least 9,000 acres of tidal and sub-tidal habitat restoration in Suisun Marsh and the Cache Slough Complex. This objective has the</p>	<p>The Final EIR/EIS addresses effects of salinity (electrical conductivity and chloride) in Impacts WQ-7, WQ-8, and WQ-11 in Chapter 8. As stated in Impact WQ-7, in Suisun Marsh at Montezuma Slough at Beldon's Landing monthly average chloride concentrations for the 16-year period modeled would increase in December, March and April by 1–2%, and decrease in May, October, November, January and February by 6–10% (Appendix 8G, Chloride, Figure Cl-20). Chloride levels in Suisun Marsh are highly dynamic on a sub-daily basis as a result of tidal influences. The changes identified above are small relative to normal day-to-day variability in chloride in Suisun Marsh.</p> <p>As stated in Impact WQ-11 for Alternative 4A, there would be no increase in the long-term average electrical conductivity at modeled Suisun Marsh locations, and for some locations long-term average electrical conductivity would decrease.</p> <p>For additional information on salinity please see Master Response 14.</p> <p>Considering the analysis in Chapter 8 of the Final EIR/EIS, Chapter 12, Terrestrial Biological Resources, concluded that there would be no reduction in acreage of brackish tidal wetlands as a result of changes in salinity in Suisun Marsh.</p> <p>Table 5.2.1-1 Interim Implementation Actions: Restoration Projects with Potential to Contribute to Meeting Habitat Conservation Measures or Environmental Commitments, was intended to specifically refer to the larger Conservation Measures under the BDCP alternatives and not the Environmental Commitments under the non-BDCP alternatives. "Environmental Commitments" was mistakenly added to this title for the Recirculated Draft EIR/EIS. All mitigation required under Alternative 4A will not be claimed under already active or planned conservation to offset the effects.</p> <p>Regarding the reference to the Delta Conservancy leading Eco Restore, that statement will not appear in the final draft response to comments based on leading efforts in the Delta and some restoration projects. Eco Restore is not part of the mitigation proposed under Alternative 4A. DWR as the lead CEQA agency will be</p>

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		<p>potential to exceed the Suisun Marsh Habitat Management, Preservation and Restoration Plan (SMP) restoration targets of 5,000 to 7,000 acres over the next 30 years. The Suisun Marsh Plan also requires that tidal restoration projects be regionally distributed (see Table 2-4 SMP 2011 page 2-17) with strict assurances, detailed environmental commitments, avoidance and minimization measures to be implemented, and salinity modeling of restoration design to ensure that local and regional salinity conditions are protected as part of the project development, including post-construction verification. The BDCP/ CA WaterFix impacts to Suisun Marsh salinity combined with the implementation of Eco Restore impacts are likely to have significant cumulative effects and result in unavoidable adverse impacts and habitat degradation of the Suisun Marsh. Yet the BDCP/CA WaterFix makes no commitment to complete pre-restoration salinity modeling or post-restoration water quality monitoring to verify if the pre-project modeling results are accurate and if appropriate mitigation to address these unanticipated impacts has been adequately addressed on adjacent lands.</p> <p>Chapter 5, page 5-3, California Eco Restore, states, "California Eco Restore will be led by the Delta Conservancy as the lead state agency and will accelerate and implement a suite of Delta restoration actions." This statement is inaccurate. SRCD [Suisun Resource Conservation District] is a board member of the Delta Conservancy and implementing Eco Restore is not a responsibility of the Conservancy. The RDEIR/SDEIS clearly shows that the lead agencies do not know who will be implementing these restoration actions, and there is no assurance that anyone will be accountable for carrying out required mitigation obligations.</p> <p>The RDEIR/SREIS states that the Eco Restore is unassociated with any habitat restoration that may be required as part of the construction and operation of the new Delta point of Diversion and water conveyance facility (Alternative 4A). Yet, Table 5.2. I -I, Interim Implementation Action s: Restoration Projects with Potential to Contribute to Meeting Habitat Conservation Measures or Environmental Commitments, indicates that the Eco Restore program actions will overlap with the effects of the BDCP/CA Waterfix. The cumulative impact analysis failed to adequately and accurately identify the cumulative impact of all these projects on Suisun Marsh wetlands and associated habitat and wildlife species. Because the net effect of these tidal restoration projects likely will be increased salinity, threatening a cumulative impact to the brackish marsh, and the Project will substantially increase salinities in the Marsh, the RDEIR/SDEIS should be revised to acknowledge the Project will contribute considerably to cumulative salinity impacts to the Marsh and mitigation should be included to substantially lessen the Project's contribution to this significant cumulative impact.</p> <p>Specifically, mitigation must address the site-specific and cumulative impacts of increased salinity of applied water for habitat management , decreased life expectancy of adjacent managed wetland water management infrastructure , and attenuated tidal stage reducing existing gravity drainage capacity of adjacent managed wetlands, undermining and destabilizing existing managed wetlands exterior levee foundations from increased channel velocities and scour, as well as direct loss of managed wetlands from conversion . None of these impacts is adequately addressed in the BDCP/CA Water Fix RDEIR/SDEIS cumulative effects, nor is there adequate mitigation proposed to address these site-specific or regional impacts on managed wetlands. If BDCP and/or the CA Water-Fix moves forward, SRCD requests a formal commitment from BDCP/ CA Water Fix and Eco Restore to mitigate tidal restoration project impacts and comply with the SMP objectives, procedures, guidelines, regional distribution of tidal restoration and</p>	<p>responsible for assuring that the proposed mitigation measures are implemented under the Mitigation, Monitoring, and Reporting Program for the proposed project.</p> <p>Because the electrical conductivity and chloride levels discussed in Chapter 8, Water Quality are not expected to increase relative to the No Action Alternative (ELT) and because this would not result in a change in brackish tidal wetlands in Suisun Marsh, no cumulative effects analysis was necessary.</p> <p>For additional information on cumulative impacts please see Master Response 9.</p>

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		<p>agreement to the SMP management structure, including the SMP Principals Management Group and Adaptive Management Advisory Team.</p> <p>BDCP/CA Water Fix and Eco Restore currently has no metric nor method of evaluating the incremental and additive effects and project impacts of increased salinity from the project operations (CM 1) and Eco Restore tidal restoration activities in the Suisun Marsh. To partially address this deficiency during BDCP project development, Ducks Unlimited, in partnership with the Central Valley Joint Venture, U.C. Davis, Oregon State University, U.S. Geological Service, and SRCD proposed to BDCP management the following scientific study: Restoring Tidal Flow to Managed Wetlands in Suisun Marsh: Implications for Wintering Waterfowl and Non-Tidal Wetland Management. This study would provide detailed information on waterfowl food production in tidal and managed wetland habitats and is needed to address the critical uncertainties of the BDCP I CA Waterfix.</p> <p>In providing mitigation for the Project's contribution to significant cumulative salinity impacts, the Project proponents should not attempt to rely on DEIR/DEIS Mitigation Measures WQ-7d and WQ-</p> <p>II d, which were previously included to address the uncontrolled and unmitigated impacts to Suisun Marsh from increased chloride and EC concentrations caused by tidal restoration projects. These mitigation measures are unenforceable and simply pass water quality protection responsibilities to Eco Restore, tidal restoration project proponents and Suisun Marsh stakeholders. The Project states that tidal restoration site design and siting "shall attempt to reduce potential effects to the extent possible" with the "goal of maintaining chloride and EC [electrical connectivity] at levels that would not further impair fish and wildlife beneficial" uses in Suisun Marsh. (Appendix A -RDEIR/SDEIS Chapter 8 page 8-119 and 8-128 and 129) The empty, non-commitments of "shall attempt to the extent possible" and "a goal of maintaining" do not represent a firm mitigation measure commitment, and it is inappropriate for BDCP/CA WaterFix to avoid addressing the significant and undisclosed impacts of tidal restoration project to adjacent managed wetlands operations and habitat conditions in the Marsh.</p>	
2633	17	<p>Throughout the public review of the BDCP DEIR/EIS and in discussions relating to the new BDCP I CA Water Fix and Eco Restore, it has been repeatedly stated that BDCP implementation would continue to comply with existing D-1641 water quality standards and not materially change existing spring and fall Delta outflow requirements. As SRCD [Suisun Resource Conservation District] has identified in the detailed comments listed above, the BDCP RDEIR/SDEIS modeling results and effects analysis demonstrate that salinity levels in the Suisun Marsh will increase, which directly contradicts the claim that water quality objectives will continue to be met under D1641 water quality standards or the Suisun Marsh Preservation Agreement contractual obligations. Implementing a project that systematically degrades and reduces the existing Suisun Marsh managed wetland habitats, functions, values and water quality is unsupportable by SRCD. The RDEIR/SDEIS fails to address SRCD's concerns, expressed in comments on the DEIR/DEIS and here, about the salinity effects of the North Delta Diversion and CA WaterFix project on Suisun Marsh. Insufficient information has been provided to demonstrate that the Project will not have substantial adverse impacts on the Marsh, or that all feasible mitigation has been considered and proposed to avoid these impacts. SRCD thus requests that DWR not take any further action towards approving the BDCP ICA Water Fix Project unless and until it has revised and recirculated the RDEIR/SDEIS, including</p>	Please see Response to Comments 2633-2 and 2633-4.

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		redoing the underlying water quality modeling, to fully address the issues and inadequacies that SRCD has identified in this comment letter.	
2633	18	ATT: 5 Carbon-Isotope, Diatom, and Pollen Evidence for Late Holocene Salinity Change in a Brackish Marsh in the San Francisco Estuary.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	19	ATT:6 Suisun Marsh Preservation Agreement Amendment Three Actions as a Means to Provide Equivalent or Better Protection than Channel Water Salinity Standards at Suisun Marsh Stations S-35 and S-97.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	20	ATT:7 Testing Crops for Salinity Tolerance.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	21	ATT: 8 Climate Change and San Francisco Bay-Delta Tidal Wetlands	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	22	ATT: 9, Revised Suisun Marsh Preservation Agreement.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	23	ATT: 10, Attachment E. Original Suisun Marsh Preservation Agreement.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	24	ATT: 11, Tidal Wetland Vegetation in the San Francisco Bay-Delta Estuary.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2633	25	ATT: 12, Salinity, Sodicity and Flooding Tolerance of Selected Plant Species of the Northern Cheyenne Reservation.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
2634	1	San Francisco Bay-Delta business, tourism, fishing, and farming communities cannot trust that the tunnels will be operated in a manner to protect our interests, especially because the State Water Resources Control Board, the Department of Water Resources, and the Bureau of Reclamation have allowed for the waiving and weakening of Delta water quality standards and species protections during the drought, endangering numerous Delta species and bringing some to the precipice of extinction.	<p>The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts; as such the proposed project is intended to be environmentally beneficial. The proposed project does not increase the amount of water to which DWR holds water rights or for use as allowed under its contracts. It is projected that water deliveries from the federal and state water projects under a fully implemented project would be about the same as the average annual amount diverted in the last 20 years. Refer to Master Response 26 (Changes in Delta Exports). Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline.</p> <p>The proposed project's facilities, including water intakes and pumping plants, would be operated in accordance with permits issued by, U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Department of Fish and Wildlife, and the State Water Resources Control Board, among other agencies. The proposed project would be permitted to operate with regulatory protections, including river water levels and flow, which would be determined based upon how much water is actually available in the system, the presence of threatened fish species, and water quality standards.</p>

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2634	2	The route selected is the worst alternative that could be selected since it does not protect Delta farm communities and Delta recreation as required by the 2009 Delta Reform Act. It is only the cheapest. A construction project through the heart of the Delta, through the sensitive estuary, and loud pounding through bird habitats for years is not the way to protect the fish or fowl.	The preferred alternative, 4A, was designed and chosen specifically to limit significant impacts and to increase water supply reliability. For example, many of the impacts to Stone Lakes National Wildlife Refuge, a source for terrestrial biological resources and recreation, have been reduced in the process of designing 4A, as compared to the previous preferred alternative, 4.
2634	3	The construction plans include dewatering Delta farmers' wells for years, making farming and living in their homes not possible. Yet there is no provision to provide remuneration to them. This is abhorrent for the local famers in the Delta who have spent generations providing agriculture services and food for not only Californians, but the nation and the world.	As described in the EIR/EIS, during construction, slurry walls would be constructed around the construction site at the intakes, tunnel shafts, and forebays to reduce the effect of dewatering wells. Dewatering wells also would be installed at construction sites associated with levees without the use of slurry walls. The effects on groundwater at locations with slurry wall installations would not result in significant effects as compared to Existing Conditions. It is possible, that some impacts may result in significant effects depending upon specific information that would be collected during design and construction phase. Mitigation measures have been identified in the EIR/EIS to reduce the impacts to less than significant as compared to Existing Conditions. Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of significant impacts in agricultural areas by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests. As described in Mitigation Measure AG-1 in Chapter 14, Agricultural Resources, in the EIR/EIS, adversely affected wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses and would be adversely affected by project construction or operation would be relocated or replaced.
2634	4	The draft of the Plan does not adequately cover the cost components of this monumental plan: to both build and operate. And frankly plans developed and executed by the State of California are notorious for being budgeted poorly. Example being the recently built eastern span of the Bay Bridge; originally estimated at \$1 Billion; final cost was \$6.4 Billion. Clearly the ability to estimate sizable projects is akin to having a crystal ball, but the sheer magnitude of this plan even with the contingencies seems to be significantly under budget. The State of California has a poor history in budgeting properly for large magnitude projects. The tunnels would be a financial disaster.	Please refer to Master Response 5 for additional details on the costs of project implementation.
2634	5	The more and more I read, the more and more I was angered by the BDCP. It did strike me actually as illegal as well. How can a plan like this be allowed under existing legislation, i.e., Water Code Section 85020-85023 [which] outlines the policy of the State of California as it pertains to the Delta? This legislation was passed recently, in 2009, which outlines clearly that regional areas should be reducing their dependencies on Delta-fed water resources through other measures. The entire BDCP is in direct conflict with that legislation. It would appear the entire BDCP has no legal basis, or should I be so bold as to say, the BDCP is illegal according to the State of California.	This comment is an opinion regarding the legality of the BDCP/California WaterFix. The EIR/EIS does discuss regional demand management measures that occur independent of the proposed action in Appendix 1C, Demand Management Measures. See Master Response 31 for information on the Delta Reform Act.
2634	6	I would love nothing more than to see the Delta restored, cleaned, and enhanced. This plan as presented by the BDCP does not accomplish those objectives; it is a water grab project which reads like a profit center for the water contractors. Through my reading and review I've come to believe it is underfunded, focuses blatantly on the financial benefits of the water contractors supplying Southern California, [and] has irreparable impact and consequences to the Delta coupled with ridiculous loopholes. Finally it would appear this proposed plan is basically illegal in accordance with legislation already	Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan. Under EcoRestore, the state will pursue restoration of more than 30,000 acres of fish and wildlife habitat by 2020. These habitat restoration actions will be implemented faster and more reliably by separating them from the water

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		in place to protect the Delta.	<p>conveyance facility implementation.</p> <p>Proposition 1 funds and other state and public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.</p> <p>Additional priority restoration projects will be identified through regional and locally-led planning processes facilitated by the Delta Conservancy. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the Delta.</p>
2635	1	<p>GGSA [Golden Gate Salmon Association] believes the RDEIR/SDEIS is not consistent with the requirements of NEPA and CEQA. The document fails to provide a clear, understandable, and accurate assessment of the likely environmental impacts of the alternatives, misleads the public and decision makers as to the likely effects, and fails to disclose significant adverse impacts that are likely to occur and to analyze feasible alternatives and mitigation measures that would reduce or avoid those adverse effects.</p> <p>GGSA believes that in order to comply with CEQA and NEPA, the RDEIR/SDEIS must be substantially revised and recirculated.</p>	This comment is a general opinion without any specific indication of the analysis deficiencies. Refer to Master Response 4 regarding alternatives analyzed, Master Response 38 regarding the complexity of the environmental documents, and Master Response 22 regarding the adequacy of mitigation measures.
2635	2	The modeling presented in the RDEIR/SDEIS indicates that the status quo is unsustainable and that, in combination with climate change, existing operations of the CVP and SWP will jeopardize the continued existence of several fish species, including the salmon we rely on to make a living, and threaten the livelihoods of thousands of salmon fishing jobs.	<p>Whether a project will jeopardize the continued existence of a listed fish species in a regulatory context is determined by the USFWS and NMFS during the Section 7 ESA consultation.</p> <p>For information about effects of the preferred alternative, Alternative 4A, on salmonids, please see Chapter 11, Fish and Aquatic Resources, which indicates that effects would not be adverse to all covered fish species.</p>
2635	3	It will lead to continued declines of the health of the Bay-Delta estuary, including the growth of toxic harmful algal blooms like Microcystis, which threaten human health and safety as well as the environment.	The potential for increased Microcystis blooms and Microcystins levels in the Delta has been addressed for all alternatives in Impacts WQ-32 and WQ-33 in Chapter 8, Water Quality. Refer also to Master Response 14, Water Quality.
2635	4	The RDEIR/SDEIS fails to incorporate the legal mandate to manage water projects to achieve 990,000 naturally spawned adult Central Valley salmon annually. Instead, the RDEIR/SDEIS is likely to reduce the poor salmon runs experienced in recent years.	For information about effects of the preferred alternative, Alternative 4A, on salmonids, please see Chapter 11, Fish and Aquatic Resources, which indicates that effects would not be adverse. Therefore, there would be no adverse effects to salmon populations due to the alternative.
2635	5	<p>Instead of meaningfully addressing threats and responding to the effects of climate change, the State's preferred alternative (Alternative 4A), and most of the other alternatives considered in the RDEIR/SDEIS, largely ignore the effects of climate change and in many cases would worsen problems. It would lead to more harmful algal blooms in the Delta and San Francisco Bay, reduced salmon survival through the Delta, and the likely extinction of several native fish species.</p> <p>Such an outcome is neither acceptable nor inevitable. Instead, we encourage the agencies to commit to the spirit and requirements of the 2009 Delta Reform Act, including reducing reliance on the Delta and investing in local and regional water supply projects in order to restore the health of the Delta ecosystem and improve water supply reliability, while sustaining the Delta's local communities and economy.</p>	<p>The water supply and Delta hydrodynamic modeling conducted for the EIR/EIS specifically considered and included potential future climate change to hydrologic and water quality variables. Multiple analyses were performed in the proposed project to test the robustness of the alternatives to a range of potential future conditions. Water supply, aquatic and terrestrial resources were all analyzed with projected future conditions. The proposed project will likely remain in place and function far into the future when salinity intrusion may require less frequent use of the south Delta pumps. Far from being stranded assets, the new water delivery facilities will be part of the state's strategy in adapting to climate change.</p> <p>More information on ways in which the BDCP/California WaterFix proposes to improve resiliency and adaptability of the Delta to climate change can be found in Chapter 29, Climate Change, EIR/EIS and Appendix A RDEIR/SDEIS and Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, EIR/EIS and RDEIR/SDEIS (in appendix A).</p> <p>The proposed project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for increased commitments to other water supply solutions, including recycling, desalination, water conservation and storage. Please refer to Master Response 4 for</p>

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			<p>additional details on the selection of alternatives. Also, please see Master Response 6 for additional details on demand management.</p> <p>For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31 and FEIR/EIS Appendices 3I and 3J.</p>
2636	1	<p>The principal purpose of the project is to expand the State and Federal government's 50-year-old program of shipping water south via the SWP and CVP, respectively. When these water projects were developed and constructed, the San Joaquin Valley and urban areas in the south and in the Bay Area and Central Coast needed water, and the Sacramento Valley had a surplus. The program was a win-win. Now, however, the Sacramento no longer has that surplus water. Not only will there be less available surface water, but aquifers all over the North valley have started to drop, just like in the San Joaquin Valley.</p> <p>Parrott [Investment Co.] is not concerned with the transfer of water which is truly "surplus" to the needs of the north, or with transfers that do not affect the "sustainability" of groundwater levels. Rather, Parrott's concern is that water transfers facilitated by the SWP and CVP, either directly or indirectly, are already playing a part in the depletion of North Valley aquifers. Furthermore, the rate of depletion is likely to increase substantially given the State's promotion of increased water transfers.</p> <p>While the tunnels would not, on their own, be a cause of the over-drafting, they would serve as a crucial facilitator of it.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. See Master Response 43 (Water Transfers), section A. Operation of the new north Delta facilities will be guided by strict regulations that are set by the SWRCB. Adaptive management and collaborative science will aid operators in managing the pumping schedule in the presence of sensitive species. Appendix B of the RDEIR/SDEIS shows supplemental modeling results for the new alternatives. In particular Section B.2.1 Alternative 4A the modeling demonstrates that under the preferred alternative (4A) reservoir levels (e.g., Trinity Lake, Shasta Lake, Folsom Lake, and Lake Oroville) would be similar to the No Action Alternative (ELT). All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation.</p>
2636	2	<p>DWR hydrographs show that groundwater levels have begun dropping throughout the Sacramento Valley. These decreases include some particularly sharp localized reductions in some areas. The State's "Long-Term Water Transfer" program, and associated actions by state and local agencies and private parties, can affect groundwater levels in these aquifers either by direct groundwater transfer, indirect groundwater transfer through substitution, or loss of recharge through land fallowing associated with transfers. The EIS/EIR does not make clear how much of the water transferred as part of these programs or projects is direct groundwater versus other indirect methods that may affect groundwater. However, it is clear that the State is promoting increased water transfers as a means to alleviate water supply pressures, and that this increase in transfers may increase the use of groundwater in the Sacramento Valley or in other ways affect the groundwater supplies and basins in the Sacramento Valley.</p>	<p>Please see Chapter 7 in the Final EIR/EIS for information on groundwater impacts and Master Response 43 for information on water transfers.</p>
2636	3	<p>The EIS/EIR should provide an analysis of the expected impacts to groundwater from all anticipated transfer activities and provide hard limits on the amount and monitoring of impacts to groundwater in source areas and develop mitigation measures if this monitoring records continued or significant declines in groundwater levels or subsidence in source (i.e., transferor) areas. There should be an annual maximum limit to the amount of water transfers the proposed project will facilitate. Parrott [Investment Co.] also suggests that a prohibition on the proposed project's facilitation or implementation of direct groundwater transfers should be a condition of approval.</p> <p>Furthermore, there has recently been a steady increase in the number of the large deep wells drilled in the Sacramento Valley's aquifers, particularly in the central and northern sections. The EIS/EIR should address the cumulative impacts of all these new wells and any water transfers facilitated by the proposed project. In particular, the EIS/EIR should analyze whether these new wells are being drilled as a result of participation in</p>	<p>As described in Chapter 3, Description of Alternatives, of the EIR/EIS, the proposed project and action alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.</p>

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		groundwater substitution transfers that are contemplated to be facilitated by the proposed project. If unregulated and rampant north-to-south transfers are allowed to continue, the condition of the north state's aquifers will eventually match that in the south. Then, California will have no agriculture.	
2636	4	For the first time, "subsidence" has begun to occur in the Sacramento Valley. And it is occurring in an area that has been involved in several relatively large-scale water transfers in recent years. Whether through direct groundwater transfers, groundwater substitution, following [or] failure to apply surface water, these transfers are implicated in and may be affecting groundwater levels and recharge and migration rates in this same area, and thereby causing, either directly or indirectly, the observed subsidence and related impacts. The EIS/EIR should more fully investigate and discuss this subsidence problem and the potential links between water transfers facilitated by SWP and CVP operations currently and address how the proposed project could potentially affect groundwater and subsidence.	As described in the response to 2636-3 and in Chapter 3, Description of Alternatives, of the EIR/EIS, the proposed project and other action alternatives considered in the EIR/EIS do not include specific water transfers. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.
2636	5	The legal framework which oversees the state's groundwater is based on two key concepts. The first is that groundwater levels must be "sustained." They cannot be drawn down to the point where their future usefulness comes into doubt. This concept has been expressed most recently in California's new SGMA [Sustainable Groundwater Management Act] groundwater law. This "sustainability" could be crucially undermined by the increased volume of water transfers which will be made possible through the tunnels. The second principal law governing the use of groundwater is the "riparian" concept that "overliers" have priority on the use of it. This principle has been re-expressed in a number of long-standing cases such as "Katz vs. Walkinshaw." Again, the expanded capacity of the tunnels would allow further inroads into the rights of "overliers." (The overlies right is riparian in nature and therefore does not cover the sale of water.)	As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and this EIR/EIS does not constitute the CEQA/NEPA coverage required for any specific transaction. Rather, it provides an analysis of how transfers relate to the conveyance facilities. As indicated in Appendix 5D, the analyses are conservative because it is not known if adequate water would be available from other water users for transfer. As shown in Table 5D-8, the maximum cross-Delta transfers under the action alternatives would be greatest under Alternative 8 because there would be the most available capacity. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.
2636	6	The degree of evaporation which affects water shipped from the Sacramento Valley to the San Joaquin is extreme. Over the course of a year, water transfers could end up wasting hundreds of thousands of acre-feet of water. Waste, on this scale is entirely inappropriate for such a high-value -- and shrinking -- resource.	With respect to water transfers, as described in response to 2636-3 and in Chapter 3 of the EIR/EIS, the proposed project and other action alternatives considered in the EIR/EIS do not include specific water transfers. With respect to conveyance of SWP and CVP water operations simulated through the CALSIM II model, evaporation at the SWP and CVP reservoirs are included in the modeling.
2636	7	The cost to ship the water south is extreme. It is extreme not only in terms of the construction of the system, but also in terms of the cost (and the waste) of the annual power needed.	The construction of the water delivery facilities is estimated to cost \$14.9 billion, an amount that would be paid for by the state and federal water contractors who rely on Delta exports. The range of costs for water vary widely among contractors south of the Delta. Costs depend on the source of water, transport facilities, energy requirements, among other factors. For the agricultural customers of the CVP, prices range from \$100 per acre-foot to more than \$400 per acre-foot. The Metropolitan Water District of Southern California, which buys water from the SWP, estimates that the cost of the proposed project would translate into about \$5.00 extra per household, per month in its service area. The final cost of water from the new conveyance facilities would be determined by numerous factors. A number of these significant factors, such as the project yield and allocation of costs, have yet to be determined. Please see Master Response 5 for

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			<p>information regarding funding of the proposed project.</p> <p>Effects to power resources under the action alternatives as compared to the Existing Conditions and No Action Alternative are addressed in Chapter 21 of the EIR/EIS.</p>
2636	8	<p>The EIS/EIR must address these issues and provide full disclosure of the amount of annual transfers of project and non-project water that the project would allow and facilitate. For instance, the project description should clearly state the volume and kind of water transfers that will be allowed each year, or in particular year types such as drought years. The discussion and analysis must identify (and thereby limit) the amount of direct groundwater and groundwater substitution transfers that the project will be allowed to facilitate/implement from the Sacramento Valley to other locations. The EIS/EIR should include analyses that identify, disclose, and address potential impacts to groundwater basin levels in the Sacramento Valley from operation of the project, both on the short- and long-term bases and with reasonable estimates of predicted conditions as affected by climate change and the more extreme hydrological variations that accompany it. The current analysis does not sufficiently address these groundwater issues, and the current depleted and decreasing levels of groundwater basins in the Sacramento Valley.</p> <p>Parrott [Investment Co.]’s preference would be that a condition of approval of this project be to prohibit its use to facilitate or implement any water transfers that could affect groundwater basin levels in the Sacramento Valley. This includes direct transfers of groundwater, indirect transfers of groundwater through groundwater substitution transfers, and any other transfers involving changes in water or land use that may adversely affect groundwater basins levels, recharge rates, or the movement of groundwater in and between basins or sub-basins.</p>	<p>As described in the response to Letter 2636, Comment 5 and in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.</p>
2636	9	<p>Parrott [Investment Co.] understands and realizes that cooperation between areas of the state perceived as "water rich" and more arid regions of the state is essential for California’s long-term social and economic prosperity, but such endeavors require the thorough review and deliberation that CEQA and NEPA require. With respect to groundwater, however, Parrott believes more detail is required in the EIS/EIR to fully understand the project’s implications for groundwater sustainability and groundwater supplies in the Sacramento Valley so that a fully-informed and well-balanced decision that is in the entire State’s interest is made apparent and selected.</p>	<p>The commenter does not specify what “more details”. Please refer to Chapter 7 for more information regarding groundwater impacts.</p>
2637	1	<p>The Bay Delta Conservation Plan/California WaterFix ("BDCP/CA WaterFix") proposes to dramatically alter the way in which the Clarksburg Fire Protection District (the "District") meets its mission and delivers emergency services within District boundaries and in accord with its mutual aid agreements. Those mutual aid agreements include agreements with other fire districts within the northern Sacramento-San Joaquin Delta.</p> <p>Although the District timely and properly requested cooperating and coordinating agency status with each state and federal regulatory agency responsible for the Bay Delta Conservation Plan ("BDCP") by District letter dated November 5, 2009, its requests have been ignored.</p>	<p>As described in Final EIR/EIS Section 1.6.2, responsible agencies are state or local public agencies other than the CEQA lead agency that have discretionary approval over the project. Trustee agencies include state agencies that have jurisdiction by law over natural resources affected by a project that are held in trust for the people of California. A cooperating agency under NEPA may be any federal agency (or state, local, and tribal agencies) other than the lead agency that has discretionary authority over the proposed action, jurisdiction by law, or special expertise with respect to the environmental impacts expected to result from an action. Reclamation does not have any record of Clarksburg Fire Protection District requesting to be a cooperating agency under NEPA.</p> <p>Please refer to Final EIR/EIS Section 20.1.1.1 and Impact UT-1 and UT-2, Chapter 20, Public Services and Utilities, which discusses potential impacts to fire protection and emergency response. The proposed project also analyzes impacts to emergency routes in Chapter 19, Transportation, specifically Impact TRANS-3. Mitigation Measure TRANS-1c, Make Good Faith Efforts to Enter into Mitigation Agreements to Enhance Capacity of Congested Roadway Segments, is provided to offset any potential impacts on emergency routes.</p>

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2637	2	<p>In a typical year the [Clarksburg Fire Protection] District responds to approximately 25 fire suppression calls, 75 medical aid calls, and 68 other "first responder" calls. Depending upon the specifics of the actual construction project which may go forward (and specifically not agreeing that any project of any scope should go forward), the District forecasts a significant and substantial increase in call volume due to construction activities and increased traffic in and through the District. After the completion of all construction activity, and as a result of proposed project operations, the District estimates a nominal increase in call volume due to operational and maintenance activities relating to the project. The increased call volumes as a result of construction, and also as a result of operations, will both be substantial, serious and significant impacts and effects on and for the District.</p>	<p>The risk for the proposed project to expose people or structures to a substantial risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands is analyzed in Final EIR/EIS Chapter 24, Hazards and Hazardous Materials. For the purpose of that analysis, "substantial risk of loss, injury or death involving wildland fires" is defined as circumstances in which construction or operational activities would increase the potential for wildland fire hazards or would occur within an area designated as a High or Very High Fire Hazard Severity Zone. It was determined that people or structures would not be subject to a significant risk of loss, injury, or death involving wildland fires during construction or operation and maintenance of the water conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and safety standards; DWR would implement standard fire safety and prevention measures as part of an FPCC (described in Appendix 3B, Environmental Commitments, AMMs, and CMs); and because the water conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.</p> <p>The commenter's concerns are acknowledged. In addition to contacting public service providers, the project proponents: collected and reviewed relevant geographic information system (GIS) data to locate law enforcement and fire protection facilities, emergency access routes, other emergency services, hospitals, public schools, and libraries within the study area; reviewed conveyance facility alignments and Restoration Opportunity Areas (ROAs) against GIS information for police/sheriff stations, fire stations, hospitals, public schools, and libraries, landfills, water and wastewater facilities to identify potential direct and indirect conflicts with individual facilities; and performed an analysis of the alternatives and GIS data to determine if public services and utilities within the Plan Area would permanently be affected by the operations of the action alternatives, including conveyance-related activities and operations, facilities, and restoration actions through an increase in population demand or through effects on the circulation network or existing infrastructure.</p> <p>After performance of these types of analysis it was determined that the proposed project would not significantly impact the provision of services by the Clarksburg Fire Protection District. While there is potential for calls upon the Clarksburg Fire Protection District to increase, the project is not anticipated to create such an increase that it would significantly impact the ability of the District to perform these services.</p>
2637	3	<p>The [Clarksburg Fire Protection] District relies in part on surface waters throughout the District, and elsewhere on mutual aid calls, for fire suppression and emergency response. Chapter 6, as modified in Appendix A of the Draft RDEIR/SDEIS, purports to analyze the significant and serious effects and impacts because of changes in surface water as a result of the project alternatives.</p> <p>Chapter 6, as modified in Appendix A of the Draft RDEIR/SDEIS, focuses almost exclusively on the changes in the level of surface water in and around both the Delta and the State of California as a result of the project alternatives. However, Chapter 6, as modified in Appendix A of the Draft RDEIR/SDEIS, fails to adequately analyze or discuss the quality or quantity of surface water available or used by existing surface water users as either impacts or effects as a result of any of the project alternatives.</p> <p>Specific to the District, various project alternatives, if not all project alternatives, fail to analyze the significant and substantial impacts or effects of lowered surface water tables, and thus failures of significant or substantial loss of access to water. The District relies heavily on water, carried in all of its rolling equipment, to fight and suppress fires. The anticipated lowering of the surface water elevations, and/or the possible degradation of surface water quality and/or quantity has the serious [possibility] of additional and further deterioration of the District's ability to fight and suppress fire both within the District and in response and draw of water outside the District under</p>	<p>As described in Final EIR/EIS Appendix 5A, Section C, the minimum surface water elevations in Steamboat Slough downstream of Sutter Slough under Alternative 4A as compared to Existing Conditions would be similar or higher in all months in dry and critical dry years, and in most months in other water year types. Minimum surface water elevations are projected to be lower (up to 0.6 feet) under Alternative 4A as compared to Existing Conditions in January through March, and for several other months during wet years.</p> <p>The minimum surface water elevations in the Sacramento River downstream of Georgiana Slough under Alternative 4A as compared to Existing Conditions would be similar or higher in all months in critical dry years, in all months except March in dry years, between May through December in above normal years; and September through January and April through June in below normal years. In all months in wet years and in January through March in other water years, minimum surface water elevations are projected to be lower (up to 0.8 feet) under Alternative 4A.</p> <p>The impact analysis associated with public services is presented in Chapter 20 of the Final EIR/EIS.</p>

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		mutual aid agreements. The project proponents must provide for all water loss.	
2637	4	<p>Chapter 8, as modified in Appendix A of the Draft RDEIR/SDEIS, does not appear to address changes in water quality upon [Clarksburg Fire Protection] District operations. Poor water quality, whether in surface or ground waters, is believed to significantly and seriously deteriorate and negatively affect the efficiency of water use in fire suppression and emergency response, and is further believed to shorten the life of the equipment used by the District to perform its mission. The RDEIR/SDEIS must fully analyze serious and significant impacts and effects arising from changes in water quality upon District operations and equipment in order to be complete.</p>	<p>Fire protection is a component of municipal and agricultural operations and effects of water quality on municipal and domestic supply (MUN) and agricultural uses (AGR) were assessed in Final EIR/EIS Chapter 8, Water Quality, in Impacts WQ-1 through WQ-33, and where significant impacts to these uses were identified due to adverse water quality conditions, mitigation has been included. Further, the Draft EIR/EIS included potential impacts to groundwater quality in the western Delta and the southern portion of the north Delta due to implementation of tidal habitat restoration. As described in the Final EIR/EIS, the restoration actions are no longer included as part of the proposed project description and the associated groundwater quality impacts are not anticipated to occur due to the proposed project. However, it should be noted that with or without the project, rising sea levels are anticipated to increase saline tidal water farther into the Delta than occurs at present.</p>
2637	5	<p>The [Clarksburg Fire Protection] District relies in part on groundwater through various existing wells located in the District, some within one-half mile of the projects for water intake, for fire suppression and emergency response. Chapter 7 purports to analyze the significant and serious effects and impacts because of changes in groundwater as a result of the project alternatives.</p> <p>Chapter 7, as modified in Appendix A of the Draft RDEIR/SDEIS, focuses almost exclusively on the changes in the level of groundwater in and around both the Delta and the State of California as a result of the project alternatives. However, Chapter 7, as modified in Appendix A of the Draft RDEIR/SDEIS, fails to analyze or discuss the quality or quantity of ground water available or used by existing groundwater users as either impacts or effects as a result of any of the project alternatives.</p> <p>At Page 7-5, lines 37-39 in Appendix A of the Draft RDEIR/SDEIS, in regards to mitigation it is stated that "If water level data indicate that dewatering operations are responsible for reductions in well productivity such that water supplies are inadequate to meet existing or planned land use demands, mitigation will be required and implemented." This statement completely fails to meet statutory or legal standards by failing in any way to describe the proposed mitigation, and how any such mitigation will in fact adequate mitigate for reductions in well quality. Will water trucks be brought in? Will new wells and water distributions systems be installed? The District, on behalf of the residents and businesses it serves, states that without any proposal of what and how mitigation will be supplied and will operate, the RDEIR/SDEIS is fatally flawed.</p> <p>Specific to the District, various project alternatives, if not all project alternatives, fail to analyze the significant and substantial impacts or effects of lowered groundwater tables, and thus significant or substantial loss of access to water. The District relies heavily on water, carried in all of its rolling equipment, to fight and suppress fires. The anticipated lowering of the ground water tables, and/or the possible degradation of groundwater quality and/ or quantity has the serious [possibility] of additional and further deterioration of the District's ability to fight and suppress fire both within the District and in response and draw of water outside the District under mutual aid agreements.</p> <p>The District is also concerned generally that the overall lowering of the groundwater table as admitted in the Draft RDEIR/SDEIS will cause, or lead to, ground surface and underground depressions, sinkholes and lowered elevations, cracks in building foundations, and other structural damage as surface and subsurface earth subsides due to lowered groundwater tables, increasing calls for emergency assistance.</p>	<p>With respect to groundwater recharge potential, as discussed in the Final EIR/EIS, the project description for Alternative 4A has been modified to include slurry walls constructed around the entire construction sites for intakes, tunnel shafts, and forebays. Dewatering activities will not occur until the slurry walls are completed, and dewatering actions would only occur to remove groundwater within the slurry walls. Therefore, the Final EIR/EIS indicates that groundwater in adjacent property is not anticipated to be effected by construction as compared to Existing Conditions, and the potential impacts have been designated as less than significant in this EIR/EIS.</p>

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2637	6	The [Clarksburg Fire Protection] District provides substantial fire and emergency response services to the persons, businesses, structures, industrial locations and improvements located out in the District which are primarily characterized by or materially support agriculture land uses. The cross-reference discussion set forth in subsection 14.1, beginning on page 14-1, line 28, through page 14-2, line 2, fails to refer to fire suppression and emergency response as related to agriculture in any other chapter. Failing this, reader expects to see analysis of the serious and significant impacts and effects of each of the proposed project alternatives on agriculture as a result of the serious and substantial impacts and effects on the District operations caused by each of the project alternatives. The lack of such analysis is a fatal flaw in the Draft.EIR/EIS. Appendix A fails to address these concerns.	Under the preferred alternative a proposed 28-foot interior diameter single-bore tunnel would be constructed more than 100 feet below the surface of Hood. It would connect north of Hood to pipelines running from Intakes 2 and 3, and south of Hood to the intermediate forebay. There are no public facilities in the proposed tunnel alignment. Construction of the tunnel facilities would not conflict with any public facilities, nor would it require the construction or major alteration of such facilities. It is not anticipated that the construction of the preferred alternative would alter the way in which the Clarksburg Fire Protection District delivers emergency services. In the event fire suppression and emergency response are required in an agricultural setting it is unlikely that the construction of the preferred alternative would hinder the response of the Clarksburg Fire Protection District.
2637	7	The substantial and serious connection between the [Clarksburg Fire Protection] District's income from special assessments (determined by a schedule of fixed amounts) and a portion of general real property taxes (determined by assessed values) and related serious and substantial impacts and effects caused by the various project alternatives is not analyzed at all.	The potential impact of reducing regional property taxes as a result of DWR purchasing private land required to construct the action alternatives is addressed in Final EIR/EIS Chapter 16, Socioeconomics, Impact ECON-4. This discussion discloses the total expected reduction in property taxes attributable to each alternative. The Sacramento–San Joaquin Delta Reform Act commits the entities receiving water from the State Water Project and federal Central Valley Project to mitigate for lost property tax and assessment revenue associated with land needed for the construction of new conveyance facilities (Water Code Section 85089).
2637	8	Serious and substantial impact and effect, and possible reduction in the level of fire suppression and emergency response will have a serious and substantial impact and effect on future agricultural development and per-acre values. These impacts, and the serious and significant impacts and effects which may occur related to the [Clarksburg Fire Protection] District may limit, restrict, stop, or reduce the agricultural infrastructure required for continued existence of all of the crops and agricultural activities identified in Chapter 14. Section 14.2.2.3, page 14-20, lines 3 to 21, with reference to the Delta Protection Commission ("DPC") and its work fails to mention or analyze the DPC's Economic Sustainability Plan ("ESP"). [Footnote 1: The ESP is described and analyzed in subsection 16.2.2.3, beginning at page 16-32. However, the ESP also should be included in the Draft EIR/EIS analysis for Chapter 14.] Cutting across a number of sections written into the Draft EIR/ESP, but with particular focus on Delta agriculture, the ESP is an important planning and legal document formally adopted by the DPC. Many of the components of the ESP have been incorporated into and made a part of the Delta Plan, formally adopted by the Delta Stewardship Council. This failure is a fatal flaw. Additionally, the admitted lack of analysis of Williamson Act contract cancellations discussion (e.g., at page 14-75, lines 10-24) fails to include in its analysis the resulting financial impacts resulting on changes in land values, changes and restrictions in crop plantings, and changes in land uses on the income and operations of the District and the other public entities, utilities, and other organs of the Delta and the Delta communities. This failure is a fatal flaw.	As described in Final EIR/EIS Chapter 20, Public Services and Utilities, none of the action alternatives would result in increased demand on fire protection or emergency response services. Implementation of Alternatives 1A, 1B, 2A, 2B, 6A, 6B, 7, 8 may result in displacement of Hood Fire Station, which would be a significant impact, as discussed under Impact UT-2 in Chapter 20. However, implementation of Mitigation Measure UT-2 would ensure that fire protection services in the Hood Fire Station service area are maintained throughout construction of the proposed water conveyance facilities, in consultation with the Courtland FPD. If final design of the alternatives requires demolition and relocation of the Hood Fire Station, the Lead Agencies, working closely with the Courtland FPD, will provide funding in sufficient amounts to construct or provide a suitable permanent fire protection facility prior to the start of any activities that would disrupt fire protection services. Regarding "failure to analyze" the Economic Sustainability Plan (ESP) in Chapter 14, Agricultural Resources of the EIR/EIS, it is unclear what the commenter is referring to. The EIR/EIS presents an analysis of the environmental effects of the construction and operation of a water conveyance facility, and construction and operation of habitat restoration enhancement under 18 different action alternatives, as well as a No Action alternative. The ESP is not part of any of the proposed action alternatives and thus it is not required that the ESP be analyzed in this EIR/EIS—it is not a discretionary action proposed as part of the BDCP/California WaterFix. The 2009 Delta Reform Act required the Delta Protection Commission to prepare the ESP for the Delta Region. The ESP is not 'analyzed' in Chapter 16, Socioeconomics. Rather, the ESP is discussed in the context of the regulatory environment as part of the existing regulatory setting. Chapter 16, Socioeconomics, discusses the economic importance of agricultural production in the five Delta counties. If Alternative 4A is approved, it will be a "covered action" in the context of the Delta Plan and the lead agencies will be required to submit a written certification of consistency with the Delta Plan to the Delta Stewardship Council. The certification of consistency must have detailed findings demonstrating consistency with the Delta Plan.
2637	9	Chapter 16, discussing the Socioeconomics of the Delta, bases its analysis in large and significant part on the thinking and belief, without evidence of this belief, that the "rural communities" of the Delta are the towns of the Delta, the collection of improvements lying within the historic townships in the Delta. The language set out at page 16-3, lines	The comment expresses concern with the data used to assess the socioeconomic effects, questioning the adequacy of the analysis. The Lead Agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS. See also Master

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		<p>8-10 is an important example of this thinking of the Draft EIR/EIS.</p> <p>In truth, the Delta communities are composed of both the townships together with their surrounding agricultural lands, each in symbiotic relationship with the other. In the Clarksburg area this truth is illustrated by the almost weekly meetings, gatherings, two annual district parades, three annual community dinners at the [Clarksburg Fire Protection] District firehouse, two garden clubs, a Boy Scout troop that has consistently produced for many years one of the greatest number of Eagle Scouts on an annual basis in the country, together with innumerable events at the schools, church, library, and with other community groups, all bringing together residents of both the town area of Clarksburg with the residents outside the town area, into one cohesive single community unit bound together with unified and common values, united traditions, and family histories going back on the same land as far as seven generations ("Community Cohesion").</p> <p>The District is also characterized by an important multicultural history. Whether it is the example of farmers who during the Second World War paid the taxes on the lands and buildings of their fellow Japanese farmers so they would not lose their land during internment, protection of the historic Japanese School, or the example of German POWs choosing to remain in the Delta upon their release in 1945, the Portuguese social hall (in the Lisbon District), the residents from Holland, in the area with the same name, or the large Hispanic population which participates in the life of the Delta, these facts and more demonstrate that the Delta community and its social fabric is not divided along the lines of township vs. non-township.</p> <p>The demographic data set forth for the Delta portion of Yolo County beginning at page 16-7, line 317, to page 16-8, line 13, of the Draft EIR/EIS, and again at page 16-7 of the RDEIR/SDEIS in the information listed for Clarksburg and West Sacramento fails to recognize that only a part of West Sacramento lies within the Delta. The numbers offered for West Sacramento mislead because those numbers describe the whole of West Sacramento, not the Delta portion of the city. The Draft EIR/EIS is inaccurate and misleading to the extent that data derived from outside the Delta is offered as analysis of the Delta. Data should be limited to in-Delta residents, population, employment, etc. This same comment applies to cities and other areas which lie partly within the Delta, but the data for which is given for the entire city or area, not just the portion of the city or area which lies within the Delta.</p>	<p>Response 24 for information on Delta as a place.</p>
2637	10	<p>At subsection 16.2.3.5, beginning at page 16-37, line 24, and throughout, the Draft EIR/EIS failed to mention or include at all in its analysis the 2001 Clarksburg General Plan, duly passed as an integral part of the Yolo County General Plan and is a matter of public record. As Yolo County is a cooperating agency and recognized arm of local government, the portions of its General Plan, specifically the 2001 Clarksburg General Plan, must be given the respect required by both state and federal law. The failure to include and analyze the 2001 Clarksburg General Plan is a fatal flaw.</p>	<p>The 2001 Clarksburg General Plan has been replaced by the Clarksburg Area Plan which was adopted by the Yolo County Board of Supervisors in September 2015 and is an element of the Yolo County General Plan. The purpose of the reference to the Yolo County General Plan in Chapter 16, Socioeconomics, was to identify policies addressing housing. One of the stated purposes in the Area Plan is to carry out the goals and policies of the housing element as adopted in the Yolo County General Plan. The Lead Agencies are not proposing to construct housing or encourage housing to be developed with the boundaries of the Clarksburg Area Plan. In addition, none of the elements of the preferred alternative would be located within the boundaries of the Area Plan.</p>
2637	11	<p>ECON 15, analyzed in relation to Alternative 1A, and incorporated into various other Alternatives, regarding damage, impact and negative effects on community character, is deeply flawed. (See page 16-72, line 3 to page 16-73, line 10.) In addition to the failures discussed above, the NEPA portion of the analysis (page 16-72, line 5 to page 16-73, line 2) admits that serious and significant impacts would be imposed on Delta communities,</p>	<p>The Draft EIR/EIS, RDEIR/SDEIS, and this Final EIR/EIS were prepared in compliance with the requirements of CEQA and NEPA. These documents are intended to provide sufficient CEQA and NEPA support for approval of the proposed project or any of the action alternatives for either compliance strategy. As implementation of the proposed project or any of the action alternatives will require permits and approvals from public agencies other than the Lead Agencies, the CEQA and NEPA documents are prepared to support the various</p>

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		while the CEQA portion of the analysis (page 16-73, lines 3-10) claims no physical impacts will occur. Either one statement or the other is true. Both statements cannot be true at the same time.	public agency permit approvals and other discretionary decisions. For more information please see Section 1.1.5 of the RDEIR/SDEIS. The preferred alternative, Alternative 4A, no longer includes an HCP. Please see Master Response 4 for information regarding the alternatives.
2637	12	ECON 15, page 16-72, at lines 27-30 claims that CM3 (the cultivated land natural community strategy) would ensure continued agricultural production, but fails to address in any way the quality, type, values or other characteristics of that claim of continued agricultural production. It is basis and foundational to any NEPA or CEQA analysis to include the basic parameters of anticipated changes in crop quality, type, value and other fundamental characteristics when claiming that "CM3 would ensure the continuation of agricultural production on thousands of acres in the Delta." The continued health of agriculture in the District in particular, and in the Delta in general, is essential to the financial health and human resources demands upon the [Clarksburg Fire Protection] District and its ability to continue to satisfy the demands of its mission.	Implementation of CM 3 and CM 11 would result in the protection of approximately 48,125 acres of cultivated land (non-rice), up to 500 acres of cultivated land (rice), and 3,000 acres of cultivated land (rice or equivalent). See Master Response 5 for information on the conservation measures See Master Response 22 for information on the mitigation measures and Master Response 33 for information on adaptive management and monitoring.
2637	13	The activities, meetings, social gatherings, parades, and other regular and annual events which provide important glue for the community and its social harmony face substantial likelihood of disruption constituting a substantial and serious negative impact and effect.	Meetings, community cohesion, and events are considered under Impact ECON-3 in Final EIR/EIS Chapter 16, Socioeconomics, which discusses impacts to community character. Under NEPA, this would be considered both adverse and beneficial. While water conveyance construction could result in beneficial effects relating to the economic welfare of a community through additional regional employment and income, adverse social effects could also arise as a result of declining economic stability in communities closest to construction effects and in those most heavily influenced by agricultural and recreational activities. Under CEQA, social or economic effects alone shall not be treated as significant effects (State CEQA Guidelines §§ 15064(f), 15131). Therefore, under CEQA, this impact would be considered to have no impact.
2637	14	The [Clarksburg Fire Protection] District is also a key area for Native American activity. Sections 18.1.1.3 and .4 in particular, and section 18.1 in general disclose that at no time did the drafters of the Draft EIR/EIS ever reach out to local historians who would have shown the drafters and their agents and associates the location of burial grounds, where arrowheads are generally found, and where other evidence of Native American culture is located. The failure of analytics used throughout the preparation of the Draft EIR/EIS to even ask for local knowledge on the ground and generally known among families who have lived in the Delta for as much as seven generations is a fatal flaw in analysis and process throughout.	The commenter's opinion related to the Draft EIR/EIS preparation is acknowledged. Section 106 consultation was addressed in the RDEIR/SDEIS through the addition of Section 18.2.1.3, which provides information on Section 106 consultation and development of a Programmatic Agreement as part of a phased approach to identifying cultural resources. Sensitivity assessments also address impacts to unknown (or unevaluated) cultural resources. Impacts/Mitigation Measures were drafted so that mitigation measures were broad enough to address unknown resources while specific enough to address impacts. For additional information about Native American outreach efforts, including identification and analysis of impacts on archaeological sites, Traditional Cultural Properties, and cultural significance of biological resources, please see Master Response 21.
2637	15	Figures 19-3a, 19-3b, 19-4a and 19-4b, and Segments CT 28, 33 and 34, and YOL 01, 02 and 03, Table 19-1, admit to various serious and significant impacts and effects of each of the Alternatives on the transportation network and routes relied upon by the [Clarksburg Fire Protection] District to perform its mission. The analysis overall, and specifically as laid out in Table 19-3, seventh column from the left titled "Hourly Volume Range (6AM to 7PM)" specifically fails to take into account morning and evening agricultural activity before and after the stated hours during harvest, planting and growing seasons for various crops. Pear harvest, for example, during July and August, creates heavy traffic before 6AM and after 7 PM. The same is	The overall traffic volumes would be lower during the hours between 7 PM and 6 AM, but the Lead Agencies acknowledge that construction truck traffic may impact the local community (residents, schools, and farmers). Therefore, Mitigation Measure TRANS-2c includes coordination with affected agencies to address impacts of construction truck traffic to local farmers before 6 AM in the morning and after 7 PM in the evening. The lead agencies acknowledge the importance of Delta roads for the delivery of agricultural products and school transportation. Final EIR/EIS Chapter 19, Transportation, and the Executive Summary in Chapter 1 identify the interference with emergency services as an effect. Impact TRANS-3 further discusses this problem and its effects. Mitigation Measure TRANS-1a includes provisions to ensure that construction vehicles allow continual access for emergency vehicles at the time of an emergency. Mitigation Measure TRANS-1c also seeks to work with affected jurisdictions to enhance capacity of congested roadway segments where construction traffic will substantially affect transportation facilities. However, some significant

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		<p>true of grape harvest in August, September and October.</p> <p>The pavement conditions, Table 19-5, for YOL 01, 02 and 03 are admittedly generally unknown or are already inadequate. When 24 -hour traffic diversions, and volunteer rerouting due to extremely heavy dump truck traffic to transport tunnel spoils and construction related vehicular, light equipment and heavy equipment trips, the Draft EIR/EIS admits the already inadequate roads will be damaged beyond repair. This will further fracture and degrade Community Cohesion.</p> <p>Although the Borges Airport is identified by a green dot in the Chapter 19 maps, it is not analyzed in Section 19.1.5 (page 19-27, line 19 through page 19-31, line 9). The Borges Airport is within the District and may serve as appropriate as an emergency landing zone for certain emergency responses on the part of the District. The Borges Airport may be open to the public on a rental or fee basis. Substantial, adverse and serious impacts and effects on the Borges Airport as a result of each of the Alternatives should be analyzed. Such analysis should include substantial and substantive discussion with the owners and operators of the Borges Airport.</p> <p>The District made formal request to be designated a coordinating and cooperating public agency for purposes of the Plan and Draft EIR/EIS. The request of the District was ignored.</p> <p>Nonetheless, the District through other correspondence, public testimony, and a number of informal meetings has made its presence noted.</p> <p>Nowhere in the Determination of Effects, section 19.3.2, page 19-36, line 7 through page 19-39, line 1, was the admitted disruption of traffic operations inclusive of the disruption on fire suppression and emergency response operations maintained by the District. Traffic rerouting, whether directed by governmental authority, or voluntary in nature as people change their transportation routes as a result of, and to avoid construction and operation impacts, will seriously impact and effect the District. Responding to calls in and around construction and operation traffic will certainly delay emergency response. The failure and omission of analysis of these issues is a fatal flaw.</p> <p>For example and in particular, but not by limitation, the admitted time of "at least 1 hour" during which LOS [level of service] would be exceeded (see, for example page 19-41, lines 10-11) does not analyze the resulting burden on emergency response. The same failure is true for corresponding analysis for all Alternatives.</p> <p>Chapter 19 fails to analyze the serious impacts and effects of increased traffic, and in particular the serious impacts and effects of long periods of heavy equipment traffic, on the levee roads. The failure and omission of analysis of these issues is a fatal flaw.</p>	<p>impacts may be unavoidable as discussed in Chapter 19, Transportation, and in the Executive Summary.</p> <p>The lead agencies acknowledge that construction truck traffic may degrade the physical condition of the roadway segments as discussed in Chapter 19. The project proponents are committed to minimizing and remedying the impacts of construction truck traffic. The lead agencies also acknowledge concerns about transportation impacts on Delta roadways and agree with the need to avoid further deterioration of these roads. Table 19-10 of Chapter 19, Transportation, identifies roadway segments that are deficient. Mitigation Measures TRANS-2a, b, and c seek to eliminate or minimize traffic on those segments or to improve the condition of those pavement sections if use by construction traffic cannot be avoided. Mitigation Measure TRANS-2c also includes remediation of roads to conditions prior to project construction.</p> <p>Borges Airport was added to Chapter 19.</p> <p>The lead agencies acknowledge the importance of Delta roads for the delivery of emergency services. Final EIR Chapter 19, Transportation, identifies interference with emergency services as an effect. Impact TRANS-3 further discusses this problem and its effects. Mitigation Measure TRANS-1a includes provisions to ensure that construction vehicles allow continual access for emergency vehicles at the time of an emergency. Mitigation Measure TRANS-1c also seeks to work with affected jurisdictions to enhance capacity of congested roadway segments where construction traffic will substantially affect transportation facilities. However, some significant impacts may be unavoidable as discussed in Final EIR/EIS Chapter 19, Transportation, and the Executive Summary in Chapter 1.</p>
2637	16	<p>Chapter 20 of the Draft EIR/EIS claims to describe the public services and utilities in the study area which may be affected by the construction, operations and maintenance of the action alternatives in the Plan Area. (Page 20-1, lines 4-6.) As part of the subsection discussing Fire Protection and Emergency Response, the Draft EIR/EIS states "Response time is broken into three components: alarm processing time (dispatch), turnout time, and travel time. The element of time for alarm processing is in the hands of the dispatch and communication system. The amount of time it takes to turnout fire apparatus is different depending on whether the station is staffed by full-time permanent or otherwise assigned personnel, or whether the staffing is recalled (volunteer). Travel</p>	<p>Mitigation Measures TRANS-1a requires the project proponents to develop site-specific construction traffic management plans (TMPs) that address specific steps to be taken before, during, and after construction to minimize traffic impacts. Per this mitigation measure, the TMPs would include notifications for the public, emergency providers, cycling organizations, bike shops, and schools, the U.S. Coast Guard, boating organizations, marinas, city and county parks departments, and the California Department of Parks and Recreation, where applicable, describing construction activities that could affect transportation and water navigation.</p>

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		time is a function of speed and the availability of a road network to get to the scene of an emergency." (Page 20-3, lines 35-40.)	
2637	17	<p>Subsection 20.3.1, from page 20-29, line 16 through page 20-30, line 8, recites a "desktop" method of analysis, limited solely to review of electronic data and telephone calls, perhaps limited to one voice message, and email(s). These two methods are the only listed means attempted by the drafters and proponents of the Draft EIR/EIS to obtain information from the public agencies and utilities the drafters write about.</p> <p>There is absolutely no data presented in summary, raw or other form, making representation of any data collected from the telephone calls and emails. This means that no such analysis was received. The calls and emails, and all information received as a result, should be disclosed in the Draft EIR/EIS. The lack of information is not disclosed, and should be disclosed. The Draft EIR/EIS, presented without any of the information collected via the personal methods, is flawed and defective because without the information obtained by telephone calls and email the readers and reviewers of the Draft EIR/EIS cannot effectively evaluate the Draft EIR/EIS. The conclusion is that the drafters have either hidden or failed to disclose the information received, or that information was received and not disclosed.</p> <p>The drafters further failed to inventory the equipment and training level of the [Clarksburg Fire Protection] District or any Delta public entity or utility, failed to estimate the increased service load on the District because of the construction and/or operations of the projects listed in any of the alternatives, and failed to evaluate whether the District, or any other public entity or utility is possessed, and offered no plan, to assist the District or any other public entity or utility would possess the required equipment and training to respond to the increased service demands upon the District caused by any of the projects or proposals listed in the Draft EIR/EIS.</p>	See Response to Comments 2637-2, 2637-8, and 2637-21.
2637	18	<p>Subsection 20.3.1, from page 20-29, line 16 through page 20-30, line 8, recites a "desktop" method of analysis, limited solely to review of electronic data and telephone calls, perhaps limited to one voice message, and email(s). The drafters of the Draft EIR/EIS completely failed to collect the statements of mission, plans, purpose or any other matter from the data and information developed and stored at each public service entity, did not inspect or view any of the facilities listed, did not learn the scope, number or type of responses handled by the [Clarksburg Fire Protection] District, or any public service entity, in the Delta. The District submits that these flaws are fatal and the failures listed are required to be corrected in order to construct and understand the base line data points upon which the Draft EIR/EIS purports, and should be, based.</p> <p>As one example, for illustration only, if such basic inquiry has been performed by the drafters of the Draft EIR/EIS, they would have learned that part of the primary mission of the District is to provide emergency medical aid, accident and other non-fire first responder services, and that annual calls of this type typically number above 75 per year. The drafters would also have learned that many of these calls result from existing and long standing mutual aid agreements with sister Delta fire protection districts. The project, and all of the alternatives, clearly disrupt and delay the delivery of these non-fire responses. It is reasonably believed by the District, based on long experience, that loss of life, serious and permanent injury, some of a debilitating type, with corresponding catastrophic financial, social and quality of life loss.</p>	See Response to Comments 2637-2 and 2637-6.

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2637	19	<p>Error: At Page 20-22, line 22, under the section entitled "Yolo County General Plan", the Draft EIR/EIS states that the Yolo General Plan makes provision for public services and utilities within "Solano" County.</p> <p>Correction: The reference should be changed so that the word "Yolo" replaces the word "Solano". Please make this correction and change all analysis accordingly.</p> <p>Error: At Table 20A-4, page 20A-13, of Appendix 20A, in the River Delta School District section, third school from the top of the page, referring to "Delta Elementary (K-6 Charter)" claims and states that the enrollment of the school, as of the date of the release of the plan (November 2013) is 123, with a capacity of 280, and states that capacity is not exceeded.</p> <p>Correction: The correct numbers for the Delta Elementary (K-6 Charter) school are: 345 enrollment, with a capacity of 345, at capacity, with a wait list of 32. Please make this correction and change all analysis accordingly.</p> <p>Flawed Environmental Analysis: Subsection. 20.3.1.1, in reference to the Environmental Consequences as applied to Fire Protection states, that "Fire Protection entities have the potential to be affected by construction activities in the same ways as law enforcement agencies." (Page 20-30, line 30.) The "Law Enforcement" section immediately above this quoted sentence on Page 20-30, lines identifies four potential impacts: increased number of construction personnel moving into the Plan Area, construction encroachment on station(s), road impacts, and decreased funding.</p>	<p>Regarding: Error on Page 20-22, line 22 - This has been corrected.</p> <p>Regarding: Error: At Table 20A-4, page 20A-13, of Appendix 20A - As of March 10th, 2016 it is confirmed that the enrollment of Delta Elementary Charter is 412 and the capacity is 416. This was revised in the document.</p> <p>Regarding: Flawed Environmental Analysis: Subsection. 20.3.1.1 - The commenter's concern with the analysis is unclear. The Lead Agencies support the analysis assumption that fire protection entities have the potential to be affected by construction activities in the same ways as law enforcement agencies. Those effects are listed below:</p> <ul style="list-style-type: none"> The number of construction personnel that would move into the Plan Area to construct the water conveyance facilities associated with the proposed project could be substantial enough to cause an increased demand for law enforcement services. In the communities in which workers moving to the Plan Area may relocate. Increased demand for construction property protection. Increased demand associated with construction-related accidents. Construction may physically encroach upon a law enforcement station or facility. Construction, road detours, and associated traffic congestion (delays) could increase the need for traffic patrol and other law enforcement activities during construction. Additional analysis of emergency route management and whether construction could result in delays or road closures, possibly making areas inaccessible to law enforcement services is addressed in Chapter 19, Transportation. Funding for law enforcement could be affected by a decrease in taxable parcel revenue. <p>This is addressed in Final EIR/EIS Chapter 16, Socioeconomics.</p>
2637	20	<p>The analysis is limited to "construction activities" (Pg. 20-30, line 30.) The effects analysis lists both constructions and operations activities as creating effects. The flaw here is the failure of the scope of environmental analysis limited to "construction," whereas the effects analysis focuses on both construction and operation. The environmental analysis must focus and include operations in addition to construction. Such expansion of analysis to include operations will require further study, additional data, and expanded outreach to understand the true environmental impacts of the BDCP operations upon public services such as Fire and Emergency Response.</p>	<p>The Draft EIR/EIS and the RDEIR/SDEIS both include extensive discussion of both construction and operational impacts. The EIR/EIS Chapters 5–30 each include an evaluation of the direct and reasonably foreseeable indirect impacts associated with implementation of the project alternatives, which includes both construction and operation. Within the RDEIR/SDEIS the impacts discussion in Section 4 similarly considers both construction and operation of the new alternatives (Alternatives 4A, 2D and 5A).</p> <p>Please see Section 4.1.2, Description of Alternative 4A, RDEIR/SDEIS for additional information on proposed project operations. Please also see Master Response 5 and 28 for more information regarding operational scenarios.</p>
2637	21	<p>The Environmental analysis as applied to fire protection, by simply incorporating the analysis as applied to law enforcement, fails to included emergency response, fire suppression, medical aid and other first responder duties which are different than law enforcement.</p>	<p>Impact UT-1, addresses the impact of increased demand on law enforcement, fire protection, and emergency response services from new workers in the plan area as a result of constructing the proposed water conveyance facilities.</p> <p>Construction of the preferred alternative could create additional demand for law enforcement, fire protection, or emergency medical services for construction property protection and related to the potential for construction-related accidents associated with hazardous materials spills, contamination, or fires. In order to minimize these increased demands, DWR would implement environmental commitments (as discussed in Appendix 3B, Environmental Commitments) which would minimize the potential for construction-related accidents associated with hazardous materials spills, contamination, or fires, and reduce potential effects associated with increased service demands from new construction workers in the</p>

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			<p>Plan Area.</p> <p>The effects of the operation and maintenance of the proposed project are analyzed in Impact UT-7: Effects on Public Services and Utilities as a Result of Operation and Maintenance of the Proposed Water Conveyance Facilities. For the preferred alternative (Alternative 4A), it was estimated that weekly operations and maintenance would require approximately 129 workers, including maintenance crew, management, repair crew, pumping plant crew, and dewatering crew. These activities would take place along the entire alternative alignment. Given the limited number of workers involved and the large number of work sites, it is not anticipated that routine operations and maintenance activities or major inspections would result in substantial demand for law enforcement, fire protection, or emergency response services. Alternatives 1A-8 all have similar estimated workers and the same impact on public services as a result of maintenance and operation.</p> <p>This minor increase in workers in the area, combined with implementation of the environmental commitments outlined in Final EIR/EIS Appendix 3B will minimize the impact to all services, not just those of law enforcement. Therefore, the analysis applies to fire protection, law enforcement, emergency response, fire suppression, medical aid, and other first responder duties in the plan area as the impact to these services will be similar and less than significant.</p> <p>Please see Chapter 20, Public Services and Utilities for additional detail.</p>
2637	22	<p>Flawed Effects Analysis of Both Adverse Effects (NEPA) and Significant Impacts (CEQA): Subsection 20.3.2, Determination of Effects (beginning at page 20-33, line 1) should be titled "Determination of Effects and Impacts", to cover both NEPA and CEQA analysis.</p> <p>The effects and impacts analysis on page 20-33 should include "lack of fire suppression equipment to serve the needs of substantially greater, adverse and significantly higher number of calls and events requiring fire suppression services by the [Clarksburg Fire Protection] District both within its boundaries and through the District's mutual aid agreements."</p>	<p>The commenter suggests changes to the impacts analysis however, the Lead Agencies believe that the current analysis is adequate and fully evaluates, and discloses all potential adverse effects and significant impacts for the proposed project and all action alternatives. No changes have been made.</p>
2637	23	<p>The Draft EIR/EIS fails to take into account various flood potential, flood dangers, and flood risks. In particular, the Draft EIR/EIS in final form should include the Lower Sacramento River/Delta North Regional Flood Management Plan (July 2014), its findings, analysis, conclusions and recommendations. Flood risk, flood events, and high water events have been a significant and serious part of life at all levels in the Delta. Flood dangers and risks, and actual flood events, should be an integral part of each and every chapter of the Draft EIR/EIS. The lack of such analysis throughout and in every chapter is a fatal flaw.</p>	<p>Appendix 6A of the Final EIR/EIS, includes a compilation of flood and levee-related information that is provided in detail in the other applicable EIR/EIS chapters. Levees are an important public safety resource and the proposed project would not change levee policy or replace ongoing programs and grant projects aimed at facilitating and supporting levee improvements in or outside the Delta. It is recognized that levee maintenance and safety in the Delta is an important issue for the residents of the Delta and for statewide interests. DWR will consult with local reclamation districts and other flood management entities to ensure that construction activities and operations of the project would not conflict flood protection measures and routine maintenance.</p> <p>Also, see Section 6A.6.2.1.3 for a discussion on DWR consistency with the State Plan of Flood Control (SPFC), and Section 6A.6.1.2 for information on project consistency with USACE, CVFPB, and DWR flood standards and regulations. In addition, implementation of the proposed project would not affect existing flood management programs and funding mechanisms, including those outlined in the CVFPP and associated RFMP's.</p> <p>The new proposed project, Alternative 4A, substantially reduces the habitat restoration footprint and does not include Conservation Measure 2 (Yolo Bypass Enhancements). Instead, the proposed project includes habitat restoration necessary to mitigate significant environmental effects under CEQA and meet the regulatory standards of ESA Section 7 and California Endangered Species Act (CESA) Section 2081(b). Yolo Bypass Enhancements would be assumed to occur as part of the No Action Alternative because they are</p>

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			<p>required by the existing BiOps.</p> <p>For more information regarding floods and levees please see Final EIR/EIS Appendix 6A.</p>
2637	24	<p>The [Clarksburg Fire Protection] District observed no dedicated outreach to the Hispanic members of our community.</p>	<p>Please refer to Master Response 27 and Final EIR/EIS Section 28.3 of Chapter 28, Environmental Justice, which describes the outreach and noticing activities that occurred to reach environmental justice communities. These activities were consistent with EO 12898 and the obligations described under Section 28.4, Regulatory Setting, of this chapter, including Reclamation's NEPA guidance in the Draft NEPA Handbook requirements. Public outreach documents are available in six languages (in addition to English), on the website, located at: http://baydeltaconservationplan.com/2015PublicReview/2015PublicReviewInformationalMaterials/2015_Multi-Lingual.aspx. Additionally, the Lead Agencies have provided translators at public scoping meetings; the BDCP Website in Spanish; and a multi-lingual information hotline for project information in English, Spanish, Tagalog, Vietnamese, or Chinese (Mandarin).</p>
2637	25	<p>The public participation, consultation and coordination activities on the part of the preparers of the Draft EIR/EIS did not include any directed or specific outreach to the [Clarksburg Fire Protection] District itself.</p> <p>The largest outpouring of people coming to public meetings occurred in Clarksburg, the heart of the District. (See, e.g., Table 32-1, page 32-2, line 18; Table 32-2, page 32-3, line 6.)</p> <p>Although the District is a major unit of local government in the Clarksburg area, the lack of outreach from the preparers of the Draft EIR/EIS to the District is a fatal flaw. The District reached out, both formally and informally on a host of occasions, but none of these substitute for the formal outreach from the preparers of the Draft EIR/EIS to the District. The District requests that the final EIR/EIS presentation clearly identify and specifically show all places where each and every one of the comments above is specifically addressed. A redline copy of the Draft EIR/EIS, accompanying the Final EIR/EIS, would greatly aid in helping the public understand where and how all comments are addressed in the final product.</p>	<p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation to provide the public with educational information that is rooted in fact, based on reasonable assumptions supported by facts and expert opinions substantiated by facts. The project website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed project and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website; https://www.californiawaterfix.com/ for review. Historical materials remain available for review and are labeled as achieved or superseded. Please refer to Chapter 32 of the Final EIR/EIS and Master Response 40 for information regarding outreach conducted for California WaterFix (and previously the BDCP).</p>
2637	26	<p>On September 29, 2015 the Yolo County Board of Supervisors adopted the Clarksburg Community Plan ("Plan"). This Plan, a legally binding document, as an amendment to the Yolo General Plan, set forth certain facts, values, and provided critical information required to properly analyze the preferred alternative and other projects examined by the EIR/EIS. If the Final EIR/EIS does not properly analyze the Plan, and any other similar plan within the Delta, the Final EIR/EIS will be fatally flawed.</p>	<p>Please see Master Response 11 for information on applicability of City and County General Plans.</p>
2638	1	<p>The Bay Delta Conservation Plan/California WaterFix ("BDCP/CA WaterFix") proposes to dramatically alter the way in which the Clarksburg Fire Protection District (the "District") meets its mission and delivers emergency services within District boundaries and in accord with its mutual aid agreements. Those mutual aid agreements include agreements with other fire districts within the northern Sacramento-San Joaquin Delta.</p> <p>Although the District timely and properly requested cooperating and coordinating agency status with each state and federal regulatory agency responsible for the Bay Delta Conservation Plan ("BDCP") by District letter dated November 5, 2009, its requests have been ignored.</p>	<p>As described in RDEIR/SDEIS Section 1.6.2, responsible agencies are state or local public agencies other than the CEQA lead agency that have discretionary approval over the project. Trustee agencies include state agencies that have jurisdiction by law over natural resources affected by a project that are held in trust for the people of California. A cooperating agency under NEPA may be any federal agency (or state, local, and tribal agencies) other than the lead agency that has discretionary authority over the proposed action, jurisdiction by law, or special expertise with respect to the environmental impacts expected to result from an action. Reclamation does not have any record of Clarksburg Fire Protection District requesting to be a cooperating agency under NEPA.</p> <p>Please refer to Section 20.1.1.1 and Impact UT-1 and UT-2, Chapter 20, Public Services and Utilities, Final EIR/EIS, which discusses potential impacts to fire protection and emergency response. The proposed project also analyzes impacts to emergency routes in Chapter 19, Transportation, specifically Impact TRANS-3.</p>

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			Mitigation Measure TRANS-1c, Make Good Faith Efforts to Enter into Mitigation Agreements to Enhance Capacity of Congested Roadway Segments, is provided to offset any potential impacts on emergency routes.
2638	2	<p>In a typical year the [Clarksburg Fire Protection] District responds to approximately 25 fire suppression calls, 75 medical aid calls, and 68 other "first responder" calls. Depending upon the specifics of the actual construction project which may go forward (and specifically not agreeing that any project of any scope should go forward), the District forecasts a significant and substantial increase in call volume due to construction activities and increased traffic in and through the District. After the completion of all construction activity, and as a result of proposed project operations, the District estimates a nominal increase in call volume due to operational and maintenance activities relating to the project. The increased call volumes as a result of construction, and also as a result of operations, will both be substantial, serious and significant impacts and effects on and for the District.</p>	<p>The risk for the proposed project to expose people or structures to a substantial risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands is analyzed in Chapter 24, Hazards and Hazardous Materials, Final EIR/EIS. For the purpose of that analysis, "substantial risk of loss, injury or death involving wildland fires" is defined as circumstances in which construction or operational activities would increase the potential for wildland fire hazards or would occur within an area designated as a High or Very High Fire Hazard Severity Zone. It was determined that people or structures would not be subject to a significant risk of loss, injury, or death involving wildland fires during construction or operation and maintenance of the water conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and safety standards; DWR would implement standard fire safety and prevention measures as part of an FPCP (described in Appendix 3B, Environmental Commitments, AMMs, and CMs); and because the water conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.</p> <p>The commenter's concerns are acknowledged. In addition to contacting public service providers, the project proponents: collected and reviewed relevant geographic information system (GIS) data to locate law enforcement and fire protection facilities, emergency access routes, other emergency services, hospitals, public schools, and libraries within the study area; reviewed conveyance facility alignments and Restoration Opportunity Areas (ROAs) against GIS information for police/sheriff stations, fire stations, hospitals, public schools, and libraries, landfills, water and wastewater facilities to identify potential direct and indirect conflicts with individual facilities; and performed an analysis of the alternatives and GIS data to determine if public services and utilities within the Plan Area would permanently be affected by the operations of the action alternatives, including conveyance-related activities and operations, facilities, and restoration actions through an increase in population demand or through effects on the circulation network or existing infrastructure.</p> <p>After performance of these types of analysis it was determined that the proposed project would not significantly impact the provision of services by the Clarksburg Fire Protection District. While there is potential for calls upon the Clarksburg Fire Protection District to increase, the project is not anticipated to create such an increase that it would significantly impact the ability of the District to perform these services.</p>
2638	3	<p>The [Clarksburg Fire Protection] District has determined that if the project as proposed proceeds, additional costs and impacts will be caused to the District. It is estimated, based on an analysis of call volume and type over the past 10 years, that with the increased traffic within the District, additional construction related activities, and other matters related to the proposed project, its construction, and its operations, as proposed by the Draft EIR/EIS and RDEIR/SDEIS, emergency requests for assistance within the District and under mutual aid agreements with other Districts will increase by approximately 100 calls per year.</p> <p>In order to meet this demand, it is estimated that the hiring of personnel in the persons of a Fire Chief, Battalion Chief, Captain, one or more Engineers, and Firefighters will be required. Additional equipment will need to be purchased, and other costs will be incurred. Additional training will be required. In total, it is estimated that the direct financial impact of the project as proposed to the District will be \$1,675,000 on an annualized basis. This estimate is subject to updates in information and to further and more accurate information which may be received in the future.</p> <p>The District states that the project proponents should be responsible to cover and pay</p>	<p>Impact analyses in Chapter 22, Public Services and Utilities, Final EIR/EIS provides evaluation of fire protection service impacts from construction of conveyance facilities. Although the potential for increased demand is acknowledged, environmental commitments for the project, including implementing a hazardous materials management plan, spill prevention plan and fire prevention and control plan would offset much of the potential service demand during a limited construction period. In addition, Chapter 19, Transportation, provides for preparing and implementing site specific transportation management plans to address construction traffic congestion and safety issues. Once construction is completed at a particular construction site, operation of the facility would not result in the potential for substantial fire protection service. DWR would coordinate with the District to further assess and potentially address confirmed economic effects of conveyance facility construction.</p>

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		the District for all of the actual costs of the project, its constructions and its operations.	
2639	1	The primary issue is the diversion of too much Sacramento River water to other areas of the state, leaving insufficient freshwater flow to protect the Sacramento River Valley, Delta and San Francisco Bay area drinking water aquifers in the short and long term.	<p>All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights that were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. DWR and Reclamation operate with water rights issued by the State Water Resources Control Board that are junior in priority to many senior water rights holders in the Delta watershed. Under the action alternatives, senior water rights holders would continue to receive the same amount of water as under the No Action Alternative. Conveyance facilities under the action alternatives could only deliver the amount of water diverted under the existing SWP and CVP water rights and in accordance with the existing and future related regulatory requirements based upon river water levels and flow, water available in the system, the presence of threatened and endangered fish species, and water quality standards. For more information, please see Master Response 32, Water Rights issues.</p> <p>The proposed project would not significantly impact local water supplies. Operations of the conveyance facilities are not expected to result in a substantial decrease or increase in Delta surface water levels. See Appendix 5A, Section C, CALSIM II and DSM2 Modeling Results, EIR/EIS and RDEIR/SDEIS, for more information. Section C reports changes in the monthly averaged daily minimum elevation of the Sacramento River at Freeport (see Section C tables). Results for each alternative are presented by month, probability of exceedance, and by water year type. Results are also presented in comparison to Existing Conditions and the No Action Alternative. The modeling results for the future No Action Alternative indicate that water levels may continue to change as climate change occurs within the Delta, independent of the proposed project.</p> <p>While groundwater levels could be temporarily lowered in localized areas during the dewatering phases of construction, groundwater would return to pre-pumping levels over the course of several months following the dewatering phase. Mitigation has been proposed to maintain water supplies in areas affected by construction dewatering. Additionally, the lead agencies would relocate and/or replace wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses that would otherwise be adversely affected by project construction or operation.</p>
2639	2	[A] primary issue is the inconsistent and inaccurate computer modeling utilized to validate more water diversion, while clear and current negative impacts are being ignored or the causes redefined. The cost of building of the tunnels will put even more pressure on water diversion regulators to allow even more diversion of Sacramento River water, to further degrade Northern California environment in favor of lower Central Valley and Southern California development. Water diversions from the Sacramento River should be reduced -- not increased.	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>By establishing a point of water diversion in the north Delta and new operating criteria the project is designed to establish a more natural east-west flow for migratory fish, improve habitat conditions, and allow for greater operational flexibility. The proposed project does not increase the amount of water to which DWR holds water rights or for use as allowed under its contracts. For more information about water rights, please see Master Response 32, Water Rights. Water deliveries from the federal and state water projects under a fully-implemented Alternative 4A are projected to be about the same as the average annual amount diverted in the last 20 years.</p>
2639	3	Baselines for computer modeling used data from different years for different modeling scenarios, basically creating a fabricated "historical Delta" from which to initiate computer modeling. As Melinda Terry from NDWA [North Delta Water Agency] said, "garbage in, garbage out." Decisions knowingly made based on the outcomes of computer models generated by the use of false baselines mean DWR and the consultants will be fully legally responsible for the outcomes and negative impacts of the actions taken. CALSIM, CALSIMII and DSM2 are examples of computer modeling used in	<p>For information on the baseline assumptions, please see Master Response 1, Environmental Baselines.</p> <p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies acknowledge, however, that the document addresses a number of topics for which some uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p>

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		<p>BDCP planning which utilize false and/or manipulated baseline data regarding freshwater flow quantity, water column depth and in-Delta use. See questions regarding water flow accounting: http://www.snugharbor.net/dwr_reporting_of_inflow_and_outf.html</p> <p>http://www.deltarevision.com/sacramento-river-waterflow.html</p> <p>http://www.deltarevision.com/it_depends_on_who_is_counting.html and http://www.deltarevision.com/COMMENTS/flows/unaccountedforwater.jpg and http://www.snugharbor.net/images-2014/news/unaccountedwater-update.pdf</p>	For more information on the modeling, please see Master Response 30, Modeling.
2639	4	<p>Metropolitan Water District (MWD) initiated and paid for the "emergency response stockpiling" which was planned in case of flood or earthquake, based on MWD budget documents generated 2004-2007. Maps from MWD presentations to its own board show MWD clear intent is to eliminate the water flow in several North Delta historic waterways so that that water can instead be exported to other areas of the state. See http://www.deltarevision.com/maps/barriers_gates/barrier_gates_maps.htm and http://www.snugharbor.net/delta_barriers_planned_by_mwd.html</p>	This comment is an opinion about the intent to export water to MWD, not on the EIR/EIS content or environmental review process.
2639	5	<p>The impact of waterflow reduction on the Sacramento River is to substantially reduce or eliminate freshwater flow on several of the historic waterways of the North Delta, including Steamboat Slough, Sutter Slough, Miner's Slough and possibly the section of the lower Sacramento River that was called "Old River" or "Mainstem" until about 1910, i.e., from between Ida Isle below Isleton to above Walnut Grove. Since Steamboat, Sutter and Miner's Sloughs are much more shallow than they used to be, more likely than not at least the lower end of Steamboat and all of Miner's Slough will become shallow tule fields. Tules consume three times as much fresh water as agriculture use, so the consumption of more fresh water for the shallow water habitat created is not recognized in the BDCP. Also not recognized in BDCP is the fact State Lands Commission [SLC] received applications for lease of the bed of Steamboat Slough and Sacramento River for use for geothermal, natural gas or other mining purposes starting in 2005, indicating SLC and those persons applying for leases assumed the river beds would be available or eliminated from navigation use -- how did they know in 2005 what DWR would propose in 2014? See http://www.snugharbor.net/images-2014/news/frackingcorrelation.pdf</p>	<p>Operations of the conveyance facilities are not expected to result in a substantial decrease or increase in Delta surface water levels. See Appendix 5A, Section C, CALSIM II and DSM2 Modeling Results, EIR/EIS and RDEIR/SDEIS, for more information. Section C reports changes in the monthly averaged daily minimum elevation of the Sacramento River at Freeport (see Section C tables). Results for each alternative are presented by month, probability of exceedance, and by water year type. Results are also presented in comparison to Existing Conditions and the No Action Alternative. The modeling results for the future No Action Alternative indicate that water levels may continue to change as climate change occurs within the Delta, independent of the proposed project.</p> <p>The proposed project does not alter any authority the State Lands Commission has relative to oil, natural gas, and geothermal exploration.</p> <p>Please note, Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred Alternative. Alternative 4A is also the NEPA Preferred Alternative, a designation that was not attached to any of the alternatives presented in the 2013 Public Draft EIR/EIS. Alternative 4 remains a potentially feasible alternative and was carried forward in the RDEIR/SDEIS because it represents the original habitat conservation plan/natural community conservation plan (HCP/NCCP) alternative approach, and because it provides an important reference point from which the Alternative 4A, 2D, and 5A descriptions and analyses were developed. If the Lead Agencies ultimately choose the alternative implementation strategy and select an alternative presented in the RDEIR/SDEIS after completing the CEQA and NEPA processes, elements of the conservation plan contained in the alternatives in the 2013 Public Draft EIR/EIS may be utilized by other programs for implementation of the long term conservation efforts.</p>
2639	6	<p>Long-term impact to Delta recreation is the elimination of at least half of the current marinas and camping/RV parks which results in a substantial loss of tourist revenue for the area. (Fish need water to swim, boats need water to float). Note that in the Delta Vision process, Delta boating and fishing recreation was estimated to generate over \$1 billion to California's economy and there were as many as 14,000,000 visitor days per year in the Delta. DWR did not provide the Delta Vision study to the consultants who generated the BDCP recreation chapters. It is foolish to think people will drive deep into the Delta to purchase fresh produce when there are farmers' markets in their own</p>	<p>Final EIR/EIS Chapter 15 Recreation provides an assessment of direct impacts on Delta marinas during construction of the water conveyance facilities. Impact REC-2 includes a discussion of direct impacts on marinas. Fishing and recreation would still be accessible during and after construction of the proposed project throughout the Delta. As described in Table 15-15 for Alternatives 4 and 4A, three marinas would be directly impacted by noise and visual disturbances from the preferred alternative: Lazy M Marina, Bullfrog Landing Marina, and Wimpy's Marina. Mitigation measures and environmental commitments would reduce the impacts on wildlife, visual setting, transportation, and noise conditions that could otherwise detract from the recreation experience. Although the Delta includes a wide range of recreation opportunities that would not be affected by the construction of Alternative 4A, it is not certain that mitigation would reduce</p>

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		<p>towns offering the same product without the investment in travel time and gas.</p> <p>See http://www.deltarevision.com/Issues/recreation/delta_recreation_contributes_1billion.jpg http://www.deltavision.ca.gov/Context_Memos/recreation/recreation_memo_interation1.pdf http://www.deltarevision.com/Delta_maps/Recreation_Navigation_Transportation.htm http://www.deltarevision.com/Issues/recreation/14million_boater_days_per_year.jpg</p>	<p>the level of impacts on specified recreation sites to less than significant in all instances, so impacts to recreation would therefore remain significant and unavoidable.</p> <p>Operations of Alternative 4 and the new preferred alternative, Alternative 4A, are not expected to result in a substantial decrease or increase in Delta recreation opportunities occurring within the study area. The recreation impact analysis relied on changes in the surface elevation of Delta water and water quality as disclosed in Final EIR/EIS Chapter 5 Surface Water and Chapter 8 Water quality. Final EIR/EIS Appendix 5A, Section C, CALSIM II and DSM2 Modeling Results provides result of the hydrologic analysis used in support of the recreation impact assessments.</p> <p>Please refer to Impacts ECON-5, 7, 11, and 17 in Chapter 16, Socioeconomics, regarding recreation-related socioeconomic impacts.</p>
2639	7	<p>"Short-term" impact to North Delta recreation, not already eliminated due to lack of water in the waterways, is the substantial limits to access by customers, due to the fact all major roads leading into the North Delta would be clogged with trucks and construction equipment. Some facilities that can house construction and engineering staff may be able to supplement lost recreation income, but most marinas have limits on live-aboard berths so will not have substitute income supplement capability. In any case, boaters and anglers will avoid the North Delta, which will impact the whole area financially. Note that CALTRANS initiated planning for "habitat corridors" [in] 2004 that look like BDCP conservation areas . . . In 2014. http://www.deltarevision.com/delta_transportation_planning.html</p>	<p>Operations of Alternative 4 and the new preferred alternative, Alternative 4A, are not expected to result in a substantial decrease or increase in Delta surface water levels. Please refer to Appendix 5A, Section C, CALSIM II and DSM2 Modeling Results, EIR/EIS, for more information.</p> <p>Mitigation Measure TRANS-1a would involve preparation of site-specific construction traffic management plans that would address potential public access routes and provide construction information notification to local residents and recreation areas/businesses. Additionally, DWR would provide and publicize alternative modes of access to affected recreation areas as an environmental commitment. Where construction impedes access around or near existing recreation areas (e.g., Clifton Court forebay), the project proponents would provide clear pedestrian, bicycle, and vehicular routes around or across construction sites. These would be designed to be safe and pleasant, and would integrate with opportunities to view the construction site as an additional area of interest. These physical facilities would be combined with public information, including sidewalk wayfinding information that would clearly indicate present and future opportunities for access. Mitigation Measure TRANS-1b and TRANS-1c have been developed to reduce or eliminate transportation-related impacts.</p> <p>As described in Table 15-15 for Alternatives 4 and 4A, three marinas would be directly impacted by noise and visual disturbances from the preferred alternative: Lazy M Marina, Bullfrog Landing Marina, and Wimpy's Marina. Mitigation measures and environmental commitments would reduce the impacts on wildlife, visual setting, transportation, and noise conditions that could otherwise detract from the recreation experience. However, due to the dispersed effects on the recreation experience across the Delta, it is not certain that mitigation would reduce the level of these impacts to less than significant in all instances, so impacts to recreation would therefore remain significant and unavoidable. When required, DWR would provide compensation to property owners for economic losses due to implementation of the proposed project.</p> <p>On-water and on-land recreation would still be able to take place throughout the Delta.</p>
2639	8	<p>BDCP fails to address the issue of unaccounted for water flows and exports, and fails to recognize the difference between water that is diverted and the total counted exports received by water contractors. Previous water plans recognized the loss of as much as 50% of diverted water-loss attributed to "evaptransportation" which is a combination of evaporation and loss of water in the transport process. Simply by adding meters and monitors in several areas in and out of the Delta, water could be better counted and controlled. In the Delta, outflow monitors could be placed closer to the two river mouths, on each side of Sherman Island, with adjustments for tides, so that the miscalculated "Delta Outflow Index" would not be necessary. Alternatively, outflow monitors could be placed by the Rio Vista Ferry on Cache Slough, just above Hidden Harbor on Steamboat Slough, just below Viera's on the Sacramento River to combine to</p>	<p>The proposed project does not propose any changes to the guidelines by which water deliveries are allocated or measured among those entities receiving water from the SWP. The EIR/EIS analyzes potential impacts using the best scientific data and methods that are reasonably available. Neither CEQA nor NEPA requires BDCP or the new preferred alternative, Alternative 4A, to address purported unaccounted for water flows and exports that the commenter asserts are existing conditions.</p>

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		<p>determine Sacramento River outflow, with adjustment for tidal influx. A monitor at Three Mile Slough and at two locations on the San Joaquin River, due to its width, could determine actual San Joaquin River outflow. The combination of these monitors would determine actual Delta outflow instead of a computed, estimated outflow. (See the study of the 2013 Delta outflow chart from the 2013 Water Plan) http://www.snugharbor.net/images-2014/news/unaccountedwater-update.pdf</p> <p>Data gaps: http://www.snugharbor.net/flowdatagaps.htm</p>	
2639	9	<p>For the last 10 years, under CALFED and BDCP funding, there have been ongoing "restoration" tests and studies, several of which have been conducted on lower Sacramento River, Steamboat and Sutter Sloughs. The "bench tests" on Steamboat Slough have resulted in growing and distribution of non-native invasive water weeds like egeria densa, and have resulted in escalation of silting in the locations where the bench tests were/are conducted. According to the fish studies, those invasive water weeds are harmful to native fish species, not helpful, so why does the BDCP promote or propose creating even more areas that are harmful to native fish species? http://www.snugharbor.net/images-2013/deltastuff/bdcp_impact_steamboatslough.jpg</p> <p>http://www.deltarevision.com/Delta_maps/Restoration_BDCP.htm</p>	<p>The preferred alternative, Alternative 4A, does not include largescale restoration and therefore has limited potential to create adverse effects related to non-native invasive water weeds. Restoration design and siting will be used to maximize ecological benefits, while minimizing or avoiding harmful effects. Several restoration projects have been successful in doing so.</p>
2639	10	<p>From 2006 to current year, CALFED/BDCP related fish migration studies have been conducted in many areas of the Delta. BDCP discusses the outcomes of the studies, but fails to recognize how the waterways were manipulated during the fish migration times to affect the outcomes, to validate the use of the Yolo Bypass area and Sacramento Ship Channel for a new native fish migration pathway. Besides the fish screens at Georgiana Slough, fish migration pathways were manipulated by increasing water temperatures in some waterways which would discourage use by migrating salmon, insertion of sediment in some waterways which would also discourage use by migrating salmon, installation of in-water berms which would block migrating salmon or divert the salmon into different migration pathways, and insertion of floating logs and debris during the fish migration studies to allow for coverage of salmon predators. It appears the studies were conducted to validate use of the Yolo Bypass/ Sacramento Ship Channel for conveyance, which fits with the 2006 to current MWD [Metropolitan Water District of Southern California] "west side" conveyance preference, based on MWD documents. Http://www.deltarevision.com/maps/conveyance-canals/conveyance-canals.htm</p>	<p>The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible. The Lead Agencies are following the appropriate legal process and are complying with CEQA and NEPA in preparing the EIR/EIS for the proposed project. These agencies acknowledge, however, that the document addresses a number of topics for which some scientific uncertainty exists. Such uncertainty can give rise to differing opinions as to what conclusions may be reached.</p> <p>The Lead Agencies strived to use the best available science throughout the effects analysis. The use of specific scientific data and findings was often vetted with fisheries managers to ensure it was the best available. A variety of data were obtained for the proposed project 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 topics relevant to the proposed project; unpublished quantitative data from within the Plan Area and from outside of the Plan Area; qualitative data or personal communication with topical experts; and expert opinion if no other sources were available.</p> <p>A full description of the methodology of the Net Effects analysis, including justification for the qualitative approach, can be found in Chapter 5 of the draft BDCP (December 2013), Section 5.2.7.10, Approach for Determining Net Effects on Covered Fish Species, and Section 5.5, Effects on Covered Fish. As indicated in Section 5.2.7.10, "The [BDCP net effects] conclusions represent qualitative judgments of the effects of the BDCP that are grounded in the detailed quantitative and qualitative analyses in the appendices... BDCP net effects conclusions are necessarily qualitative and synthesize results from the more detailed (and often quantitative) analyses found in the appendices to this chapter. While qualitative, the net effects conclusions are derived from a transparent and structured approach. This approach is based on conceptual models that describe the logic and assumptions embedded within the effects analysis."</p> <p>As described in EIR/EIS Chapter 11, Fish and Aquatic Species, the best available science was used for analysis of potential effects of alternatives. The scientific basis for this analysis has been reviewed by the Delta Independent Science Board (ISB) several times as part of their ongoing reviews of the BDCP (please see http://deltacouncil.ca.gov/science-board/delta-isb-products) and no concerns have ever been raised regarding the issues the commenter describes.</p>

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2639	11	<p>BDCP does not address the impact of fracking in the Delta, which is much more likely to impact water quality within a few years in any area where horizontal fracking and the residue wells are located, which could then also affect the availability of fresh surface water in the Delta. BDCP should acknowledge the substantial increase in fracking for natural gas, located in the same areas as the proposed restoration areas, and acknowledge the use of tules and other plantings to naturally filter the spills and residue from the fracking process, and how the lands above the fracking areas that are currently prime farm land will be impacted by the know hazards of fracking.</p> <p>See http://www.deltarevision.com/timeline.htm and http://www.snugharbor.net/images-2014/news/deltanaturalgaswells.pdf</p>	<p>This comment is on the fracking process and potential effects from fracking. No comments related to the EIR/EIS or proposed project and alternatives is presented. Construction and operation of the proposed project would not involve the fracking process.</p> <p>State constitutional restrictions require the reasonable and beneficial use of water, and state laws require that water pumped from the Delta be put to stipulated beneficial uses. Beneficial uses include agricultural, municipal, and industrial consumptive uses; power production; and in-stream uses including fish protection flows. Fracking presumably would be an “industrial” use of water. As of the present, hydraulic fracturing is a lawful use of water, as state law generally permits oil and gas operators to engage in “the injection of air, gas, water, or other fluids into the productive strata, the application of pressure heat or other means for the reduction of viscosity of the hydrocarbons, the supplying of additional motive force, or the creating of enlarged or new channels for the underground movement of hydrocarbons into production wells[.]” (Cal. Pub. Resources Code, § 3106[b].) According to the Division of Oil, Gas, and Geothermal Resources (DOGGR) within the Department of Conservation, nearly all fracking (hydraulic fracturing, a kind of well stimulation) in California occurs in connection with the recovery of oil, and not natural gas. And the vast majority occurs within Kern County. Other areas in which well stimulation has occurred and is expected to continue include the following established oil well fields in Southern California: Wilmington; Sespe; and Inglewood. Based on this information, the Lead Agencies conclude that any hydraulic fracturing occurring in the Delta is minimal, if any is occurring at all.</p> <p>As directed by Senate Bill 4 of 2013, DOGGR recently completed comprehensive regulations addressing the environmental effects of well stimulation. DOGGR also completed an EIR devoted to the subject of well stimulation, including hydraulic fracturing, throughout California. Through the rule-making and EIR processes, the state achieved a better understand how much water is actually used for fracking in California. Voluntary reporting indicates that the use of water for fracking is minimal. The Department of Conservation estimates that statewide, about 270 acre-feet of water per year is used for hydraulic fracture stimulation activities. For comparison’s sake, roughly 5.2 million acre-feet of water a year have been diverted from the Delta, on average, over the last 20 years by the federal and state water projects for farms and cities.</p>
2639	12	<p>BDCP addresses earthquake response issues, yet fails to recognize the earthquake and liquefaction issues may be caused by the horizontal fracking process based on the known impacts in other states where the process has been in use for 10 years. BDCP also fails to recognize that as natural gas is drawn out of the ground, much like the levee failure of McDonald Island in the early 1980s, the levees above the areas to be fracked may fail due to the fracking process and natural gas draw-down combined. In addition, fresh water used for fracking in the Delta may reduce water level for drinking water wells in the surrounding Delta area. See http://www.deltarevision.com/timeline.htm</p>	<p>Please see Response to Comment 2639-11.</p>
2639	13	<p>CALFED and BDCP consultants have had great difficulty with accuracy in their studies of the Delta with regard to the actual physical location of the Delta islands and waterways. If the consultants cannot even figure out the location of the islands and waterways they propose to modify, why would anyone think the computer modeling use or the decisions made would be more accurate than the wrong maps of the Delta? The wrong maps show a lack of attention to important details one would assume would be a basic requirement for a scientific study.</p> <p>See http://www.deltarevision.com/wrong-maps-of-the-delta.html and http://www.snugharbor.net/images-2013/deltastuff/wrongdeltanames.jpg and http://www.deltarevision.com/history_of_california_travel.html</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>The Mapbook (Volume M-3), 2013 Public Draft EIR/EIS may provide the level of detail in labeling of places that the commenter is seeking. The maps throughout the EIR/EIS have been designed to provide the level of detail appropriate to depict the effects of conveyance facilities on these resource areas. Accordingly, not all maps are all the same scale; rather, the scale was selected on the basis of the nature of the effects for a given resource area. Labeling in many map figures has been minimized to be consistent with discussions in</p>

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			the narrative in order to maintain clarity and ease of use in the maps.
2639	14	<p>Water quality, especially salinity, is the biggest water-related issue in the Delta and statewide. In the Delta, the measurement of salinity for the last 100 years was reported as 1 [part per thousand] so when did we agree to switch to accepting 2 [parts per thousand] and why and for whom?</p> <p>Http://www.snugharbor.net/images-2014/bdcp/salinityonsteamboat.jpg</p> <p>EC [Electrical conductivity] and other measurements are traditionally used for levels of salt water, but the Delta was always freshwater. We all use drinking water wells in the Delta. If the drinking water wells are impacted in the "short term" from the drawdown of the Delta groundwater, what water will be left to replenish the Delta's groundwater since most of the Sacramento River water will be exported through tunnels so it will not be available to refresh our aquifer?</p> <p>Http://www.deltarevision.com/delta_and_bay_aquifer_impacts.html</p> <p>More on water quality past documents are at: http://www.deltarevision.com/Delta_maps/Water_salinity_toxins_wq.htm</p>	<p>Salinity in the Delta is a function of the amount and timing of freshwater input from the major tributaries, tidal action from San Francisco Bay, and exports from the Delta. During the late winter and spring months of seasonally elevated flows, and in wet years, seawater intrusion is limited and the Delta has mostly low salinity. During low-flow summer and fall months, and during dry years, lower freshwater flows result in greater amounts of seawater intrusion. Staff from DWR and USBR monitor Delta water quality conditions and adjust operations of the SWP and CVP in real time as necessary to meet water quality objectives set by the State Water Resource Control Board protection of agricultural water supply, municipal and industrial drinking water supply, and fish and wildlife beneficial uses.</p> <p>Effects of the alternatives on salinity levels are described in EIR/EIS Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity and Appendix A of the RDEIR/SDEIS. Modeling results indicate that the implementation of the water conveyance facilities may positively or adversely affect in-Delta water quality, depending on a number of factors including location, time of year, and hydrologic conditions. See tables in Appendices 8E through 8N for specific results related to various water quality constituents (including EC, bromide, and chloride). See also RDEIR/SDEIS Section 4.3.4 for a discussion on Alternative 4A's (the proposed project's) effects on water quality, salinity and electrical conductivity. For more information on changes to salinity and other water quality constituents with implementation of the proposed project, please see Master Response 14, Water Quality.</p> <p>In addition to potential effects associated with the proposed project and project alternatives, modeling results for the No Action Alternative indicate that, with or without the proposed project, rising sea levels will bring saline tidal water further into the Delta than occurs at present.</p> <p>With respect to groundwater recharge potential, as discussed in the Final EIR/EIS, the project description for Alternative 4A has been modified to include slurry walls constructed around the entire construction sites for intakes, tunnel shafts, and forebays. Dewatering activities will not occur until the slurry walls are completed, and dewatering actions would only occur to remove groundwater within the slurry walls. Therefore, the Final EIR/EIS indicates that groundwater in adjacent property are not anticipated to be affected by construction as compared to Existing Conditions, and the potential impacts have been designated as less than significant in this EIR/EIS.</p> <p>During operations, the north Delta intakes would not drain the Delta rivers and channels, including the Sacramento River. The conveyance facilities, including water intakes and pumping plants would be operated in accordance with permits issued by the State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife which could include the North Delta Bypass Flows, as described in Chapter 3 of the EIR/EIS, to maintain flows in the Sacramento River to protect aquatic resources and other water users. It should be noted that the Draft EIR/EIS also included potential impacts to groundwater quality in the western Delta and the southern portion of the north Delta due to implementation of tidal habitat restoration. As described in the Final EIR/EIS, the restoration actions are no longer included as part of the proposed project description; and the associated groundwater quality impacts are not anticipated to occur due to the proposed project.</p>
2640	1	<p>The twin tunnels alignment runs under Woodward Island and will have significant negative impacts to Reclamation District 2072's Flood Control and Drainage facilities. The EIR does not consider impacts to the Reclamation District and should be more detailed in the Final EIR.</p>	<p>Potential impacts from tunneling operations and damaged tunnels can be found in Chapter 9, Geology and Seismicity, FEIR/EIS.</p>
2640	2	<p>With the limited information provided following are preliminary impacts, concerns and issues regarding the tunneling operation:</p>	<p>GEO-3 has been revised to describe the expected width of the settlement "trough," the depth of settlement, and the change in ground slope that is anticipated at certain developed areas and infrastructure (including</p>

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		<p>The East Bay Municipal District (EBMUD) aqueducts cross Woodward Island from East to West parallel with the Districts North levee. The EBMUD pipes are supported by pilings and the tip of the pilings are likely deeper than 100 ft below MSL as shown on the 2013 EIR In Chapter 3 Figure 3-21. The tunnels and the aqueduct should be analyzed to determine a suitable separation such that the interface will not cause hydraulic or structural impacts to the levees and drainage system of the District.</p> <p>This is also true for the District drainage pumping plant and the BNSF Railroad trestle in the North Woodward Cut.</p>	<p>the EBMUD aqueducts and other critical infrastructure) as a result of the tunneling operation.</p> <p>Geotechnical engineering analyses and designs for specific facilities will be developed during the detailed design phase.</p>
2640	3	<p>With the limited information provided following are preliminary impacts, concerns and issues regarding the tunneling operation:</p> <p>Woodward Island has a high-water table, artesian aquifers under seepage and other hydraulic resources. Putting a penetration under the District will have a significant effect on the water table. Any additional water produced from the tunnel encroachment will significantly impact the Districts drainage and flood facilities as well as the agricultural operations.</p>	<p>The proposed project would not significantly impact local water supplies. While groundwater levels could be temporarily lowered in localized areas during the dewatering phases of construction, groundwater would return to pre-pumping levels over the course of several months following the dewatering phase. Mitigation has been proposed to maintain water supplies in areas affected by construction dewatering.</p> <p>Construction of the proposed project's facilities will occur in a manner specifically designed to avoid adverse effects on groundwater. As described in Appendix 3C, Table 3C-7, of the 2013 Public Draft EIR/EIS, ponds to store reusable tunnel materials and spoils material would be designed with the invert at least 5 feet above seasonally high groundwater and impervious liners along the invert and interior slopes of the ponds to avoid contamination.</p> <p>For more information regarding groundwater impacts and their associated mitigation of the proposed project please see Section 4.3.3 Groundwater of Section 4 in the RDEIR/SDEIS. Updated information on groundwater effects of water conveyance alternatives can be found in Appendix A Chapter 7 of the RDEIR/SDEIS.</p>
2640	4	<p>With the limited information provided following are preliminary impacts, concerns and issues regarding the tunneling operation:</p> <p>The Tunnels will go under the District's North and South levees and will affect the safety and stability of the levee. When a boring machine is installing the tunnels it will produce significant dynamic and hydraulic loads that will affect the levee.</p>	<p>Please see Appendix 6A, Section 6A.6.3.2, FEIR/EIS, for potential impacts from tunneling operations.</p>
2641	1	<p>The Environmental Justice Coalition for Water (EJCW), Restore the Delta, the Environmental Water Caucus (EWC), and our affiliated organizations present the following concerns on behalf of thousands of community members who would be negatively affected by the Bay Delta Conservation Plan (BDCP) and California WaterFix Project. We continue to oppose both the BDCP and California WaterFix. A misnomer, California WaterFix will be referred from here on as Tunnels Project. [Footnote 1: "California WaterFix" is a misnomer; it will not fix California water issues. We choose to call the project what it appears to be, a Tunnels Project. We think this best for commenting purposes.]</p> <p>Our organizations, as well as hundreds of thousands of limited English speakers who reside largely in low-income communities of color within the five Delta counties, request an extension and restart of the public comment period due to U.S. Bureau of Reclamation and the California Department of Water Resources(DWR)'s, failure to provide for meaningful access and participation of California's limited English speaking population, including limited English speakers who live in the Delta and are attempting to engage with the draft Bay Delta Conservation Plan and draft The Partially Recirculated</p>	<p>For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.</p> <p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation to provide the public with educational information that is based on reasonable assumptions supported by facts and expert opinions substantiated by facts. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website, www.BayDeltaConservationPlan.com and is available for review. Historical materials remain available for review and are labeled as achieved or superseded. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Chapter 32 of the EIR/EIS and Master Response 40.</p> <p>More information on how DWR has developed the project in an open and transparent manner is provided in</p>

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		Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). In particular, we request that the agencies hold public hearings and provide interpreters; translate vital documents such as, at the very least, the Executive Summary of the draft RDEIR/SDEIS; and provide affordable access to documents to allow low-income and limited English speakers to participate meaningfully in the process. RDEIR/SDEIS fail to allow meaningful participation and do not consider impacts of the Tunnels Project on environmental justice communities.	Master Response 41.
2641	2	<p>RDEIR/SDEIS do not meet Environmental Justice legal standards.</p> <p>The State of California has defined "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." [Footnote 2: California Government Code [Section] 65040.12(c).] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:</p> <p>CEQA participation requirements - CEQA requires a process that provides an opportunity for meaningful participation of the public. According to Public Resources Code Section 21061: "The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project can be minimized; and to indicate alternatives to such a project." Public Resources Code section 21003(b) provides: "Documents prepared pursuant to [CEQA] should be organized and written in such a manner that will be meaningful and useful to decision makers and to the public." CEQA Guidelines section 15201 explains that "Public participation is an essential part of the CEQA process. Each public agency should include provisions in its CEQA procedures for wide public involvement ... in order to receive and evaluate public reactions to environmental issues relating to the agency's activities." RDEIR/SDEIS fail to meet the purpose of CEQA and has obstructed meaningful and useful means to public participation. Lead agencies fail to translate critical documents and conduct sufficient outreach to affected communities to facilitate their meaningful participation.</p>	<p>Please refer to Section 28.3 in Chapter 28, and Chapter 32, Public Involvement, regarding public outreach and language accessibility. The project proponents have more than fulfilled the requirements of the Federal Executive Order, and have treated all groups of people fairly and inclusively. More than 22 scoping meetings occurred between 2008 and 2009. Twelve public meetings occurred in 2014 regarding the Draft EIR/S. Two public meetings occurred in 2015 regarding the RDEIR/SDEIS. Additionally, the following summary of outreach activities and strategies, consistent with EO 12898 and the obligations described under Section 28.4, Regulatory Setting, including Reclamation's NEPA guidance in the Draft NEPA Handbook requirements, presents how scoping and other outreach considered minority and low-income populations. These activities included, but were not limited to, the following.</p> <ul style="list-style-type: none"> - Providing notification and announcements of scoping meetings in culturally diverse newspapers and on radio stations serving culturally diverse audiences. - Conducting scoping meetings within affected communities during evening hours in an effort to involve low-income and minority communities outside of working hours. - Providing translators at public scoping meetings. - Providing the BDCP project Website in Spanish. - Providing a multi-lingual information hotline for project information in English, Spanish, Tagalog, Vietnamese, or Chinese (Mandarin). <p>For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.</p>
2641	3	<p>RDEIR/SDEIS do not meet Environmental Justice legal standards.</p> <p>The State of California has defined "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." [Footnote 2: California Government Code [Section] 65040.12(c).] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation</p>	Please see Response to Comment 2641-2, above.

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		<p>with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:</p> <p>NEPA participation requirements and Equal Justice Executive Order 12898: Federal Executive Order (EO) 12898 (1994), Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires Federal agencies to make environmental justice part of their mission and to develop environmental justice strategies. The Presidential Memorandum accompanying the Executive Order specifically singles out NEPA, and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices." (Memorandum from President Clinton, March 1994, available at http://www.epa.gov/fedfac/documents/executive_order_12898.htm.) [Footnote 3: Memorandum from President Clinton, March 1994, available at http://www.epa.gov/fedfac/documents/executive_order_12898.htm.] RDEIR/SDEIS fail to meet NEPA participation requirements and the Presidential Memorandum for effective community participation in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices.</p>	
2641	4	<p>RDEIR/SDEIS do not meet Environmental Justice legal standards.</p> <p>The State of California has defined "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." [Footnote 2: California Government Code [Section] 65040.12(c).] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:</p> <p>Title VI of the Civil Rights Act of 1964 provides: "No Person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." [Footnote 4: Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency," See 65 Fed. Reg. 50,121 (Aug. 16, 2000). EPA "Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 69 Fed. Reg. 39602. (June 25, 2004). Lau v. Nichols, 414 U.S. 563 (1974) providing that National Origin Discrimination to Limited English Speakers. See also Executive Order 13166, 65 Fed. Reg. 50,121 121 (Aug. 16, 2000), and 69 Fed. Reg. 39602 (June 25, 2004).] Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency," See 65 Fed. Reg. 50,121 (Aug. 16, 2000). EPA "Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 69 Fed. Reg. 39602. (June 25, 2004). Lau v. Nichols,</p>	Please see Response to Comment 2641-2, above.

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		<p>414 U.S. 563 (1974) providing that National Origin Discrimination to Limited English Speakers. RDEIR/SDEIS fail to meet Title VI of the Civil Rights Act of 1964, Executive Order 13166, 65 Fed. Reg. 50,121 121 (Aug. 16, 200), and 69 Fed. Reg. 39602 (June 25, 2004) by failing to provide sufficient documents for information affecting limited English speaking communities, thus excluding them from participation.</p>	
2641	5	<p>RDEIR/SDEIS do not meet Environmental Justice legal standards.</p> <p>The State of California has defined "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." [Footnote 2: California Government Code [Section] 65040.12(c).] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:</p> <p>California Government Code section 11135 (a) and implementing regulations in the California Code of Regulations Title 22 Sections 98211 (c) and 98100. Government Code 11135(a) provides: "No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, genetic information, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state." RDEIR/SDEIS fail to meet California Government Code section 11135 (a) and California Code of Regulations Title 22 Sections 98211 (c) and 98100 by unlawfully denying full and equal access to documents for EJ communities.</p>	Please see Response to Comment 2641-2, above.
2641	6	<p>RDEIR/SDEIS do not meet Environmental Justice legal standards.</p> <p>The State of California has defined "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." [Footnote 2: California Government Code [Section] 65040.12(c).] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:</p> <p>The Dymally-Alatorre Bilingual Services Act - Government Code Sections 7290-7299.8 which requires that, when state and local agencies serve a "substantial number of non-English speaking people," they must among other things translate documents</p>	Please see Response to Comment 2641-2, above,

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		explaining available services into their clients' languages. RDEIR/SDEIS fail to meet the Dymally-Alatorre Bilingual Services Act - Government Code Sections 7290-7299.8 by not providing at minimum the Executive Summary in languages other than English. [Footnote 5: California Government Code Sections 7290-7299.8.]	
2641	7	<p>RDEIR/SDEIS fail to consider environmental justice communities.</p> <p>Language Accessibility and Public Participation:</p> <p>The Tunnels Project still fails to uphold federal principles of environmental justice that are to be implemented under not only the National Environmental Policy Act of 1969, but also federal and state civil rights laws. The Tunnels Project has failed to provide adequate public outreach and translated documents that would allow a comprehensive and objective view of the project and its impacts on the Delta and surrounding environmental justice communities--communities disproportionately exposed to environmental health burdens.</p> <p>Impacts from the Tunnels Project will include the relocation of residents from their homes, loss of jobs, inability to access fish for basic nutrition, increased health risks from the higher degree of contamination in the fish that are accessible, higher water rates as urban municipal water systems will be forced to upgrade their water treatment systems, exposure to increased water contaminants like methylmercury, selenium, salt, pesticides, and other chemical toxins when recreating at county and state parks within the Delta, and inability to navigate waterways when fishing and/or reach communities in a timely fashion during the 10-year construction period.</p> <p>Unfortunately, Bay Delta Conservation Plan & the Tunnels Project have left few traces of what EJ outreach they may have done in their extensive archive of meetings and plan documents online and in its meeting schedule involving other stakeholders.</p>	<p>The commenter raises issues related to impacts associated with residential relocations, socioeconomics, environmental justice, water quality, navigation and recreation. Potential impacts and mitigation measures for impacts to these resources are provided in Chapters 5-30 of the Draft EIR/EIS and Sections 4 and 5 of the RDEIR/SDEIS.</p> <p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation duty to provide the public with educational information that is based on reasonable assumptions supported by facts and expert opinions substantiated by facts. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website, www.BayDeltaConservationPlan.com and is available for review. Historical materials remain available for review and are labeled as achieved or superseded. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Master Response 40.</p> <p>More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.</p> <p>For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.</p>
2641	8	<p>The agencies have still failed to respond adequately to requests for materials & outreach in Spanish and other languages. Currently, only some documents (e.g., Fast Facts) are available in languages other than English and present content that is too limited in scope for the target audience to use it to engage meaningfully in the decision-making process. As one example, the Fast Facts document is available in six languages, but only presents promotional information. Moreover, the contents of the translated documents present information that is misleading about the impacts of the Tunnels Project.</p> <p>The Fast Facts document claims to address certain issues raised in comments received on the Draft EIR/EIS. However, nowhere in this four-page document are the negative impacts of the tunnels--on public health, health of communities, water quality and subsistence fishing, impact on small communities, air quality, etc., mentioned. The RDEIR/SDEIS documents are still not available in other languages, thus making them inaccessible not just to individuals, but to many communities as a whole which have a high percentage of limited English speakers.</p>	<p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation to provide the public with educational information that is based on reasonable assumptions supported by facts and expert opinions substantiated by facts. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Multi-lingual information on this website is available in Spanish, Hmong, Vietnamese, Chinese, Tagalog and Cambodian. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website, www.BayDeltaConservationPlan.com and is available for review. Historical materials remain available for review and are labeled as achieved or superseded. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Master Response 40.</p> <p>More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.</p> <p>For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.</p>
2641	9	When our community members and partners have called the contact number for more information in Spanish, they are prompted to leave a message. After leaving a message,	All persons calling the hotline are prompted to leave a message, regardless of what language. All messages were responded to as quickly as possible. Every effort was made to provide the information requested by all

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		our colleagues reported that the messages were returned only after a week had passed. Immediate questions or concerns were left unanswered or referred to the Fast Fact sheet for answers that do not exist on those sheets.	callers. The commenter does not provide a specific name or date of the call so a specific response cannot be provided.
2641	10	As noted in a May 28, 2014, letter regarding, then, the lack of access for limited English speakers, the environmental justice survey completed to support Chapter 28 of the EIS/EIR (Environmental Justice) excluded non-English speakers within the Delta. Since then, no efforts have been made to publish even the Executive Summary in languages other than in English.	<p>For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.</p> <p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation to provide the public with educational information that is based on reasonable assumptions supported by facts and expert opinions substantiated by facts. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website, www.BayDeltaConservationPlan.com and is available for review. Multi-lingual information on this website is available in Spanish, Hmong, Vietnamese, Chinese, Tagalog and Cambodian. . Historical materials remain available for review and are labeled as achieved or superseded. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Chapter 32 of the EIR/EIS and Master Response 40.</p> <p>More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.</p>
2641	11	Last year, we also commented that the closing of the BDCP forum to critical comment is contrary to the promise of encouraging public participation. This year, the two open house sessions held on July 28, 2015, in Sacramento and the second on July 29, 2015, in Walnut Grove were ostensibly conducted for the purpose of collecting public feedback on the then-current status of the BDCP and Tunnels Project. The open house process once again avoided meaningful public participation and a traditional public hearing process by presenting a "science fair" style open house. In addition, the open house was hosted during typical working hours, which, while convenient for the agencies which staffed the event, did not allow many community members to participate (and contrary to the open house's very purpose: to elicit and capture public comments on the BDCP and Tunnels Project). Attendees of these open house meetings conveyed to us that no interpretive services were advertised at these meetings for hearing impaired persons.	The commenter raises issues related to the format of the public meetings. There is no specific meeting format required under CEQA or NEPA. An overview brochure as well as the Executive Summary were available as handouts and numerous members of the project team were available to answer specific questions from meeting attendees. The meetings were held from 3:00 p.m. to 7:00 p.m. in order to allow agency staff to attend during working hours while also being available for the general public to attend after working hours. Newspaper notices for the meetings provided the hotline number for those with special needs. Interpretive services for the hearing impaired were not requested before, during or after any of the public meetings. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Chapter 32 of the EIR/EIS and Master Response 40. For additional information about how this project has been developed in an open and transparent manner, please refer to Master Response 41.
2641	12	<p>Land Use, Flood Risk, and Affordable Housing:</p> <p>The Tunnel Project still fails to consider how affordable housing opportunities will still be maintained as land use changes are implemented. Impacts on low-income homeowners, such as threats to public safety and lowered home value must be addressed as part of any proposed land use changes for which the RDEIR/SDEIS call. Disproportionate impacts of flooding on renters must be mitigated for all residents of the Delta. The impacts on existing communities of alterations in land use plans must be evaluated, particularly the potential for increased vulnerability to flooding.</p> <p>A sustainable Delta will require dramatic changes in land use decisions. The Delta is already over-developed, thereby limiting choices for flood attenuation and increasing the potential for catastrophic damage associated with a seismic event. As those choices are made, the potential exists to provide equitable benefits in planning for EJ</p>	<p>Please see Appendix 6A, BDCP/California WaterFix Coordination with Flood Management Requirements, Section 6A.6.2.1.3, FEIR/EIS, for a discussion on DWR consistency with the State Plan of Flood Control (SPFC), and Section 6A.6.1.2 for information on project consistency with USACE, CVFPB, and DWR flood standards and regulations. Overall, construction and operations of the proposed project would not increase flood risk to people or structures in the Delta.</p> <p>Also, see Chapter 13, Land Uses, Chapter 16, Socioeconomic, and Chapter 28, Environmental Justice, for impacts to land use, socioeconomics, and minority and low-income populations, respectively. The Flood Risk Reduction Section in Chapter 30 states that it is not expected that there will be changes to land use or zoning designations within the Plan Area. Finally, the proposed project does not include "super levees" as a project component. Please see Chapter 3 in the FEIR/EIS for a description of the new proposed project, Alternative 4A.</p>

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		<p>communities, but there is also the threat of disproportionate impacts on those same communities. For this reason, a sustainable vision for the Delta must identify and account for the particular impacts on EJ communities.</p> <p>Changes in allowable land use patterns must be an element of a sustainable Delta. Current patterns of development will leave entire communities at risk in the event of one or more seismic event and/or flooding. We are deeply concerned that the Tunnel Project facilities and alignments may foreclose otherwise viable options for improving land use and affordable housing for the Delta's poorest residents. A disproportionate number of the developments the Tunnels Project would put at risk are populated by low-income, predominantly Latino residents. Changes in flood mapping and zoning will have a profound effect on these developments, while their ability to recover from a flood event is limited.</p> <p>Moreover, these existing communities may be detrimentally impacted by the advent of upper scale developments protected by new "super levees," which have the potential to re-route floodwaters in ways that may negatively impact lower income communities. The following figures taken from Draft EIR/EIS (Appendix: Figures 6-5 SPFC and Non-SPFC Levees [ATT1], 6-6 Reported Delta Levee Problem Areas [ATT2], 6-7 Effective Federal Emergency Management Agency Flood Zones [ATT3], 28-1 Minority Populations in the Plan Area [ATT4], and 28-2 Low-Income Populations in the Plan Area [ATT5]) demonstrate that FEMA flood zone encompasses much of the central, south, and western Delta as well as Suisun Marsh where many low-income and minority Delta residents live. RDEIR/SDEIS fail to analyze the impacts to communities whose transportation routes could be disrupted due to flood impacts.</p> <p>At an even greater disadvantage are communities that reside in, but do not own property in, floodplains—including tenants and farmworkers. These communities receive less assistance than property owners after a flood event and are more likely to be permanently displaced and suffer a total or near total loss of their movable property. Any emergency plan must target the special needs and vulnerabilities of these residents as well as their capacity to lead their own recovery effort, if it is, in fact, supported with resources.</p> <p>As development becomes limited and/or more expensive in floodplains, the supply of low-income housing will be curtailed. Any land use changes must include a plan for provision of affordable housing for the current and expected population in the Delta Region. No such plan appears in the RDEIS/DEIR.</p>	
2641	13	<p>Public Health & Water Quality:</p> <p>The Tunnels Project degrades rather than protects or enhances the water quality in the Delta. In addition, water quality and other assessments in Chapter 25 Public Health are based on many decisions/papers published prior to our drought conditions and do not effectively consider public health impacts for environmental justice communities. The impact of the drought and incomplete environmental assessment confound many of the conclusions made in RDEIR/SDEIS. Several concerns for water quality and its public health impact on environmental justice communities remain with the RDEIR/SDEIS.</p> <p>The Tunnels Project creates an overall pattern of inequitable and discriminatory water quality impacts, several of which would have public health implications. That general pattern is this: by diverting the Sacramento River right as it enters the Delta, the Tunnels</p>	<p>The comment raises concerns regarding degradation of water quality in the Delta due to implementation of the proposed project. The constituents identified in the comment were assessed in detail in Chapter 8, Water Quality, of the EIR/EIS relative to thresholds of significance that included address of degradation and impacts to beneficial uses. Of the constituents noted in the comment, only electrical conductivity (a salinity-related parameter) was identified as significant for the preferred alternative, Alternative 4A, due to degradation (Impact WQ-11), and mitigation was provided to reduce that impact to less than significant level (Mitigation Measure WQ-11).</p> <p>As described in Section 28.5.1.2 of Chapter 28, Environmental Justice, the chapter first identifies adverse impacts from other resource areas, and then analyzes those impacts to see if they would disproportionately affect environmental justice populations. Any adverse water quality-related public health impacts that would disproportionately affect meaningfully greater minority or low-income populations are analyzed in Chapter 28. Under the preferred alternative, 4A, although Impact PH-3 is not considered adverse or</p>

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		diversions reduce flows and slows down water, which increases residence time, which, in turn, concentrates salinity and pollutants in the western and central Delta, while privileging export water quality south of the Delta over in-Delta beneficial uses. This happens over and over again in the RDEIR/SDEIS modeling results for boron, bromide, chloride, salinity, nitrate, pesticides, mercury, selenium, and dissolved organic carbon. It contributes to why harmful algal blooms will be significant and adverse impacts of the project down the road. These and other water quality constituents, which were not modeled in the RDEIR/SDEIS, all worsen for south and west Delta water ways and the Suisun Marsh and improve for the export pumps. This is a conscious decision to sacrifice in-Delta water quality and the environmental justice communities that rely on it; it is an integral part of the Project design and purpose and the water quality modeling, however incompletely done, bears that out. [Footnote 6: See Project Objectives at 1-8, Section 1.1.4.1, lines 18-21, stating "DWR's fundamental purpose in proposing the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ... water quality within a stable regulatory framework, consistent with statutory and contractual obligations" and Project Objectives at 1-8, Section 1.1.4.1, lines 34-37, stating project objectives include to "[r]estore and protect the ability of the SWP and CVP to deliver up to full contract amounts...".]	significant in Chapter 25, because a potential bioaccumulation of constituents would be likely to significantly affect environmental justice populations more than the general population, they are analyzed in this section. For additional information regarding water quality, please see Master Response 14.
2641	14	As noted in RDEIR/SDEIS Chapter 25-66, there are significant bromide effects on drinking water quality, which relate to precursors for carcinogenic disinfectant byproducts—a significant water supply treatment cost issue for both municipal exporters and in-Delta municipal drinking water suppliers, like Stockton, Walnut Grove, Isleton, Rio Vista, etc. Treatment plan upgrades would further increase the burden of water accessibility on small and low-income communities.	Please refer to the Public Health section under Alternative 4A of Chapter 28, Environmental Justice, for a description of effects regarding bromide on environmental justice communities. For additional information regarding water quality, please see Master Response 14.
2641	15	As noted in the RDEIR/SDEIS, public health impacts from Microcystis blooms have yet to be fully assessed. [Footnote 7: RDEIR/SDEIS, Appendix A, Chapter 25.3.3.2.] As RDEIR/SDEIS state, public health impact would be significant and unavoidable.	The potential effects of the alternatives on Microcystis bloom formation potential in the Delta, and impacts to human health, has been fully assessed in the EIR/S in Chapter 8, Water Quality, in Impacts WQ-32 and WQ-33 and in Chapter 25, Public Health, in Impacts PH-8 and PH-9. The degree of potential impact on human health and drinking water supplies due to microcystins cannot be quantified in the analysis. To do so would be speculative. The assessments recognize the potential impacts to drinking water uses and human health. Hence, Mitigation Measure WQ-32 is provided to reduce the severity of the significant impacts identified for Alternatives 1 through 9; Alternatives 4A (the preferred alternative), 2D, and 5A would not have significant impacts such that there would be a substantial increase in Microcystis bloom formation and, therefore, mitigation would not be necessary or required. For additional information regarding water quality, please see Master Response 14.
2641	16	RDEIR/SDEIS still fails to comprehensively evaluate the public health impacts on small communities on fish consumption and exposure to methylmercury. Species of fish affected by the Tunnels project are pursued during subsistence fishing by populations already burdened with environmental injustice. Despite the RDEIR/SDEIS stating the adverse effects and negative health impacts of the Tunnels Project, more investigation and analysis needs to be completed. [Footnote 8: RDEIR/SDEIS, Appendix A, Chapter 28.5.8.7.] As noted in Environmental Water Caucus' letter submitted October 30, 2015, Interior Suisun Marsh salinity is expected to increase substantially from operation of the Tunnels, according to data in the RDEIR/SDEIS. [Footnote 9: Environmental Water Caucus Comments on Recirculated Draft EIR/Supplemental Draft EIS for Bay Delta Conservation Plan and Tunnels Project, submitted October 30, 2015.] Reverse flows on the lower Sacramento River will increase, which may injure neighboring water right	For additional information regarding methylmercury, please see Master Response 14, Water Quality.

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		holders. Numerous water quality pollutant criteria and beneficial uses will be violated and conditions degraded. And subsistence fishers may be harmed by worsening mercury and selenium concentrations contaminating fish tissues in the long term, resulting from Tunnels operations.	
2641	17	BDCP's analysis of selenium as a water quality stressor is inadequate for failing to acknowledge or address uncertainties about the regulatory and technological setting of the Grassland Bypass Project and long-term management and mitigation of selenium loading to the San Joaquin River in the western San Joaquin Valley. [Footnote 10: The California Water Impact Network provided the State Water Board with testimony about the Grassland Bypass Project's limitations and the broad overview of the challenges Grassland area farmers face in developing and implementing a cost effective treatment technology for concentrating, isolating, managing and sequestering selenium. California Water Impact Network. 2012. Testimony on Recent Salinity and Selenium Science and Modeling for the Bay-Delta Estuary, prepared by T. Strohane and submitted to the State Water Resources Board Workshop #1 Ecosystem Changes and the Low Salinity Zone, September 5 (and 6, if necessary), 44 pages plus appendices. Accessible online 26 October 2015 at http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/cmnt081712/tim_strohane.pdf] These projects indicate the ecological and public health risks of various scenarios of selenium loading to the Bay Delta Estuary. BDCP irresponsibly downplays the risks and foreseeable costs and circumstances involved.	Please refer to Master Responses 14 regarding selenium.
2641	18	The RDEIR/SDEIS have conducted no analysis of in-Delta water demand and subsistence fishing patterns represented by these beneficial uses when it conducts its operational studies of the Tunnels Project. These uses are protected by, among other statutes, the Delta Protection Act of 1959. Additional evaluation must be conducted and allow for proper public participation to apply the precautionary principle, rather than allowing real-time operational decisions to exacerbate environmental injustices for Delta-dependent communities. [Footnote 9: Environmental Water Caucus Comments on Recirculated Draft EIR/Supplemental Draft EIS for Bay Delta Conservation Plan and Tunnels Project, submitted October 30, 2015.]	Please also see Appendix 3J, Alternative 4A (Proposed Project) Compatibility with the Delta Plan, regarding specific compatibility with the proposed project. Please also see Chapter 28, Environmental Justice, regarding impacts to subsistence fishing. The analysis presented in the FEIR/S meets CEQA and NEPA requirements. For more information regarding the adequacy of public outreach efforts please see Master Response 40.
2641	19	To ensure that community health and the environment are protected in the Tunnels Project, we recommend that decisions on changes in conveyance and operation of Delta water infrastructure be incremental and reversible, dependent upon the measured impact on the ecosystem. This can only be done by having habitat restoration proceed first, so that the public knows it will succeed. Success for the Delta common pool resources should be assured before any Twin Tunnels project is deemed safe to develop. Agricultural and storm water discharges must be limited to protect water quality. Remediation of mine sites and stream beds must be prioritized and ecosystem restoration projects must be prioritized, sited, and designed so as to limit the potential for additional methylation of mercury and the related health impacts to wildlife and human health.	Please see Response to Comment 2641-2, above.
2641	20	The lack of consideration for environmental justice communities, lack of proper assessment of public health impacts and mitigation efforts, lack of access to information regarding the project, lack of provision of adequate oral and written bilingual information, failure to notice meetings in various languages, and limited public access to the document through required computer access, exorbitant fees violate the below cited principles of environmental justice and constitutes violations of CEQA and NEPA, as	Please see Response to Comment 2641-2, above.

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		well as federal and state civil rights of a significant population of the five Delta counties.	
2641	21	The Tunnels Project fails to consider, fully, impacts on categories including and not limited to public health, water quality, subsistence fishing, land use, flood risk, affordable housing, public participation, and language accessibility for environmental justice communities. The lead agencies violate Civil Rights and Environmental Law and fail to meet Environmental Justice legal standards. For the reasons listed above, the BDCP/Tunnels Project presents an environmental injustice and should not proceed, as proposed.	<p>A detailed description of the methodology used in Chapter 28 is located in Section 28.5.1.2 of Chapter 28, Environmental Justice. This environmental justice assessment is limited to effects that have been identified as adverse even with mitigation. These effects were then carried forward and screened for their potential to result in disproportionate adverse effects on environmental justice populations. For effects that were determined not adverse, no additional evaluation is needed because those effects would not result in disproportionate effects on minority and low-income populations. This method of screening effects is consistent with the CEQ guidance (Council on Environmental Quality 1997:25). Issues not analyzed in detail in this chapter, such as land use, public health, and water quality, are described in Section 28.5.3.1 of Chapter 28. However, additional detail related to microcystis and mercury related to subsistence fishing have been added to the chapter. Affordable housing is not a CEQA or NEPA issue.</p> <p>Please see Response to Comment 2641-2, above.</p> <p>For additional information on Water Quality, please see Master Response 14.</p> <p>For additional information on Environmental Justice, please see Master Response 27.</p> <p>For additional information on the State Plan of Flood Control, please see Master Response 8.</p>
2641	22	[ATT1: Figure 6-5. SPFC and Non-SPFC Levees.]	This comment describes an attachment to the comment letter that was considered in the responses above.
2641	23	[ATT2: Figure 6-6. Reported Delta Levee Problem Areas.]	This comment describes an attachment to the comment letter that was considered in the responses provided above.
2641	24	[ATT3: Figure 6-7. Effective Federal Emergency Management Agency Flood Zones.]	This comment describes an attachment to the comment letter that is considered in the responses to the comment letter shown above.
2641	25	[ATT4: Figure 28-1. Minority Populations in the Plan Area.]	This comment describes an attachment to the comment letter that was considered in the environmental analysis as described above.
2641	26	[ATT5: Figure 28-2. Low-Income Populations in the Plan Area.]	This comment describes an attachment to the comment letter that was considered in the environmental analysis as indicated in the responses above.
2641	27	The Environmental Justice Coalition for Water groups object to the proposed Bay Delta Conservation Plan/"California WaterFix" Tunnels Project. The Bay Delta Conservation Plan/"California WaterFix" Tunnels Project do not meet Environmental Justice legal standards. We find the Recirculated Draft EIR/Supplemental Draft EIS released this past July lacking proper consideration for low-income communities and environmental justice communities. The RDEIR/SDEIS fail to consider, fully, impacts on categories including and not limited to public health, water quality, subsistence fishing, land use, flood risk, affordable housing, public participation, and language accessibility for environmental justice communities.	<p>A detailed description of the methodology used in Chapter 28 is located in Section 28.5.1.2 of Chapter 28, Environmental Justice. This environmental justice assessment is limited to effects that have been identified as adverse even with mitigation. These effects were then carried forward and screened for their potential to result in disproportionate adverse effects on environmental justice populations. For effects that were determined not adverse, no additional evaluation is needed because those effects would not result in disproportionate effects on minority and low-income populations. This method of screening effects is consistent with the CEQ guidance (Council on Environmental Quality 1997:25). Issues not analyzed in detail in this chapter, such as public health and water quality, are described in Section 28.5.3.1 of Chapter 28. However, additional detail related to microcystis and mercury related to subsistence fishing have been added to the chapter. Affordable housing is not a CEQA or NEPA issue. Please refer to Section 28.3 in Chapter 28, and Chapter 32, Public Involvement, regarding public outreach. More than 22 scoping meetings occurred between 2008 and 2009.</p> <p>Please see Response to Comment 2641-2, above</p> <p>For additional information on Water Quality, please see Master Response 14.</p>

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			<p>For additional information on Environmental Justice, please see Master Response 27.</p> <p>For additional information on the State Plan of Flood Control, please see Master Response 8.</p>
2642	1	<p>The analysis of alkali seasonal wetlands in the RDEIR/S needs to differentiate and specify impacts to and mitigations for rare iodine bush scrub occurring near Clifton Court Forebay. The rare iodine bush scrub type (<i>Allenrolfea occidentalis</i> Shrubland Alliance) of alkali seasonal wetland complex occurs at the extreme northwest edge of its range proximal to the Clifton Court Forebay (within what was termed Conservation Zone 8 in the BDCP DEIR/S). It is not possible to create additional alkali wetlands of this type, therefore protection of this plant community must be through avoidance and/or protection of compensatory mitigation areas. In the previous BDCP DEIR/S (March 2013), the summary of net effects to alkali wetlands correctly found that: "Protection of alkali seasonal wetland complex in Conservation Zone 8 provides the only opportunity in the Plan Area to protect the rarer woody iodine bush scrub type alkali seasonal wetland natural community." [see BDCP DEIR/S (March 2013), Chapter 5, sections 5.4.7.2 and 5.4.7.3 p. 5-22, lines 1-31]</p> <p>However the summary of effects to alkali wetlands provided in the analysis of Alternative 4A (CEQA /NEPA preferred alternative) within the RDEIR/S is less clear on the need to distinguish between alkali wetland types: "The construction losses of this special-status natural community would represent a significant impact if they were not offset by avoidance and minimization measures and other actions associated with the project's environmental commitments. Loss of alkali seasonal wetland complex natural community would be considered both a loss in acreage of a sensitive natural community and a loss of wetland as defined by Section 404 of the CWA. However, the protection of 150 acres of combined vernal pool/alkali seasonal wetland complex as part of Environmental Commitment 3, the restoration of 34 acres of these communities as part of Environmental Commitment 9, Resource Restoration and Performance Principles VP/AW2-VP/AW4, and the implementation of AMM30 Transmission Line Design and Alignment Guidelines during construction of Alternative 4A would offset this loss, avoiding any significant impact. Typical project-level mitigation ratios (2:1 for protection and 1:1 for restoration) would indicate 4 acres of protection and 2 acres or restoration would be needed to offset (i.e., mitigate) the 2 acres of loss. AMM1, AMM2, AMM3, AMM4, and AMM10 would also be implemented to minimize impacts. Because of the offsetting protection and restoration activities and AMMs, impacts would be less than significant." [RDEIR/S Section 4 - New Alternatives in section 4.3.8 Terrestrial Biological Resources, under Impact BIO-18 page, 4.3.8-36, lines 1-14]</p> <p>Because the RDEIR/S fails to make clear that the impacted acres of rare woody iodine scrub will need to be protected within the project area near Clifton Court Forebay (i.e., Conservation Zone 8), and the pieces of information required to make this finding are scattered across different chapters and between different versions of the DEIR/DEIS and RDEIR/RDEIS, we want to emphasize this point herein. The only opportunity to offset impacts to the rare alkali type is to avoid and/or protect suitable acreage of the same type within the area (Conservation Zone 8) where it occurs.</p>	<p>Differentiation of iodine bush scrub as a component of the grassland, vernal pool complex, and alkali seasonal wetland habitats adjacent to Clifton Court Forebay has been added the discussion of impacts for each of these habitat types in the Final EIR/EIS. Clarification that protection of iodine bush scrub in the vicinity of Clifton Court Forebay would be needed to compensate for impacts on the plant community has been added to the discussion of mitigation requirements for each of these habitat types.</p>
2642	2	<p>The RDEIR/S fails to analyze and disclose reasonably foreseeable adverse effects from growth inducing potential of project. In the revised Chapter 30 - Growth Inducement and Other Indirect Effects, the RDEIR/S provides additional narrative regarding reasonably foreseeable growth-inducing effects, both direct and indirect, that could be</p>	<p>The comment raises import policy issues concerning sustainable growth and available water supplies in California; specifically to consider and evaluate the likely future growth and development within the Tulare Lake hydrologic region of Fresno, Kings, Tulare, and Kern counties. The comment suggests that the Final EIR/EIS should fully disclose the full range of environmental effects that would accompany such growth and</p>

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		<p>caused by the proposed project. We agree with the basic assumption employed for the purposes of analyzing growth-inducing potential, that any increase in water supplies and/or improvements in water supply reliability associated with the proposed project will stimulate growth. However, the conclusion of the subsequent analysis fails to provide disclosure of reasonably foreseeable affects in areas poised for significant growth but currently limited by water availability. Specifically, the RDEIR/S fails to include an analysis - or even a mention - of how and where growth inducing effects would occur in places like the southern San Joaquin Valley as a result of project implementation. The RDEIR/S avoids such analysis by continuing the unacceptable practice found within the BDCP DEIR/S (2013) of selectively claiming which analyses of future conditions are too speculative to be considered, and which are not. For example, the RDEIR/S correctly finds that: "Developing housing and implementing the services needed for population increases would generate impacts at locations where that growth would occur." [RDEIR/S Chapter 30, p. 30-4, lines 22-23] But then shirks its responsibility to analyze and disclose further the impacts associated by stating: "Identifying the specific locations and characteristics of that growth—and, consequently, the specific environmental impacts of that growth—would be speculative. However, the impacts associated with such development can be characterized generally based on reviews of environmental impacts on general plans in the areas where this growth could occur." [RDEIR/S Chapter 30, p. 30-4, lines 23-27] Modeling greenhouse gas (GHG) emissions and other environmental impacts associated with reasonably foreseeable community growth in affected areas outside of the Delta region (e.g., southern San Joaquin Valley) is deemed too speculative to analyze, though modeling the economic benefits of the project to these indirectly affected areas was not (BDCP Statewide Economic Impact Analysis Report (ICF, August 2013)). Further, the RDEIR/S itself attempts to justify by making arguably the most speculative claim of all: "...assuming conditions favorable to growth were present, growth would likely still occur absent projected increases in deliveries under the BDCP. Contractors would seek to develop alternative supplies. Consequently, the impacts of growth would likely still occur but would be attributable to other water supply projects." [bold text added for emphasis; RDEIR/S Chapter 30, p. 30-3, lines 29-32] Which alternative supplies? What other water supply projects could rival the magnitude and duration of water delivery that this project represents? The RDEIR/S fails to analyze growth-inducing effects that could occur across the southern San Joaquin Valley, a region poised for growth where a burgeoning southland population would move into given increased water availability and reliability. Such a scenario falls well within the realm of what is reasonably foreseeable given the parcelization of major landowners capable of securing water rights in this region, several multi-thousand unit housing development proposals moving northward from Los Angeles, and the development of major transportation infrastructure to / from this region (e.g. High Speed Rail). Lack of water availability is the fundamental obstacle limiting community expansion across the southern San Joaquin Valley. Previously, the BDCP DEIR/S considered adverse effects from growth within the southern San Joaquin Valley (as it relates to the Tulare Lake hydrologic unit area) for only the City of Bakersfield. (footnote 1: BDCP DEIR / DEIS Appendix 30C - Summary of Significant Impacts of Secondary Effects of Growth. See especially Table 30C-3, pp. 30C-37 through 47. (ICF, November 2013)) Analysis of growth-inducing effects of the project to this region remain woefully inadequate. What potential adverse effects would new communities, much of which would include a commuter population to / from the greater Los Angeles region, have on statewide greenhouse gas emission limits and goals? What effects would growth here have on the state's agricultural economy? How might potential new community growth resulting from increased water availability</p>	<p>development.</p> <p>The comment suggests that the proposed project would itself allow for this growth, and that the future growth in these counties would not likely occur without the additional water supply reliability that the proposed project would provide. The Environmental Setting of Final EIR/EIS Chapter 30 was revised to present a more complete summary of the water supplies and water uses (i.e., demands) in each California hydrologic region, including the Tulare Lake region. As described in the comment, urban development is likely to continue in this vibrant portion of California; the available water supplies will likely shift slightly to provide the additional urban water supplies needed to support this population growth. If no additional water is imported to the region (from the Friant-Kern canal and the California Aqueduct), some fraction of the current agricultural water uses will likely be purchased (re-allocated) to urban water uses.</p> <p>As summarized in Final EIR/EIS Chapter 30, Table 30-2 in the Environmental Setting/Affected Environment section, the 2010 population in the Tulare Lake region was about 2.3 million, and the urban water use was estimated as 750 taf/yr, with an average urban water use of 0.33 af/person. The population is projected to increase by about 60% by 2050, to a population of 3.6 million people. The additional urban water supply needed would be about 450 taf/yr. Also summarized in Table 30-2, the existing agricultural water use in the Tulare Lake region needed to irrigate about 3 million acres of crops is almost 11,000 taf/yr, for an average agricultural water use of 3.5 af/acre. Table 30-4 summarizes the existing water supplies within each hydrologic region. For the Tulare Lake region, the existing water supplies total about 11,500 taf/yr; there are about 2,000 taf/yr diverted from the local rivers, about 3,000 taf/yr imported, and about 6,500 taf/yr of groundwater pumping. The existing CVP/SWP water from the Delta provides about 2,000 taf/yr of the imported water supplies, with the Friant-Kern canal providing about 1,000 taf/yr. This information is provided to indicate that the growth inducing effects of the increased Tulare Lake region water supply from the proposed project, estimated to be about 32 taf/yr (Table 30-16b) would not likely be a strong incentive for additional growth; this additional water would provide about 7% of the additional water for urban growth (i.e., 32/450). As suggested in Chapter 30, the environmental effects from urban growth in each county of California are more accurately and comprehensively included in the local and region planning and individual project environmental documents.</p>

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		<p>impact the valley economies of Fresno, Kings, Tulare, and Kern Counties? These issues must be addressed as part of any analysis of adverse growth-inducing effects of project implementation, and the RDEIR/S fails to do so. Such an analysis could draw from existing and ongoing planning efforts for the region (e.g., Habitat Conservation Plans, San Joaquin Valley solar least-conflict lands study) and would not need to be created de novo. At the very least, a qualitative consideration of where and how these impacts might occur in the southern San Joaquin Valley, and what impact they would have in a statewide context must be developed in order for the RDEIR/S to meet its obligations to fully analyze and disclose reasonably foreseeable effects caused by the project. To conclude that increased water availability and reliability will generate growth-inducing pressure south of the Delta, but that, “Decision-makers alone are able to transform growth-inducing potential or pressure, created by economic or social conditions, into actual growth[,]”² is to shirk the responsibility to analyze within this process the impacts from growth that what will come. We acknowledge that the analysis of statewide water availability is complex, and that, while calculations can be run and re-run, conclusions will differ depending on what entity performs them. Amid such controversy and clouded opinion one phenomenon remains transparently clear; provide water and communities grow. Never in the history of human civilization has this not been the case. The RDEIR/S only reconfirms the failings of the BDCP to honestly address reasonably foreseeable impacts from population growth in areas where project implementation will result in increased water availability.</p>	
2643	1	<p>Recycled Water from Treated Wastewater Effluent Should Be Included in the BDCP/California Water Fix</p> <p>The RDEIR/SDEIS should consider recycled water available from the enhanced treatment of wastewater effluent from Publicly Owned Treatment Works (POTWs) as an alternative water supply to the proposed project. Locally-available, drought-proof supplies of treated wastewater effluent represent a large, significantly underutilized source of freshwater throughout California. It is critical for California to continue developing local and regional recycled water supplies for use in landscape irrigation, industrial process water, indirect potable reuse, and ultimately, direct potable reuse when feasible. If fully developed, the availability of a large supply of recycled water in northern California, the Central Valley, and southern regions of California could potentially mitigate the need to build such an extensive north Delta diversion facility as proposed in the BDCP. California's response to the water supply challenges posed by severe droughts, climate change impacts, and population growth requires the investment in a portfolio of options that will best serve the water demands of the state. Recycled water should be appropriately considered in long-term planning decisions to develop sustainable water supplies for California.</p>	<p>Although conservation components such as recycled water have merit from a statewide water policy standpoint, and are being implemented or considered independently through the state, they are beyond the scope of the proposed project. The proposed project is one component, among many, of the California Water Action Plan. The California Water Plan evaluates different combinations of regional and statewide resources management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. Follow the California Water Plan here: http://www.waterplan.water.ca.gov/.</p> <p>By establishing a point of water diversion in the north Delta the proposed project is designed to improve native fish migratory patterns while securing reliable water deliveries. Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1, EIR/EIS, describes the range of conveyance alternatives considered in the development of the EIR/EIS. Appendix 1B, Water Storage, EIR/EIS, describes the potential for additional water storage and Appendix 1C, Demand Management Measures, EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including desalination. While these elements are not proposed as part of the proposed project, the Lead Agencies recognize that they are important tools in managing California's water resources.</p>
2643	2	<p>Limited Plan Area</p> <p>While the RDEIR/SDEIS does add analysis in San Pablo Bay, the study area has not been modified since the EIR/EIS, only extends as far as the beginning of the Carquinez Strait (Station D6A), and does not include the entire San Francisco Bay. Since San Francisco Bay is hydraulically connected to the Sacramento-San Joaquin Delta (Delta), the RDEIR/SDEIS should evaluate impacts to the entire San Francisco Bay.</p>	<p>The BDCP Plan Area is defined by the boundaries of the legal Delta with the addition of the Suisun Marsh area. The EIR/EIS project area includes the Plan Area, upstream of the Delta region and the SWP and CVP export Service Areas because some of the effects of implementing the project or its alternatives would extend beyond the BDCP Plan Area. The analysis in the EIR/EIS includes impacts to Delta outflows, as well as impacts to Southern California and the San Joaquin Valley. More information on how the San Francisco Bay was considered in the EIR/EIS is provided in Master Response 26. The analysis of impacts of the proposed project in the study area can be found in the Final EIR/EIS Chapters 5-30.</p>
2643	3	ATT1: Plan Area Map	This comment describes an attachment to the comment letter. See Responses to Comments 2643-2. This attachment does not raise any additional issues related to the environmental analysis in the 2015

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			RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2643	4	<p>Outdate Standard Used for Ammonia</p> <p>In reviewing the RDEIR/SDEIS, it does not appear that any modifications have been made to the ammonia analysis. The standard used to evaluate ammonia throughout both the BDCP and EIR/EIS, released in November 2013, was the standard established in 1999 (1999 Update of Ambient Water Quality Criteria for Ammonia, EPA 822-R-99-014). EPA published the updated ammonia standards on August 22, 2013 (EPA 822-R-13-001 Aquatic life Ambient Water Quality Criteria for Ammonia- Freshwater 2013). The BDCP and EIR/EIS identified the updated ammonia standard (0.26 parts per million ammonia when mussels are present and 1.8 parts per million ammonia when mussels are not present) when it was in draft form but the final evaluation of these documents used the 1999 ammonia standard. The 2013 ammonia standard should be used to evaluate the project's potential impacts related to ammonia.</p> <p>The RDEIR/SDEIS adds language to acknowledge the potential for nitrogen species to impact water quality in the Bay-Delta. In Section 8.1.3.1 0, the following has been added, "The Delta Stewardship Council's 2013 Delta Plan recommended that the San Francisco and Central Valley Water Boards prepare study plans for the development of NNEs for the Delta and Suisun Bay. The Delta Plan states that the Water Boards should adopt and begin implementation of nutrient objectives, either narrative or numeric, where appropriate, by January 1, 2018." Since the BDCP/California Water Fix has the potential to impact nitrogen concentrations in the Bay-Delta, a quantitative assessment in both the BDCP and the EIR/EIS is warranted. Using the 2013 ammonia criteria would trigger inclusion of ammonia for quantitative analysis, which differs from the result achieved in EIR/EIS Appendix 8C Constituent Screening Analysis, page 8C-28. The qualitative assessments performed in Step 6 of the Appendix 8C Screening Analysis appears to be inadequate considering these important issues.</p>	<p>The assessment of ammonia provided in Impact WQ-1 for all alternatives relied on evaluating changes in ammonia concentrations relative to Existing Conditions and the No Action Alternative, not a comparison of absolute ammonia concentrations to water quality criteria for ammonia. So while the EIR/EIS, in Chapter 8, Water Quality, acknowledges USEPA's draft 2009 water quality criteria for ammonia, and not the final 2013 criteria, this omission does not affect the final assessment. This is because ammonia concentrations under the alternatives are expected to be similar to concentrations under the No Action Alternative, and possibly lower relative to Existing Conditions. Ammonia was evaluated qualitatively, using supporting quantitative estimated concentrations, based on changing source water fractions at the Delta assessment locations. However, ammonia is not conservatively transported throughout the Delta, as it may be lost through conversion or uptake. Thus, a completely quantitative assessment for ammonia is not possible. The assessment in the EIR/EIS, which assumes conservative transport of ammonia, provides a reasonable approach given the information available and potential reductions in future ammonia loading to the Sacramento River via improvements at the Sacramento Regional Wastewater Treatment Plant (a project not associated with the BDCP/California WaterFix). The assessment of nitrate in Impact WQ-15 for all alternatives was based on quantitative modeling results, and qualified because it also is not conservatively transported throughout the Delta. Thus, ammonia and nitrate were assessed quantitatively to the extent possible, but were also assessed qualitatively due to their non-conservative nature in surface waters.</p>
2643	5	<p>No Agricultural Contribution to Ammonia in the Delta</p> <p>Water Quality Section 4.3.4 related to ammonia has limited discussion of loadings. The section focuses on the ammonia concentrations below Freeport that are calculated from Sacramento County Regional Sanitation District (SCRSD) seasonal permit limits, while remaining silent on the seasonal contribution of agricultural inputs. The section fails to consider potential effects to beneficial uses that are currently the focus of multi-million dollar Region 2 and Region 5 projects to establish NNEs, by stating, "As stated for Alternative 4, any negligible increases in ammonia concentrations that could occur at certain locations in the Delta under Alternative 4A would not be of frequency, magnitude and geographic extent that would adversely affect any beneficial uses or substantially degrade the water quality at these locations, with regard to ammonia." The RDEIR/SDEIS should evaluate ammonia contributions from agriculture and not solely from point sources such as publically owned treatment works.</p>	<p>The project alternatives have the potential to change the relative proportions of Sacramento River water in the Delta. Hence, the assessment evaluates how changing source water (Sacramento River, San Joaquin River, Bay) would change water quality, based on water quality characteristics of these waters. Because the SRCSD discharge occurs on the Sacramento River and is undergoing a project that will reduce the Sacramento River ammonia concentrations downstream of the discharge, and because the Sacramento River source water fractions would change under the alternative, it was necessary to account for the SRCSD project to estimate changes in ammonia concentrations at the timeframes evaluated (early long-term and late long-term). Projects leading to reductions (or increases) in future loadings of a similar magnitude from agricultural discharges due to future regulatory actions related to nutrient criteria development have not been established. Further, these are actions separate from the project alternatives.</p>
2643	6	Insufficient Evaluation of Selenium	Please refer to Master Response 14 regarding water quality.

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		<p>The evaluation of downstream selenium impacts in Section 4.3.4 assumes an assimilative capacity for selenium in the Western Delta of 1.3 microgram per Liter. This is a much larger value than is currently being used in the proposed 2015 Total Maximum Daily Load (TMDL) for Selenium in North San Francisco Bay, which assumes an assimilative capacity of 0.5 microgram per Liter. As a result of this inconsistency, the impact of Delta exports to North San Francisco Bay due to the recommended project alternative is understated and should be reevaluated. Section 4.3.4 lists the anticipated increases in selenium exported to the western Delta and Suisun Bay as 0.01-0.04 microgram per Liter, while the decreases in selenium in the Delta exports are listed at 0.05-0.091 microgram per Liter. Completing a simple mass balance results in a conservative difference of 0.045 microgram per Liter or 790 kilograms per year of selenium unaccounted for in the Delta. This removal of selenium in the Delta is not captured as increasing biota concentration in the tables presented in Appendix B: Supplemental Modeling Results for New Alternatives. Improved modeling for selenium and its transformations in the Delta is warranted. This conclusion is supported by a 2012 report prepared by Tetra Tech to aid the San Francisco Regional Water Quality Control Board in preparing the North San Francisco Bay Selenium TMDL, which states, "Given the importance of the riverine sources of selenium on bioaccumulation and the potential changes in the riverine inputs associated with Delta conveyance proposals, better characterizations of the magnitude of the selenium sources and transformations within the Delta are warranted."</p> <p>The RDEIR/SDEIS does not include modeling for the proposed alternative and instead relies on the results produced in the EIR/EIS for Alternative 4, Scenario H3 for the Late Long Term. Modeling should be performed for the recommended project alternative to appropriately evaluate downstream selenium impacts. Modeling will capture impacts from increased residence time. Increased residence time (up to 10 days in some locations) will lead to additional selenium bioaccumulation in species inhabiting the western Delta and Suisun Bay, water bodies considered nurseries for protected species, such as green sturgeon. Tissue concentration increases in green sturgeon and other fish will lead to potential exceedances of the proposed North San Francisco Bay Selenium TMDL. Any downstream impacts should be mitigated by the project proponents and not passed on to other dischargers via other regulatory processes.</p>	
2644	1	<p>As both a conservation organization and Delta land owner, The Nature Conservancy (TNC) has been actively engaged in the Delta for many years to advance the recovery of endangered species and restore its unique ecosystem, which supports 750 species of plants and animals, some of which are found nowhere else on Earth. Guided by science, we endeavor to apply practical solutions that work for nature and people.</p> <p>Although the original Environmental Impact Report (EIR) for the Bay Delta Conservation Plan (BDCP) has been substantially revised addressing comments from stakeholders, including TNC, resulting in the Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (referred to in our comment letter as the (REIR/S) we remain concerned that the California WaterFix project will not result in meeting the needs of people while sufficiently improving the health of the Delta and its associated species.</p>	<p>DWR's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. The project would help to address the resilience and adaptability of the Delta to climate change through water delivery facilities combined with a range of operational flexibility. In addition to the added water management flexibility created by new water diversions and operational scenarios, the project would improve habitat, increase food supplies and reduce the effects of other stressors on the Delta ecosystem.</p> <p>The Proposed Project would enable DWR to construct and operate new conveyance facilities that improve conditions for endangered and threatened aquatic species in the Delta while at the same time improving water supply reliability, consistent with California law (see, e.g., Cal.Wat. Code, § 85001[c]). Implementing the conveyance facilities would help resolve many of the concerns with the current south Delta conveyance system, and would help reduce threats to endangered and threatened species in the Delta, including entrainment at south Delta export facilities. For instance, implementing a dual conveyance system would</p>

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			<p>align water operations, and their location, to better reflect natural seasonal flow patterns by creating new water diversions in the north Delta equipped with State-of-the-art fish screens, thus reducing reliance on south Delta exports during times of the year when listed aquatic species are present and most vulnerable. For more information on mitigation measures to minimize contraction and operational-related impacts to fish species, including Delta and longfin smelt, please see Chapter 11, EIR/EIS.</p> <p>No issues related to the adequacy of the environmental impact analysis in the EIR/EIS were raised. However, please also see Master Response 3 regarding purpose and need.</p>
2644	2	<p>The Sacramento-San Joaquin Delta (Delta) is a key natural resource for the entire state of California. Not only is it an integral part the State Water Project (SWP) and Central Valley Project (CVP) water delivery systems, but it is also a diverse ecosystem and the largest estuary on the west coast of Americas, home to over 700 species of fish and wildlife. Its central location and habitat make it both an infrastructure corridor for humans and migratory path for numerous species. However, there are many problems facing the Delta that if left unresolved will result in the continuing rapid decline of numerous species and the ecosystem, reduction in water supply reliability, reductions in water quality, and increase potential for levee failures in response to sea level rise and anticipated larger storm events due to climate change.</p> <p>The Bay Delta Conservation Plan (BDCP or Plan) of 2013 aimed to improve both water supply reliability and ecosystem health. The Nature Conservancy (TNC) has been actively involved in the development of the Plan for over 8 years and submitted extensive comments on the previous draft EIS/EIR. As a conservation group and landowner in the Delta, TNC is intensely interested in the management of the Delta and its related water resources, and the terrestrial and aquatic habitat values it represents. TNC has a large, active portfolio of conservation programs encompassing multiple Delta and upstream habitats. The construction and future operations of the WaterFix project will have a substantial impact on the Delta, and therefore TNC's lands and conservation interests. We would add that while much of the focus of the WaterFix and related mitigation has been on aquatic flows and habitat values, it is imperative that habitat for migratory birds and terrestrial habitat must also be prioritized in the development of conservation strategies that provide for both sustainable management of water as well as other resource values in the Delta.</p>	<p>The RDEIR/SDEIS and this Final EIR/EIS fully evaluate the potential effects of constructing and operating water conveyance facilities on natural communities and Delta terrestrial species. Alternatives 4A, 2D and 5A incorporate Environmental Commitments to reduce these effects, including over 14,000 acres of natural community protection and restoration. Please refer to Table 4.1-3, Environmental Commitments under Alternative 4A in Section 4 of the RDEIR/SDEIS. These Environmental Commitments are derived from conservation measures presented for the BDCP alternatives and are incorporated as a commitment of the project. In addition, the RDEIR/SDEIS and this Final EIR/EIS in Appendix 3B provide mitigation measures, avoidance and minimization measures and additional environmental commitments to reduce significant/adverse effects. These measures are provided to reduce and mitigate for effects on terrestrial and other species as well as to reduce other significant environmental impacts.</p>
2644	3	<p>Currently, water flows and project operations in the Delta are being operated based on minimal standards required by biological opinions, which are failing to improve ecosystem health and improve water supply reliability. Current project operations, exacerbated by drought, are causing the decline in health and population of many species with some in danger of extinction. Populations of many native aquatic species including longfin smelt, green sturgeon, Delta smelt and winter-run Chinook salmon have been subjected to intense stress and have declined drastically. In fact, extreme measures had to be taken, including the rearing of salmon in the San Pablo Bay, to prevent population collapse of fall-run Chinook and protect this salmon fishery over the past several seasons. Further disruption from the construction and proposed operations of the WaterFix project will likely worsen, not improve, overall ecological conditions in the Delta.</p>	<p>The commenter does not provide evidence showing that the status of species is related to existing project operations. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>
2644	4	<p>Although it is said that operation of California WaterFix will improve flows through the Delta, Mount et al. (2013) found that there is very little difference in projected average exports in project operations during dry and critical years compared to the No Action</p>	<p>The comment related to average Delta exports for the SWP and CVP in dry and critical dry years under the proposed project as compared to the No Action Alternative is consistent with model results presented in Chapter 5 of the EIR/EIS. It is acknowledged that there is uncertainty associated with the effects of new</p>

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		<p>Alternative (NAA).</p> <p>Additionally, this study found that mitigation for take of salmon associated with the new facilities is highly uncertain to be successful. They conclude by saying that mitigation efforts alone are unlikely to foster any significant increase in salmon population and that the risk of extinction for Chinook salmon will remain high.</p>	<p>facilities and for this reason a number pre- and post-operational studies are proposed, in order to assess the extent of effects and adaptively manage should issues be found. As described in the adaptive management and monitoring program in Section 4.1 of the RDEIR/SEIS, as part of the final north delta diversion (NDD) screen design effort, several pre-construction studies would be implemented to better understand how to minimize losses associated with the three new intake structures. As noted in the RDEIR/SEIR, Alternative 4A also includes investigations to better understand factors affecting juvenile through-Delta migration (as described in the adaptive management and monitoring program in Section 4.1) and includes biologically-based triggers to inform real-time operations of the NDD, intended to provide adequate migration conditions for juvenile salmonids.</p>
2644	5	<p>TNC [The Nature Conservancy] recognizes the vast number of comments received regarding the BDCP Environmental Impact Report (EIR), and appreciates the effort put forth by DWR to address those comments. These efforts have resulted in a Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (referred to in our comment letter as the REIR/S) that has been improved in many aspects, including fish and aquatic habitat analyses, water quality, air quality impacts, and increased detail of project descriptions. Some alternatives were also modified to reduce environmental impact. However, many important considerations have not been fully addressed, and many questions are not adequately answered, and changes in the WaterFix plan, and certain modeling assumptions raise new questions about the viability of the WaterFix to achieve intended goals.</p> <p>In order for ecological conditions to improve in the Delta, there must be a paradigm shift in how flows are managed. Management should be based upon a framework that integrates long-term, sustainable ecosystem management in the Delta for the benefit of multiple species and multiple habitat types. While we acknowledge that the current historic drought has caused extraordinary challenges in meeting both water quality and conservation goals in the Delta, such conditions are likely to occur as a result of climate change -- with or without new infrastructure -- and the analysis of such conditions is lacking in the REIR/S. The development of new infrastructure -- as proposed to be operated in the REIR/S would not, as a result, provide enduring benefits to the Delta ecosystem or affected threatened and endangered species -- apart from the potential to address reverse flow phenomena at Old [and] Middle Rivers. Fundamentally, it is how the tunnels are operated that will drive whether or not the ecosystem can actually be managed in a way that promotes sustainable water management and ecosystem recovery.</p>	<p>The proposed project was developed to decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries to SWP and CVP water users in drier periods. The overall operational assumptions of the proposed project and other action alternatives are presented in Chapter 3 of the EIR/EIS, and changes in ecological conditions under the proposed project and action alternatives as compared to the Existing Conditions and No Action Alternative are presented in Chapters 11 and 12 of the EIR/EIS.</p> <p>Regarding the comment that an analysis of future droughts in relation to climate change was not included in the EIR/EIS analysis, multiple analyses were performed in the proposed project to test the robustness of the alternatives to a range of potential future conditions. Water supply, aquatic and terrestrial resources were all analyzed with projected future conditions. The proposed project will likely remain in place and functional far into the future when salinity intrusion may require less frequent use of the south Delta pumps. Far from being stranded assets, the tunnels will be part of the state's strategy in adapting to climate change.</p> <p>More information on ways in which the BDCP/California WaterFix proposes to improve resiliency and adaptability of the Delta to climate change can be found in Chapter 29, Climate Change, EIR/EIS and Appendix A RDEIR/SDEIS and Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, EIR/EIS and RDEIR/SDEIS (in appendix A). For additional information regarding climate change, please see Master Response 19.</p>
2644	6	<p>We have reached a moment in which we need to have a more direct dialogue and clear set of operating conditions that is fully consistent with the objectives of the Delta Reform Act to "reduce reliance on the Delta as a source of water supply." (Cal. Water Code sect. 85021.)</p>	<p>In April 2015 state and federal agencies announced a new sub-alternative—Alternative 4A (California WaterFix) —which replaced Alternative 4 (the proposed BDCP) as the state's proposed project. Alternative 4A reflects the state's proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. These two efforts are a direct reflection of public comments.</p> <p>See Master Response 31 for more information about the Delta Reform Act.</p>
2644	7	<p>There is a fundamental need for a comprehensive adaptive management regime in the Delta that can adjust and respond to changes in flow conditions, multiple environmental stressors (e.g., water quality degradation, increasing populations of invasive species, flow dynamics that better mimic the Delta's natural hydrology, etc.) as well as the long-term effects of climate change.</p>	<p>The adaptive management and monitoring program will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, California Endangered Species Act (CESA) 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and California Endangered Species Act</p>

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		<p>The current REIR/S is woefully inadequate in providing a predictable framework for adaptive management actions that should be the foundation for a strategy to restore and protect ecological health in the Delta. As noted in the recent Independent Science Board Report, "Flows and Fishes in the Sacramento-San Joaquin Delta," (August 2015), "implementation of a comprehensive, focused, and strategic framework for scientific research linking water flow to the complex processes influencing fishes is required for both the Delta ecosystem and Delta science." Such a system must be wholly integrated, provide transparent access to science and scientific analyses, and effectively integrated in the proposed operations for the California WaterFix. The current REIR/S is lacking this critical framework.</p> <p>The Ecological Flows Tool (EFT) developed by TNC [The Nature Conservancy] is one potential tool that can be applied to help drive adaptive management actions in better managing flows to meet multiple habitat and species conservation objectives. EFT is designed to improve the management of the riverine and riparian ecological resources of the Sacramento River and the Delta. Developed with the insight of over 70 experts and supported by the Department of Fish and Wildlife's Ecosystem Restoration Program, the EFT consists of a decision analysis framework that includes over 60 ecological indicators spanning six Sacramento River species/habitat groups and seven Delta species/habitat groups. Combined with hydrologic driving models, the EFT can be used as an effective instrument for long-term adaptive management. In addition, robust monitoring must be included as part of adaptive management of the system, with operations modified with new information to ensure that these species indeed benefit from the designed conservation measures.</p> <p>The timeframe over which this project would be implemented, combined with the uncertainties in how aquatic and terrestrial systems and species will respond to implementation necessitate that an experimental approach be taken. Restoration experiments and extensive monitoring of system response should be fully integrated into system operations before, during and after implementation. Also, following implementation, operations of the dual conveyance system should be flexible and required to change according to new information collected on how the aquatic and terrestrial ecosystems, including covered species, are responding to the changes and restoration projects.</p>	<p>(CESA) 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act).</p> <p>For more information on adaptive management and the use of scientific research to inform operations see Master Response 33.</p>
2644	8	<p>The most significant change to the Bay Delta Conservation Plan (BDCP) is that it has been split into two separate initiatives. The WaterFix initiative will focus on conveyance needs -- and only address direct mitigation requirements of the project -- and the EcoRestore initiative will focus on restoration, initially described as an effort to restore "at least 30,000 acres of habitat in the Delta," which is significantly lower than the proposed 100,000 acres under the BDCP. Over the next five years, restoration of these initial 30,000 acres of habitat must be viewed as an experiment to inform much wider restoration efforts in the Delta. There is much we can learn in the process of undertaking individual habitat restoration projects, but simply an assembly of projects is unlikely to deliver upon the objective of achieving comprehensive restoration and recovery -- or even stabilization of existing threatened and endangered fishes in the Delta.</p> <p>Section 7 of the Endangered Species Act (ESA) requires that federal agencies ensure that their actions do not jeopardize the continued existence of an endangered species or result in the adverse modification of its habitat. If, following consultation as provided for</p>	<p>Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan. Under EcoRestore, the state will pursue restoration of fish and wildlife habitat by 2020. .</p> <p>Proposition 1 funds and other state and public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.</p> <p>Additional priority restoration projects will be identified through regional and locally-led planning processes facilitated by the Delta Conservancy. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the</p>

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		<p>in the Act, it is determined that the proposed action is likely to jeopardize the species or habitat, the agency shall suggest reasonable and prudent alternatives that would allow the project to continue without causing jeopardy (San Luis [and] Delta-Mendota Water Authority et. al. v. Jewell, 2014). As such, governance conditions and the role of state and federal wildlife agencies are more predictable as applied to the WaterFix, thereby enabling agencies to seek modification of project operations, but only to the standard of "avoidance of jeopardy." This standard is insufficient to recover affected fishes (e.g., Delta smelt, longfin smelt, winter- and spring-run Chinook) and do not apply to the protection of critical habitat values for migratory birds and waterfowl dependent upon the Delta.</p> <p>While the authority of the agencies under Section 7 of the Endangered Species Act is clear with regard to modifying project operations to avoid jeopardy, this level of authority has proven to be inadequate in arresting the continued and dramatic decline of listed species in the Delta. The revised administrative permitting change does not change the status of the beleaguered Delta species and the deteriorating environment in which they live. A landscape scale ecosystem-wide approach is essential for a successful mitigation and restoration program in the Delta. Unfortunately, the current draft REIR/S gives little attention to this critical condition. We cannot simply assume that the development and operation of a water project of the scale proposed here (9,000 CFS [cubic feet per second]) will provide systemic ecological benefit in the Delta. While the proposed dual operations of the new conveyance and south Delta pumps may likely have the effect of reducing negative flows on Old and Middle Rivers, even these outcomes would likely have little effect on population recovery of endangered fishes.</p> <p>Recognizing the deteriorating Delta environment, we [The Nature Conservancy] urge that the goal of WaterFix and EcoRestore should be more than maintaining the status quo conditions for wildlife and habitat -- which is actually a formula for continued decline. Wetlands and riparian habitat are shrinking, and the Delta ecosystem as a whole is declining. The continuing development of permanent crops is also threatening important terrestrial habitat in the Delta. Because it is difficult to measure or offset impacts from both of these initiatives individually, it is necessary to make these goals apply equally in both the WaterFix and EcoRestore programs, thereby helping to achieve the "dual goals" of water supply reliability and reduced reliance on the Delta as a source of water supply.</p>	<p>Delta.</p> <p>The primary objective of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) is to disclose to decision makers the environmental impacts of a proposed action and alternatives, evaluating the potential adverse change to existing conditions and determining if mitigation is available to offset the potential impact. These documents, along with many others developed through the project planning (e.g., engineering, economic, and other technical studies and other environmental compliance processes [e.g., Endangered Species Act, Clean Water Act, and water rights compliance]), will serve as the basis for DWR and other agencies' decision on whether to approve the project. The Federal and State Lead Agencies have done their best to make the EIR/EIS for the proposed project as fair, objective, and complete as possible and believe the scope of the project and the analysis contained in each chapter sufficiently discloses the potential impacts associated with each of the action alternatives. The EIR/S and the RDEIR/SDEIS identify environmental commitments, avoidance and minimization measures, and mitigation measures to reduce or avoid effects. Specific mitigation measures are proposed when necessary to avoid, reduce, minimize, or compensate for adverse environmental effects of the action alternatives. Mitigation is also presented to meet CEQA's specific requirement that whenever possible, agency decision makers adopt feasible mitigation available to reduce a project's significant impacts to a less-than-significant level. Although NEPA does not impose a similar procedural obligation on federal agencies, this practice is consistent with NEPA's intent that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated. Under Section 7 of the ESA, an applicant must minimize and mitigate the impacts of the taking of listed species, to the maximum extent practicable. Mitigation measures included in the EIR/EIS are considered to be potentially feasible; however, the ultimate determination of feasibility can be made only by state and federal lead agency decision makers. For more information regarding significant and unavoidable impacts please see Master Response 10.</p> <p>Considerable scientific uncertainty exists regarding the Delta ecosystem, including the effects of CVP and SWP operations and the related operational criteria. To address this uncertainty, DWR, Reclamation, DFW, USFWS, NMFS, and the public water agencies will establish a robust program of collaborative science, monitoring, and adaptive management. For more information regarding adaptive management please see Master Response 33.</p>
2644	9	<p>The REIR/S should include greater emphasis on a statewide water conservation strategy as a fundamental tool to reduce reliance on the Delta as a water supply source. This strategy is consistent with the California Water Action Plan. During the ongoing drought, both urban and agricultural water conservation strategies have proven effective at reconciling dramatic reductions in available water supply. Water transfers, the potential for other water project modifications, and permit modifications should also be evaluated in the context of statewide efforts to reduce the need for water supplied from the Delta. All water users increasingly realize that both surface and groundwater are a limited and valuable resource that need to be conserved and used efficiently whether the state is in drought conditions or not. Broad, sustained conservation will help achieve both water supply resiliency and ecosystem preservation. Additionally, there is a need for clarification that restoration and mitigation actions undertaken as a part of either WaterFix or EcoRestore should be designed to reconcile overall water demand that serve to reduce pressure on the Delta.</p>	<p>Although conservation components, water storage, and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the state, they are beyond the scope of the proposed project. The proposed project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. Appendix 1C, Demand Management Measures, in the EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including storm water drainage. While these elements are not proposed as part of the BDCP or the California WaterFix, the Lead Agencies recognize that they are important tools in managing California's water resources.</p> <p>The originally proposed habitat restoration measures and related Conservation Measures (CMs) (i.e., CM2 through CM21) would not be included as part of the Proposed Action, except to the extent required to mitigate significant environmental effects under CEQA and meet the regulatory standards of ESA Section 7 and CESA, California Fish and Game Code, Section 2081(b). However, restoration actions that are independent of the Proposed Action will continue to be pursued as part of existing projects and programs. Examples of these include the 2008 and 2009 USFWS and NMFS BiOps (e.g., Yolo Bypass improvements and</p>

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			habitat enhancements, 8,000 acres of tidal habitat restoration), (2) California EcoRestore, and (3) the 2014 California Water Action Plan.
2644	10	<p>To better ensure consistency with the Delta Plan and to help protect ecological conditions in the Delta in alignment with other objectives, we [The Nature Conservancy] believe other authorities should be applied in reviewing operations of the water projects -- beyond the existing role of state and federal wildlife agencies. In particular, the Delta Stewardship Council (DSC) is vested with authority to protect these multiple objectives (Cal Water Code [Section] 85022, 85034, 85210 et. seq.). There is an urgent need for a new operating regime consistent with both habitat and species protections as well as water supply reliability goals. A role for the DSC would also enhance a wider public understanding of how project operating decisions, land use, habitat restoration and other values are incorporated in the Delta. Specific recommendations to achieve these objectives should include:</p> <p>-A clear role for the Delta Independent Science Board (ISB) and Independent Science Program to provide an outline for biological goals and metrics and a plan to attain those goals based upon adaptive management strategies to improve overall ecological conditions in the Delta. The Ecological Flows Tool (EFT) could be used to provide a framework for this approach that would incorporate flow conditions in the Delta that more closely mimic the historic natural flows and hydrology that characterize the unique ecosystem values of the Sacramento-San Joaquin systems and the Delta. [Footnote 1: The Ecological Flows Tool (EFT) combined with hydrological models can be used effectively to inform adaptive management strategies. The decision analysis framework that includes over 60 ecological indicators spanning six Sacramento River species/habitat groups and seven Delta species/habitat groups. The use of this tool and its development has led to a greater awareness of the value of flexibility to manage ecosystem trade-offs over time.]</p> <p>-The ISB should propose annual, inter-annual and long-term objectives for flows in the system designed to improve overall ecological conditions in the Delta. As part of this process, the Delta Science Program should develop a comprehensive benchmarking system designed to better meet ecological flow needs and other objectives including groundwater sustainability which has a direct impact on long-term surface flows both above and into the Delta. In this context, the Delta Science Program should assess multiple habitat values, existing conditions, and strategies for adaptive management actions necessary to achieve improved ecological conditions in the Delta.</p> <p>-The Delta Stewardship Council should be vested with the authority to adopt, amend, or reject recommendations of the Independent Science Board.</p> <p>While the Stewardship Council is not vested with regulatory authority pertaining to biological conditions, as a practical matter under the Delta Reform Act, the Stewardship Council has an integrating role in Delta policy matters and is the right place to both review ecological objectives in the Delta and to conduct a public forum in which scientific recommendations could be aired, discussed and evaluated. Such a process would necessarily include discussion and awareness of how systemic changes such as the proposed WaterFix project are either succeeding or failing to meet expectations for improved ecological conditions in the Delta. This role for the Stewardship Council would complement the role of the State Water Quality and Resources Control Board in requiring certain flow standards into and above the Delta under the Bay-Delta Water</p>	<p>Since 2006, the proposed project has been developed based on sound science, data gathered from various agencies and experts over many years, input from agencies, stakeholders and independent scientists, and more than 600 public meetings, working group meetings and stakeholder briefings.</p> <p>The Delta Plan is currently the subject of litigation which could affect the legal requirements and/or implementation of the Delta Plan. On June 24, 2016, Sacramento Superior Court Judge Michael P. Kenny ruled that the Delta Plan was invalidated (JCCP 4758), pending the Council's remedying of three specific deficiencies identified by the Court. Thus, the status of the Delta Plan and the Council's consistency certification process remain unclear during the pendency of the litigation, including appeals. The lead agencies intend to fully comply with the Delta Reform Act, to monitor the Delta Plan litigation and future Delta Plan amendments, and to consider filing a certification of consistency at the appropriate time.</p> <p>See Master Response 31 and Appendix 3J of the Final EIR/EIS for more information about the Delta Reform Act and Master Response 33 concerning Adaptive Management and Monitoring.</p>

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		Quality Control Plan Update Process.	
2644	11	<p>An adaptive management system is critically important to effective management of the Delta. Uncertainties as a result of climate change, modelling assumptions, estimation of ecosystem effects and benefits, and various other unknowns make it impossible to address situations in any way other than on a case-by-case basis. For example, if mitigation outcomes are deemed by the advisory panel to be insufficient, there must be enough flexibility to adapt the mitigation program to meet conservation objectives.</p> <p>The REIS/R outlines an adaptive management element as part of its science program to guide and adapt operations over time and appropriately acknowledges the significant uncertainties around function of the Delta ecosystem and its response to BDCP/WaterFix implementation. However, the description on adaptive management provided in the REIS/R focuses more on how it is organized, rather than what will be done. The current description does not provide an understanding of how adaptive management would work for the project or how it would be tied to EcoRestore. The adaptive management plan should more explicitly describe an experiment-based approach to achieving the mitigation and conservation objectives. Additionally, while a commitment to funding an adaptive management program is acknowledged, no details are provided on the potential sources of that funding or how it will be administered.</p> <p>It is important adaptive management be integral to project planning and design, rather than an adjunct to project operations.</p>	<p>The adaptive management and monitoring program (AMMP) will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, CESA, California of Fish and Game Code, section 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and section 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act).</p> <p>Adaptive management is not a required element of the proposed project or the EIR/EIS. However, DWR and Reclamation are providing a description of the proposed Adaptive Management and Monitoring program to provide a more complete picture of the proposed action. Monitoring is a requirement of CESA, California Department of Fish and Game Code, section 2081(b) incidental take permit. Adaptive management is a recommended component of any long-term mitigation program. DWR and Reclamation have included local agencies in the decision-making process through the extensive public outreach and involvement program of BDCP and California Water Fix. This has included numerous outreach meetings with local public agencies directly. DWR and Reclamation intend to continue this outreach to local agencies during the rest of the CEQA/NEPA process as well as during project implementation. As described on p. 4.1-20 of the RDEIR/SDEIS, collaborative science and adaptive management will be funded through a combination of mitigation funds from participating state and federal water contractors, and available supplemental state and federal funding.</p>
2644	12	<p>Under Alternative 4A, some upstream reservoirs (including Folsom, Shasta, and Oroville) would have a decreased storage volume by late September. This will decrease the flexibility to manage for cold water releases for salmonids heading up river to spawn. We [The Nature Conservancy] did not note any mitigation for this potentially significant impact. Reliance upon new storage to offset this need is a questionable assumption as such storage should be applied to supplement the need for flows that are required beyond existing regulatory requirements. Management protocols need to be put in place to make certain there is enough cold water available when needed under all water year types. Additionally, flow conditions need to be managed in ways that increase both seasonal and inter-annual hydrologic variability (particularly dry and critically dry years) to help suppress invasive species and promote natives. Operations must incorporate the needed range of total flows and require flexibility in magnitude, timing and duration.</p>	<p>End-of-September storage in Folsom Lake, Shasta Lake, and Lake Oroville under Alternative 4A would be about the same as conditions under the No Action Alternative (see Appendix 5A, Section C, of the Final EIR/EIS which includes model results specifically for Alternative 4A). The end-of-September storage in Folsom Lake, Shasta Lake, and Lake Oroville under Alternative 4A would be substantially lower than conditions under the Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project. The specific effects of climate change, sea level rise, and population growth are shown through the comparison of the No Action Alternative to Existing Conditions. Effects due to climate change, sea level rise, and population growth are not caused by the project and do not lead to mitigation. For more information on upstream reservoir effects please see Master Response 25.</p>
2644	13	<p>The REIS/R analyses show that WaterFix operations will have significant/adverse impacts to Chinook salmon and green sturgeon spawning and egg incubation habitat, yet no mitigation is proposed. The final determination is that no feasible mitigation is possible to address the impacts. Given the state of these fisheries today, such a finding is inconsistent with efforts to reestablish fish populations or likely, even in meeting the Section 7 standard of avoidance of jeopardy in light of precariously low fish populations. While it may not be possible to address direct impacts, conservation actions need to be developed to promote the overall health and abundance of these species, and these actions need to be tied to WaterFix obligations and responsibilities.</p>	<p>Chapter 11, Fish and Aquatic Species, of the FEIR/FEIS describes the projected effects of the new preferred alternative, Alternative 4A to salmonids and sturgeon species. The analysis finds that there would be no adverse effects in a NEPA context.</p> <p>Please see chapter 22 of the Final EIR/FEIS indicating that, when climate change and future demands are considered, the effects would be less than significant.</p>
2644	14	<p>The scientific consensus is that reducing exports, particularly in drier years, and allowing more variable flows will have the greatest impact on restoring the Delta ecosystem (Hanak et al. 2013). In fact, construction of new tunnels in the Delta coupled with</p>	<p>The Final EIR/EIS includes model results specifically for Alternative 4A as compared to Existing Conditions and No Action Alternative. These results indicate that total Delta exports under Alternative 4A are approximately 6 percent higher in wet years and 3 percent lower in critical dry years as compared to the No</p>

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		<p>increased storage in both surface and groundwater facilities north and south of the Delta offer the opportunity for "exporting more water in wetter years and less in drier years." Yet a review of the proposed operations indicates that more water will be exported in the wetter years with about the same amount of water exported in drier years. In our view, this type of operation at best, maintains the status quo of the Delta ecosystem which we know is deteriorating and not sustainable to support many native species.</p>	<p>Action Alternative. The results also indicate that total Delta exports under Alternative 4A are similar in wet years and 18 percent lower in critical dry years as compared to the Existing Conditions which includes changes due to climate change, sea level rise, and population growth.</p>
2644	15	<p>We [The Nature Conservancy] request that the REIS/R describe an alternative that takes advantage of the new conveyance facilities to implement the "more in wet and less in dry" export strategy coupled with the water conservation actions that we know are possible and called for in the Governor's Water Action Plan. Overall, the operations of the tunnels in regards to temperature, flow, and other environmental considerations are not adequately described in the REIS/R. Regulating these factors to ensure the health of the ecosystem and all its biological resources needs to be made a clear objective and driving force in operational decisions. Although water delivery needs will change, other factors including climate change, species needs, and invasive species impacts will require additional changes to operations to preserve the ecosystem while still delivering water. The conservation benefits associated with water management should be considered in operational decisions. For example, flooding of wetlands has a great benefit for shorebirds and other species. The benefit of these actions should be taken into account when water transfers and permits are being considered.</p>	<p>Although conservation components, water storage, and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the state, they are beyond the scope of the proposed project. The proposed project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. Appendix 1C, Demand Management Measures, in the EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including storm water drainage. While these elements are not proposed as part of the BDCP or the California WaterFix, the Lead Agencies recognize that they are important tools in managing California's water resources.</p> <p>Improved operational flexibility to respond to differing conditions, such as the "more in wet and less in dry" strategy described by the commenter, is inherent in the basic objectives of the proposed project. For example, the proposed project would allow the lead agencies to capture more water during times of heavy rainfall when diversions pose less risk to fish and water quality. By operating the north Delta diversions during these high flow periods, the lead agencies can avoid creating reverse flow patterns in the Delta that are harmful to fish. Alternatively, during dry seasons, system operators can reduce north Delta diversions and rely more on south Delta pumping to maintain water quality through the Delta. Although the proposed project would not increase the overall volume of Delta water exported, it would make the deliveries more predictable and reliable, while restoring an ecosystem in steep decline. Local water agencies will need to invest in additional strategies and technologies, including efficiency improvements, conservation, recycling, and desalination, to meet future water demand. The proposed project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for increased commitments to other water supply solutions, including recycling, desalination, water conservation and storage.</p> <p>For more information on operational criteria please see Master Response 28. For additional information regarding storage, please see Master Response 37.</p>
2644	16	<p>To meet multiple species needs and to avoid jeopardy of threatened and endangered species, the California WaterFix needs to assure sufficient freshwater flow in all seasons and in all water year types (particularly during dry and critically dry years) to maintain key ecological processes. The preponderance of scientific data conclude that increased average outflow, along with more variable outflows are required to achieve conservation outcomes in contributing to the recovery (and therefore avoid jeopardy) of threatened and endangered aquatic species (Mount et al. 2012, Moyle et al. 2011, National Research Council 2012, Hanak et al. 2013). The current plan raises significant concerns about the adequacy and ability of the WaterFix to provide flows necessary to avoid jeopardy. Our [The Nature Conservancy's] concerns include the following and support the more detailed comments provided to the California Natural Resources Agency by the Natural Resources Defense Council, The Bay Institute and Golden Gate Salmon Association:</p> <p>-The analyses and modeling are flawed in numerous ways. For example, CalSIM II modeling (for flows and temperatures upstream) is too coarse (monthly time step) to</p>	<p>With respect to use of CalSIM modeling, it is acknowledged that this planning tool provides a broad perspective on general water operations, and that real-time operations would be used to limit potential effects. The CALSIM II model is a monthly model that incorporates assumptions about daily operational changes, and the model results should not be used in a predictive manner to determine absolute values. These types of models are the most appropriate to analyze potential changes due to different operational assumptions for the SWP and CVP. However, as described in Appendix 5A of the EIR/EIS, these models cannot be used in a predictive manner to define absolute values. Rather, they must be used in a comparative manner to indicate basic changes between the action alternatives, and to understand the changes that could occur as compared to the Existing Conditions and the No Action Alternative.</p> <p>This is also related to the final point in the comment, related to the need for an integrated adaptive science and adaptive management program, which is described in Chapter 3, Section 3.6.4.4, Adaptive Management and Monitoring Program, of the Final EIR/EIS.</p> <p>With respect to potential effects on covered fishes, Chapter 11, Fish and Aquatic Species, indicates that, although there would be reduced flows during some months and water year types under the preferred</p>

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		<p>detect changes on the timescales that are relevant to most species. In addition, the WaterFix documents acknowledge that real world operations will be different from the projected operational outputs of CalSIM. However, those outputs are then used as inputs to additional models (e.g., temperature modeling, Delta Passage Modeling, etc.), which raises questions as to usefulness of the additional model outputs used to estimate impacts.</p> <p>-The DEIR/S analyses of alternatives with a north Delta diversion (the tunnels) clearly indicate that endangered species like salmon, sturgeon, steelhead, and smelt will continue to suffer impacts due to project operations which are not adequately addressed by the proposed project operations. These impacts occur upstream and in the Delta.</p> <p>-There will be broad-scale negative alterations to the ecosystem that accompany WaterFix which require further analysis. For example, the loss of sediment inputs to the Delta and estuary (both because of diversion of sediment and because of decreased flows to mobilize sediments) will have negative effects on fish species that need increased turbidity for cover and for restoring tidal marshes (which are sediment starved). In addition, decreased sediment and turbidity combined with increased Delta residence times predicted under project alternatives will facilitate harmful algal blooms (Microcystis). In addition, the additive effects of declines of the estuary's most abundant prey species will have impacts far afield such as on bird and fish species, and marine mammals that rely on forage fish for prey.</p> <p>-The No Action Alternative [NAA] (no tunnels), according to the WaterFix documents, acknowledges substantial adverse impacts to endangered and non-endangered species (e.g., fall-run Chinook salmon). As a result, comparison of project alternatives to the NAA condition tends to obscure and minimize the potential harm from alternative operations. The NAA will require significant mitigation in order to avoid impacts and, therefore, alternatives that produce "similar" or worse impacts should do the same. As described in the REIR/S, it is virtually impossible to discern what operations will be in the future and what the real impacts of any of the alternatives will be. In part, this is why we have underscored the importance of an integrated adaptive science and adaptive management framework to be included in project operations.</p>	<p>alternative, Alternative 4A, relative to the NAA, reductions would not be large or frequent enough to cause adverse effects or significant impacts to any fish species upstream or in the Delta. In addition, real-time operations would further reduce any effects to fish. In addition, operations under Alternative 4A (i.e. the preferred alternative) include Fall X2 requirements to benefit Delta smelt, consistent with the 2008 USFWS BiOP, and spring outflow criteria to minimize and avoid project-related impacts to longfin smelt.</p> <p>With respect to the potential effects related to sediment, which were acknowledged in the EIR/EIS, under Alternative 4A, to the maximum extent practicable, the first and preferred disposition of the sediment removed by the North Delta Diversion will be to reintroduce it to the water column in order to maintain Delta water quality (specifically, turbidity, as a component of Delta Smelt critical habitat). As stated in Appendix 3B, Section 3B.2.18, Disposal of RTM, Spoils, and Dredged Material, DWR will collaborate with USFWS and CDFW to develop and implement a sediment reintroduction plan that provides the desired beneficial habitat effects of maintained turbidity while addressing related permitting concerns (the proposed sediment reintroduction is expected to require permits from the Central Valley Regional Water Quality Control Board and USACE). USFWS and NMFS will have approval authority for this plan and for monitoring measures, to be specified in the plan, to assess its effectiveness.</p> <p>With respect to Microcystis, for which the potential effect was noted in the public draft BDCP EIR/EIS, additional examination of this topic is being undertaken as part of the section 7 consultation for California WaterFix. Given that the EIR/EIS did not conclude that there would be significant effects to abundant prey species, it therefore would not be expected that there would be effects to higher trophic levels. In regard to water quality, please see Master Response 14.</p> <p>The adaptive management and monitoring program (AMMP) will be further developed during project implementation. As part of this development, more specific and detailed goals and objectives may be developed that are based on the final requirements of the Biological Opinion, CESA, California Fish and Game Code section 2081(b) incidental take permit, and other relevant permits and regulatory requirements. Because those requirements are not final, such goals and objectives are premature. DWR and Reclamation will be held accountable to the requirements of the Biological Opinion and CESA, section 2081(b) incidental take permit through the permit requirements and the enforcement authority of the U.S. Fish and Wildlife Service and National Marine Fisheries Service (through the Endangered Species Act) and the California Department of Fish and Wildlife (through the California Endangered Species Act). For more information on adaptive management see Master Response 33.</p>
2644	17	<p>There are approximately 276 references to the Sacramento River Ecological Flows Tool (SacEFT) in section 4 of the BDCP REIR/S, as well as several significant misinterpretations of the model. EFT is comprised of sub-models that represent both the Sacramento River (SacEFT) and the Delta (DeltaEFT) ecoregions; both sub-models comprise the EFT. We [The Nature Conservancy] suspect that given the nature of some of the misinterpretations a variety of other problems may exist. One example of this in the use of only one of the six (6) EFT winter-run Chinook indicators (juvenile standing) in the Draft EIR/EIS analysis, which resulted in an incomplete analysis. Another example is the dismissal of the results that showed adverse effects under some conditions, primarily in late summer. EIS/EIR authors these results as inaccurate based on the fact that EFT had high sensitivity.</p> <p>However, an accurate EFT prediction of positive or adverse effects requires review of EFT Effect Size (ES) results and Net Effect Scoring (NES). The proper use of the NES would yield more accurate results. The most thorough and accurate application of EFT to BDCP alternatives is contained within Alexander et al. (2014). We request the BDCP REIR/S</p>	<p>The authors of the EIS/EIR appreciate the comments and suggestions regarding the EFT model. We have reviewed Alexander et al. 2014 several times and have even less confidence that the model provides the information we need for our analyses. In fact, the model was not chosen to be used in the Section 7 BA. Instead, several other methods that provide similar outputs to those from SacEFT were updated and used in the BA. Further, we have reviewed DeltaEFT and reached similar conclusions for both the CWF BA as well as the EIR/EIS.</p>

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		authors review the Alexander et al. 2014 report and correct their findings appropriately. This closer review of EFT results will help to reconcile some apparently conflicting results noted in Section 4 of the BDCP REIR/S. We are willing to work with you to this end, and urge you to contact us.	
2644	18	The Delta is a critically important landscape for migratory waterbirds, including compatible cultivated lands and managed wetlands. While the REIR/S has addressed many of the concerns raised in previous comments to the BDCP regarding impacts to migratory waterbirds, including cranes and on Staten Island specifically, we [The Nature Conservancy (TNC)] remain concerned that the impacts of this project are not being fully addressed or mitigated. For Greater Sandhill Cranes, the REIR/S identifies 145 acres of direct construction impacts to roosting/foraging habitat, plus direct impact to 7,161 acres of foraging habitat. In addition, a total of 20,243 acres of roost and foraging habitat are predicted to be impacted by indirect disturbances from noise and nighttime lighting. While these areas have been identified according to their potential impact to Sandhill Cranes, many of these areas are also important for other migratory waterbirds and thus can be considered as part of the impacts to many other waterbird species as well. To mitigate these impacts, the REIR/S proposes protection of 7,300 acres of high value cultivated foraging habitat, plus creation of an additional at least 160 acres, as well as restoration of 595 acres of roosting habitat. Given the potential for permanent impacts to loss of habitat and disturbance that causes abandonment of these sites by cranes and other birds, TNC feels that the proposed mitigation measures are insufficient.	The commenter states that the proposed mitigation measures are insufficient to address impacts on sandhill cranes and other waterbirds. Roosting habitat creation well exceeds the impacts on roosting habitat (which are overestimated as water conveyance construction activities will avoid permanent loss of roosting habitat). Roosting habitat creation will also provide habitat for other migratory waterbirds (impact analysis on waterfowl are addressed in the EIR/EIS under Impact BIO-178 through 183). The acres of habitat that have the potential to be affected by noise and visual effects will be minimized by noise barriers and by creating work windows for construction activities such that construction noise levels do not exceed 50 dBA Leq (1 hour) as described under Impact BIO-71. In addition, any unavoidable noise related effects would be compensated for by the enhancement of 0.1 acre of foraging habitat for every acre indirectly affected within the 50 dBA Leq (1 hour) construction noise contour (see AMM 20 in Appendix 3B of the EIR/EIS). The creation of roost sites, the protection of cultivated lands (managed in high to very high value crop types for the species in perpetuity), and the avoidance and minimization measures and monitoring described in AMM20 provides measures to address uncertainty and sufficient mitigation that would provide habitat for sandhill cranes and other waterbirds. With regards to sandhill cranes, please also see Master Response 17.
2644	19	Almost 3,000 acres of roosting habitat and over 17,000 acres of foraging habitat will be impacted to some degree. We [The Nature Conservancy] recommend that the Sandhill Crane roosting habitat goal be revised up to 3,000 acres of wetland and appropriately flooded agricultural land. Also, while 48,000 acres of cultivated lands are proposed for protection to support covered species, the REIR/S is not specific enough in what management will be required. We recommend that more specific post-harvest crop management guidelines be specified, using the management practices that have been developed and tested at Staten Island, Stone Lakes and other properties. At least 20,000 acres of the 48,000 protected cultivated lands should have management specifically targeted to benefit Sandhill Cranes. Also, we propose that any mitigation by creating supercharged habitats should also include early experimentation with creating and testing response to determine whether birds can be attracted to them. Finally, we recommend that the identification of protected and restored lands be guided by a spatially-explicit reserve design analysis that should be completed before implementation to ensure that investments are made that maximize connectivity and resiliency of protected and restored lands.	<p>Under Alternative 4A, 92 acres of roosting habitat (17 acres permanent, 75 acre temporary) would be directly affected and 4,484 acres of foraging habitat (2,047 acres of which is very high to high value habitat) would be directly affected. DWR will create 415 acres of roosting habitat and protect 4,584 acres of high- to very high value crane foraging habitat. Protected and created habitat would be guided by Resource Restoration and Performance Principles outlined in Chapter 3 of the EIR/EIS.</p> <p>Construction noise above 50 dBA could temporarily affect the use of 20,243 acres of crane habitat (2,917 acres roosting and 17,327 acres foraging). The effects of noise on cranes would be avoided and minimized through AMM20, which includes the protection of additional habitat determined to be affected by construction.</p> <p>Under the BDCP and California WaterFix, protected lands will be managed and enhanced according to the Conservation Measures (Environmental Commitments) and AMMs. The Conservation Measures (Environmental Commitments) establish guidelines for selecting conservation lands, which take into consideration connectivity and provide for the long term management of these lands specifically for the benefit of greater sandhill crane. Conservation Measure 11 in the Draft BDCP and modified portions of CM11 appear in Appendix 11F of the FEIR/FEIS, which specifically address the management of cultivated lands for sandhill cranes. With regards to greater sandhill crane, please see Master Response 17.</p> <p>The commenter's recommendation to conduct early-experimentation and testing response at supercharged habitats and to include a spatially-explicit reserve design analysis for selecting lands to protected and restored is noted.</p>
2644	20	We [The Nature Conservancy (TNC)] also remain concerned about the potential impacts of the proposed overhead powerline, particularly the 230kV powerline that will be travel from the east, along Lambert Road. TNC appreciates the relocation of proposed powerlines off of Staten Island and overall reduction in number of permanent and	The commenter states concern that the minimization measures will not eliminate the potential for sandhill crane mortality from collision with powerlines. The commenter further recommends that powerlines that are relocated or installed as a result of the project are undergrounded. The RDEIR/RDEIS states that one or a combination of measures described in AMM20 has been updated and allows for a number of minimization

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		<p>temporary lines in the new project design, however there are remaining concerns about the risk that new powerlines pose to cranes. Regardless of reducing the number of proposed power lines elsewhere, new lines in risk zones may cause mortality, as cranes will be unfamiliar with the location of these lines. Research has shown bird diverters to be only partially effective. The proposed line along Lambert Road may be particularly problematic since this is a core use area for cranes and other waterbirds. This line will be installed within 1 km of three known crane roost sites and surrounding foraging habitats, including in between two roost sites in the Stone Lakes area. Even with flight diverters, these lines and others in the project area may cause mortality of Sandhill Cranes. The proposed minimization and mitigation measures will not eliminate this potential impact. Therefore we urge that the powerlines relocated or installed that are associated with the Project be undergrounded, as this is the only sure way to avoid avian-powerline interactions.</p>	<p>and mitigation measures to meet the performance standard of no take of greater sandhill crane associated with new transmission lines. The performance standard will be accomplished by one or any combination of the following:</p> <ul style="list-style-type: none"> • Design the transmission line alignment to minimize risk. When locating powerlines, choose specific site locations that are in low risk zones or outside of the Greater Sandhill Crane Winter Use Area. • Remove, relocate or underground existing lines. Reduce the number of existing lines in risk zones to offset placement of new lines in risk zones. Prioritize elimination or reduction of existing lines and avoidance of new lines in the highest risk zones. • Underground new lines in high-risk zones of the greater sandhill crane winter use area. • Use natural gas generators in lieu of transmission lines in high-risk zones of the greater sandhill crane winter use area to provide power for the construction of the water conveyance facilities. • Install bird strike diverters on existing lines in high-risk zones. Bird diverters will be required on all new lines. The length of existing line to be fitted with bird strike diverters will be equal to the length of new transmission lines constructed as a result of the project, in an area with the same or higher greater sandhill crane strike risk to provide a net benefit to the species. Bird diverters will also be required on all new lines. For optimum results, the recommended spacing distance for bird flight diverters is 15 to 16.5 feet (4.5 to 5 meters) (Avian Power Line Interaction Committee 1994). Bird strike diverters will be installed on project and existing transmission lines in a configuration that research indicates will reduce bird strike risk by at least 60% or more. Bird strike diverters placed on new and existing lines will be periodically inspected and replaced as needed until or unless the project or existing line is removed, or are otherwise no longer a strike risk for greater sandhill cranes. The most effective and appropriate diverter for minimizing strikes with greater sandhill crane on the market according to best available science will be selected. • Manage habitat to shift cultivated land roost site locations away from risk zones created by new transmission lines. This can be accomplished by not flooding past or current roosting sites located in the vicinity of the new transmission line, thereby eliminating the sites' attractiveness as roosting habitat; and establishing new roost site equal or greater in size at new location in a lower risk zone but within 1 mile of the affected site. The relocated cultivated land roost site will be established prior to commencement of the wintering season that occurs prior to construction of new transmission lines. The existing cultivated land roost site will be flooded during the wintering season prior to construction; it will not be flooded during the wintering season that occurs during the year construction begins. A wildlife agency-approved, qualified biologist familiar with crane biology will design the new roost site and direct implementation of the roost site establishment. • Final transmission line design will be determined in coordination with the wildlife agencies and wildlife agency-approved, qualified biologist familiar with crane biology, to achieve the performance standard and ensure the measures described herein are incorporated. <p>All new transmission lines will be fit with bird diverters and other methods such as undergrounding transmission lines, using natural gas generators, and designing the final alignment will be evaluated throughout the project area, not only within the vicinity of Staten Island.</p> <p>A bird-strike analysis was conducted for multiple species as part of the BDCP which concluded that birdstrike potential was not significant for other species that were covered under the BDCP. The EIR/EIS addresses the impact of birdstrike for all avian species, analyzing factors such as flocking behavior, flight, wing shape, and movement patterns. The implementation of the measures proposed in AMM20 are expected to reduce the</p>

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			<p>risk of birdstrike on avian species to a less-than-significant impact.</p> <p>Please also see Master Response 17.</p>
2644	21	<p>BDCP activities should not directly or indirectly impede Level 2 and Level 4 water deliveries to federal refuges, state wildlife areas, and private wetlands (identified in the Central Valley Project Improvement Act). Currently, all alternatives appear to detrimentally affect Level 2 deliveries to refuges. Level 4 deliveries do not appear to be included in the supply at all. Additionally, water supplies of private and public wetlands in the Sacramento and San Joaquin Valley are also likely to be determinately affected. Impacts on habitat values in the rivers and tributary systems above the Delta should be carefully monitored in the context of project operations and mitigation to protect multiple habitat values. Monitoring of groundwater conditions and implementation of the Sustainable Groundwater Management Act (SGMA) is essential to protect habitat values in the context of both "short" and long-term water transfers and should be included as an objective in the WaterFix program.</p>	<p>As described in Appendix 5A, Sections A and B, the Existing Conditions values for Level 2 water supplies represents average water deliveries prior to 2009 when the Notice of Preparation and Notice of Intent were published. The No Action Alternative values represent Level 2 water supply contract amounts based upon the most recent contracts between the individual refuges and Reclamation. The results for refuge water supply referred to in this comment related to Table B.1.-1 in the RDEIR/SDEIS include results for refuges located both north of Delta and south of Delta. For north of Delta CVP water users, including Level 2 refuge water supplies, the CALSIM II model makes decisions under some hydrologic and precipitation conditions to provide a portion of water supplies from groundwater instead of CVP water supplies. These decisions do not affect south of Delta refuge water supplies. Overall, the annual allocation of Level 2 refuge water supplies is consistent in the Existing Conditions and No Action Alternative. However, as described in the RDEIR/SDEIS, during critical dry years, it is anticipated that there will not be adequate water supplies to fully provide 75 percent of the Level 2 refuge water supplies.</p> <p>Level 4 water supplies have historically been provided by Reclamation through water transfers. As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers would continue, including transfers for Level 4 refuge water supplies, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the EIR/EIS. With regards to water transfers, please also see Master Response 43.</p> <p>Recent adoption of the Sustainable Groundwater Management Act will implement groundwater monitoring programs and require implementation of groundwater sustainability plans throughout California by 2022, and full implementation of the plans by 2042. The requirements for the groundwater sustainability plans and local and regional plans are currently under development. It is anticipated that the plans would reduce the ability to continue long-term groundwater withdrawals that would result in continuous overdraft conditions. Implementation of the groundwater sustainability plans are considered in the cumulative impact analysis.</p>
2644	22	<p>All alternatives, especially alternative 9, result in the loss of wetlands. The resultant impacts and timing and details of mitigation measures are not provided. These impacts need to be identified and appropriate mitigation actions should be determined based on those findings.</p>	<p>A wetland delineation was completed in early 2015 and verified by USACE. Chapter 12 of the Final EIR/EIS presents and discusses impacts on wetlands for all alternatives. Mitigation Measure BIO-176: Compensatory Mitigation for Fill of Waters of the U.S. provides mitigation to compensate for those impacts. The lead agencies believe that the level of detail provided in this measure is sufficient for determining the effectiveness of the mitigation.</p>
2644	23	<p>The REIR/S states that spring outflow will be met through water purchases in order to protect the ecosystem. However, it is not specified who makes these water purchases, from whom the water is purchased or the funding sources used for the purchases. It is important that these details be made clear. Public monies should not be used for meeting project obligations.</p> <p>Additionally, it is stated that in the event that water purchases cannot be made to meet spring outflow releases they will be covered through operations of the CVP and SWP. It is not discussed what will occur if this does not happen. A contingency plan, such as back up or reserve storage, should be in place. Spring outflow models also operate under the assumption that there will be a reduction in exports combined with releases from Lake Oroville. How likely is this to happen? Is this simply a modeling assumption or a</p>	<p>The operational assumptions are presented in Chapter 3 of the Final EIR/EIS, including objectives for adaptive management. The text in the Final EIR/EIS has resulted in several changes in the text in the RDEIR/SDEIS, including the text referred to in this comment related to acquisition of water for spring outflow in Alternative 4A. This text has been modified in the Final EIR/EIS to not include acquisition of water related to spring outflow criteria. The model results presented in the Final EIR/EIS do not include water acquisition methods.</p> <p>Spring outflow proposed for the initial operating criteria described in the EIR/EIS can be met through reduced exports alone. H4 spring outflow included in 4A can be met through export reductions, releases from Oroville, and/or water transfers/purchases. The exact mechanism for obtaining the necessary spring outflow will depend on the initial operating criteria and hydrology, but modeling indicates that these outflows can be met.</p>

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		commitment to be included within operating permit terms?	
2644	24	In many cases species level monitoring is necessary in order to determine the relationships between the organisms and the conditions of the Delta (water quality, flow, etc.) Although this level of monitoring is mentioned for several groups of aquatic organisms, TNC [The Nature Conservancy] recommends that it also be applied to shorebirds, waterfowl, and riparian songbirds. Established monitoring protocols (e.g., Pacific Flyway Shorebird Survey, Mid-winter Waterfowl Survey) would be sufficient for this. Specifically, the Sandhill crane, tricolored blackbird, western burrowing owl, and Swainson's hawk should be monitored. Maintenance plans should be developed in order to track the health of these populations. Specific performance metrics should be used to determine the health of the populations. Habitat loss impacts should also be measured, and migratory bird populations monitored. Specifically White Gosse [sic] and Aleutian Canada Goose surveys should be conducted.	<p>DWR and Reclamation acknowledge the recommendations made regarding species monitoring. The Proposed Action will include long-term monitoring for the state and federally listed bird species included in the federal Biological Opinion and state incidental take permit: Swainson's hawk and tricolored blackbird. These monitoring measures will be outlined in the federal Biological Opinion issued by the U.S. Fish and Wildlife Service and in the CESA California Fish and Game Code, section 2081(b) incidental take permit issued by the California Department of Fish and Wildlife. To support these permits, the Proposed Action (Alternative 4A) includes an Adaptive Management and Monitoring Program (AMMP). The broad purposes of the program will be to: 1) undertake collaborative science, 2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and 3) apply new information and insights to management decisions and actions (RDEIR/SDEIS Page 4.1-18).</p> <p>The Final EIR/EIS also includes a required Mitigation Monitoring and Reporting Plan (MMRP), which includes descriptions of how DWR will monitor the implementation of each mitigation measure, including those designed to offset or minimize impacts to special-status birds and to migratory birds. Note that the Proposed Action is no longer a habitat conservation plan (HCP) or natural community conservation plan (NCCP), so therefore does not need to include a detailed monitoring plan for covered species, natural communities, or biological diversity.</p> <p>Monitoring will also be conducted in restoration sites such as riparian woodland and tidal wetlands to ensure that the restoration projects meet their success criteria and the terms of permits likely needed from the U.S. Army Corps of Engineers and State Water Quality Control Board regarding impacts to waters of the U.S. and waters of the state. Monitoring of birds mentioned in the comment may occur as part of the monitoring for restoration success in wetlands.</p>
2644	25	The REIR/S has many changes to CEQA and NEPA documentation based on new and updated environmental analysis. Many of these analyses now say that specific water quality impacts will be less than significant. Even for those which the new analysis revealed the same result, the sensitivity analyses now say that effects will be less than significant. For example, chloride concentrations and electrical conductivity were shown to be significantly and unavoidably impacted in alternatives 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9, yet now the sensitivity analysis asserts that the magnitude of the impacts to biological resources is substantially less than previously indicated. Clear explanations for these new determinations are warranted. What is the reasoning for these new determinations that effects will be less than significant?	The explanations for the refinements to the water quality impact determinations for chloride and electrical conductivity, which included additional conductivity modeling sensitivity analyses to understand the drivers of the chloride and EC impacts, were presented within the impact discussions (Impact WQ-7 for chloride and Impact WQ-11 for EC), as well as Section 8.3.1.1, Methods for Analysis, in Chapter 8, Water Quality, of the EIR/EIS. Please see Master Response 14 for more information on water quality.
2644	26	The effects of droughts on water quality are not sufficiently described. The REIR/S states that prolonged dry weather and drought conditions are likely to have adverse effects on water quality and may cause an influx of salt water into the Delta. However there is not analysis on what these effects may be and what magnitude they will have. In addition, in cases of significant droughts (like the one we are currently experiencing) it is becoming normal for water quality standards to be further degraded by the relaxation of regulatory standards as a consequence of petitions to the State Water Resources Control Board from the DWR and USBR [Reclamation]. Because this has become a normal occurrence during most dry periods it should be reflected in the operations of the SWP. Consequently in the interests of full disclosure we [The Nature Conservancy] request a description of the impacts and benefits associated with this action.	The purpose of the water quality assessment is to identify the effects of the alternatives on water quality, not the effects of droughts water quality. Understanding that effects of the alternatives on water quality may be different during an extended drought, modeling results were summarized and evaluated for the 1987–1991 drought period.
2644	27	Although the current BDCP has split the conservation and restoration actions from the water delivery infrastructure aspects, they are not unrelated. The separation of	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.

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		WaterFix and EcoRestore effectively changes conservation objectives tied to the project, and both aspects of the project need to work towards those goals. Close coordination between the two initiatives is necessary to achieve this, and should be made a priority. Both initiatives should receive feedback from the other and adjust accordingly to ensure the project is cohesive and successful.	
2644	28	The REIR/S has a strong focus on endangered species. Although this is not a misplaced emphasis, these considerations effectively preclude important attention to wider ecosystem and habitat values and the need for considerations to other covered and non-covered species that still may be affected by the Plan. Although they might not be endangered now, the destruction of their habitat or displacement due to construction may significantly affect their population. This is particularly true of shorebirds, waterfowl, and organisms in the tidal marsh habitats.	The commenter states that the REIR/SEIS has a strong emphasis on endangered species and notes that other “non-covered species”, including waterfowl and shorebirds, may also be affected by the Plan. The REIS/SEIS did consider effects on natural communities, special-status species, which includes listed and non-listed species, and other biological resources, such as waterfowl and shorebirds (see Impacts BIO-178 through BIO-183).
2644	29	Restoration actions should be prioritized based on the level of impact. High-impact actions, including the Yolo Bypass, Tidal Wetlands Restoration, and Non-Tidal Marsh Restoration should be prioritized due to their high impact. Prioritizing high value actions will bring about the greatest improvement in ecosystem health quickly and help ensure the efficient use of funds. Additionally, specific types of habitats must be conserved. The loss of a specific type of wetland, freshwater wetlands, for example, should be offset with the creating of the same type of wetland. All types of habitats are important, and the balance should be maintained to ensure the overall health of the ecosystem.	This comment is an opinion about how habitat restoration in the Delta should be implemented and prioritized to improve the overall health of the ecosystem. The habitat types and acreages are linked to listed species protections detailed in the Biological Assessment for this alternative. These actions were developed in consultation with federal and state fish and wildlife agencies which will include conditions for implementation of these actions in a Biological Opinion as required under Section 7 of the ESA and incidental take permit as required under CESA, California Fish and Game Code, Section 2081 (b). Furthermore, Impact BIO-176, Effects of Constructing Water Conveyance Facilities on Wetlands and Other Waters of the United States, addresses impacts to wetland and includes Mitigation Measure BIO-176, which states that compensatory mitigation shall fully replace lost function and value through restoration and/or creation of habitat with at least as much function and value as those of the impacted habitat. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2644	30	The overall conservation strategy of the BDCP should plot the offsetting of the loss of brackish, freshwater, and managed wetlands, as well as associated uplands. These habitats are essential to waterfowl, shorebirds, and many other organisms.	The commenter comments on the BDCP conservation strategy. The BDCP is no longer the preferred alternative. Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred Alternative. Alternative 4A is also the NEPA Preferred Alternative, a designation that was not attached to any of the alternatives presented in the 2013 Public Draft EIR/EIS. Alternative 4 remains a potentially viable alternative and is being carried forward in this RDEIR/SDEIS because it represents the original habitat conservation plan/natural community conservation plan (HCP/NCCP) alternative approach, and because it provides an important reference point from which the Alternative 4A, 2D, and 5A descriptions and analyses were developed. If the Lead Agencies ultimately choose the alternative implementation strategy and select an alternative presented in the RDEIR/SDEIS after completing the CEQA and NEPA processes, elements of the conservation plan contained in the alternatives in the 2013 Public Draft EIR/EIS may be utilized by other programs for implementation of the long term conservation efforts. Both the BDCP and Alternative 4A provide for the protection and restoration of habitats affected under these alternatives, which include tidal and nontidal wetlands and managed wetlands. Protected and restored lands would be managed for special-status and common species.
2644	31	When habitat quality is being evaluated, post-harvest management of cultivated lands should be considered. The current REIR states that when possible, tilling would be deferred or some lands left unharvested to increase the amount of forage available. Although this is a good start, the loss or conversion of managed farmland due to BDCP actions also needs to be taken into account. Conservation strategies and NEPA/CEQA mitigation should provide for offsetting the loss of rice and other crops that support	The effect of the conversion of cultivated lands that is also considered habitat for Wildlife, is analyzed throughout Chapter 12, Terrestrial Biological Resources, and mitigation is proposed, which includes the protection and management of 11,870 acres of cultivated lands specifically for wildlife species, including greater Sandhill crane, tricolored blackbird, western burrowing owl, and Swainson’s hawk.

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		foraging and breeding habitat for birds covered by the BDCP (greater Sandhill crane, tricolored blackbird, western burrowing owl, and Swainson's hawk).	
2644	32	Although the draft REIR/S mentions invasive aquatic vegetation control and introduction prevention actions, it does not describe how invasive species control will be considered in operational decisions. Control of invasive species will not only be valuable to the ecosystem, but also to water quality and management of WaterFix infrastructure. Control measures need to be outlined and an implementation plan created to prevent the spread of invasive species.	There are a number of environmental commitments outlined in Appendix 3B, Environmental Commitments, AMMs, and CMs of the FEIR/FEIS, to address issues with various invasive aquatic species. Among the measures being committed to are: Develop and Implement a Barge Operations Plan (which in part will involve monitoring during construction which will include observation of barge landing, loading, unloading, and departure of one or more barges at each active barge landing site; the condition of both river banks at each landing site, and visual inspection for invasive aquatic species on in-water equipment such as barges and small work boats); Funding the California Department of Boating and Waterways' Programs for Aquatic Weed Control; and Construction Best Management Practices (AMM2). Project proponents will contribute funds to further the DBW's aquatic weed control programs in the Delta. The funds will be transferred prior to, or concurrent with, commencement of construction of the project. The proposed project's contribution to DBW's aquatic weed control would include enhancement funding for those areas with project impacts that are located outside DBW's risk assessment area. The project proponents would partner with existing programs operating in the Delta to perform risk assessment and subsequent prioritization of treatment areas to strategically and effectively reduce expansion of the multiple species of IAV in the Delta. This risk assessment would dictate where initial control efforts would occur to maximize the effectiveness of the commitment. The MMRP being developed for the BDCP/California WaterFix, which will be made available simultaneously with the Final EIR/EIS, will include additional details.
2644	33	<p>McCormack Williamson Tract:</p> <p>McCormack-Williamson Tract (MWT) is an approximately 1,600-acre "island" in the north Delta. TNC [The Nature Conservancy] purchased MWT in 1999 using federal funds granted from the US Fish and Wildlife Service to TNC through the CALFED Bay-Delta Program. When TNC purchased MWT it also became the sole landowner in Reclamation District (RD) 2110.</p> <p>MWT is protected by approximately 8.8 miles of non-project levees and has flooded several times over the last few decades. Due to its location, geography, and ecological history, MWT is viewed as a prime site for restoration of fresh water tidal marsh, seasonal wetlands and riparian forest.</p> <p>TNC and RD 2110 are collaborating with the California Department of Water Resources (DWR) to complete planning and permitting for the MWT Levee Modification and Habitat Development Project (LMHDP). LMHDP objectives include improving flood control in the north Delta and benefiting aquatic and terrestrial habitats, species and ecological processes. DWR has executed a Project Funding Agreement with RD 2110 to complete LMHDP planning, design, and permitting. Based on the current schedule, implementation of LMHDP could possibly begin as early as 2018, pending permits; however neither DWR, TNC nor RD 2110 are obligated to undertake the construction and restoration phase of the LMHDP, should the project proceed beyond permitting.</p> <p>The LMHDP design includes removing portions of the MWT levee system. The modified pipeline/tunnel alignment for WaterFix Alternative 4 includes a tunnel alignment, work area, and temporary access road on MWT (see WaterFix Figures M12-4, Sheet 3 of 8).</p> <p>Inundation following LMHDP: An analysis of MWT topography and tidal influence indicates that most of the MWT interior will be inundated at mean tide level following levee removal, including the tunnel alignment, work area, and temporary access road on MWT, as indicated in WaterFix Alternative 4. Assuming LMHDP construction proceeds in</p>	The EIR/EIS assumes existing land use conditions and changes that could occur for future projects that are not speculative. As indicated in this comment, implementation of the McCormack Williamson Tract Levee Modification and Habitat Development Project is under development and is considered in this EIR/EIS as a cumulative impact project. The EIR/EIS evaluates proposed footprints of the conveyance facilities as described in the 2015 Conceptual Engineering Report. It is acknowledged that final locations for numerous aspects of the conveyance facilities will be determined during the design phase based upon topographic and geotechnical surveys and discussions with land owners. If the footprints are substantially different than what was evaluated in this Final EIR/EIS, additional environmental documentation would be completed.

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		advance of any potential work on the WaterFix tunnels, DWR should address the apparent conflict between the proposed Alternative 4 features and inundation anticipated on MWT following LMHDP construction.	
2644	34	<p>McCormack Williamson Tract:</p> <p>McCormack-Williamson Tract (MWT) is an approximately 1,600-acre "island" in the north Delta. TNC [The Nature Conservancy] purchased MWT in 1999 using federal funds granted from the US Fish and Wildlife Service to TNC through the CALFED Bay-Delta Program. When TNC purchased MWT it also became the sole landowner in Reclamation District (RD) 2110.</p> <p>MWT is protected by approximately 8.8 miles of non-project levees and has flooded several times over the last few decades. Due to its location, geography, and ecological history, MWT is viewed as a prime site for restoration of fresh water tidal marsh, seasonal wetlands and riparian forest.</p> <p>TNC and RD 2110 are collaborating with the California Department of Water Resources (DWR) to complete planning and permitting for the MWT Levee Modification and Habitat Development Project (LMHDP). LMHDP objectives include improving flood control in the north Delta and benefiting aquatic and terrestrial habitats, species and ecological processes. DWR has executed a Project Funding Agreement with RD 2110 to complete LMHDP planning, design, and permitting. Based on the current schedule, implementation of LMHDP could possibly begin as early as 2018, pending permits; however neither DWR, TNC nor RD 2110 are obligated to undertake the construction and restoration phase of the LMHDP, should the project proceed beyond permitting.</p> <p>The LMHDP design includes removing portions of the MWT levee system. The modified pipeline/tunnel alignment for WaterFix Alternative 4 includes a tunnel alignment, work area, and temporary access road on MWT (see WaterFix Figures M12-4, Sheet 3 of 8).</p> <p>Transmission tower stability: An existing transmission tower on MWT is directly in the path of the tunnels proposed by WaterFix Alternative 4. That tower (approximately 2000 ft. in height) is supported by several guy wires. Subsidence due to tunnel construction could impact the transmission tower, its operations building, and guy wire anchors. DWR should address how potential effects of the tunnels on the MWT transmission tower and supporting equipment will be resolved.</p>	<p>The EIR/EIS evaluates proposed footprints of the conveyance facilities as described in the 2015 Conceptual Engineering Report. It is acknowledged that final locations for numerous aspects of the conveyance facilities will be determined during the design phase based upon topographic and geotechnical surveys and discussions with land owners. If the footprints are substantially different than what was evaluated in this Final EIR/EIS, additional environmental documentation would be completed.</p> <p>Regarding the part of the comment pertaining to subsidence caused by tunneling, the potential for ground settlement caused by tunneling activities is described in Impact GEO-3 in Chapter 9.</p> <p>GEO-3 has been revised to describe the expected width of the settlement "trough," the depth of settlement, and the change in ground slope that is anticipated at certain developed areas and infrastructure as a result of the tunneling operation.</p> <p>GEO-3 also describes how the results of site-specific geotechnical investigations would be applied to the development of geotechnical design and construction recommendations to minimize the potential effects from settlement.</p> <p>Specific protection measures would be implemented at locations along the tunnel alignment that are particularly sensitive to settlement, such as transmission line towers. The maximum allowable settlement for each type of asset would be established using published standards or industry best practice. The protection measures that may be employed to control settlement in excess of the allowable limits include establishing construction specifications for the minimum TBM face pressures and measurements of the volume and/or weight of the soil being extracted, requirements in the contract documents to limit TRM volume losses to a specific figure, requiring the tunneling contractor to closely manage the method of advancing the tunnel and manage ground losses at the tunnel face and around the shield body.</p>
2644	35	<p>Staten Island:</p> <p>Staten Island is owned by TNC [The Nature Conservancy] and managed by Conservation Farms and Ranches (a non-profit affiliate of TNC) as a diversified agricultural property with a specific focus on wildlife-friendly farming. Specifically, Staten is one of the most important sites in California for wintering Greater Sandhill Cranes (Ivey and Herziger, 2003) and management at Staten is focused on improving habitat conditions for this species. In addition, the island is managed to provide valuable habitat for waterfowl, shorebirds, and other wildlife.</p> <p>TNC acquired fee title to Staten Island in 2001 with two grants provided by the State of California. The California Natural Resources Agency granted California Proposition 204 funds to TNC because the Agency determined that the protection of Staten Island would help achieve the goals of the CALFED Ecosystem Restoration Program by (1) protecting</p>	<p>Since issuance of the 2013 Draft EIR/EIS, the proposed project has been modified to address concerns of impacts to sandhill cranes on Staten Island. Specifically, the project has been modified to minimize construction activities on Staten Island by removing: tunnel launch facilities, large reusable tunnel material storage areas, a barge landing site, and high voltage power lines.</p> <p>Effects on sandhill cranes and other wildlife on Staten Island would be avoid and minimized through the implementation of the following Avoidance and Minimization Measures (AMMs).</p> <ul style="list-style-type: none"> • AMM1 Worker Awareness Training • AMM2 Construction Best Management Practices • AMM3 Stormwater Pollution Prevention Plan

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		<p>critical agricultural wetlands for continued use by significant numbers of migratory birds; and (2) allowing development and refinement of economically viable wildlife-friendly agricultural practices. DWR granted California Proposition 13 funds to TNC because DWR determined that the protection, management and use of Staten Island for wildlife-friendly agricultural purposes would (1) preserve agricultural land; (2) protect wildlife habitat; and (3) protect the floodplain area from inappropriate or incompatible development.</p> <p>The land use at Staten Island is restricted by a Conservation Easement Deed granted by TNC to DWR in 2001. We remain concerned that construction activities related to installation of the tunnels on Staten Island and the related impacts on crane habitat, as proposed by DWR, would violate the terms of the Conservation Easement which encumbers Staten Island. California law specifies that conservation easements are permanent (California Civil Code, [Section] 815 et. seq.). TNC cannot voluntarily agree to DWR's proposal to locate the water conveyance tunnels under Staten Island if such activity would violate the Conservation Easement; however we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p>	<ul style="list-style-type: none"> • AMM4 Erosion and Sediment Control Plan • AMM5 Spill Prevention, Containment, and Countermeasure Plan • AMM6 Disposal and Reuse of Spoils • AMM10 Restoration of Temporarily Affected Natural Communities • AMM20 Greater Sandhill Crane • AMM30 Transmission Line Design and Alignment Guidelines (however no transmission lines planned in the vicinity of Staten Island) <p>Please refer to Master Responses 17 and 18 for more information about the terrestrial resources, sandhill cranes, and agriculture.</p> <p>DWR is very familiar with the Conservation Easement on Staten Island that this comment describes. DWR holds the Conservation Easement and, as the Conservation Easement holder, has oversight to ensure that TNC's management of Staten Island is consistent with the purposes of the Easement. The purposes of the Conservation Easement are to protect "multiple and complementary benefits" that are defined in the Easement, specifically (i) agricultural land preservation, (ii) wildlife habitat protection, (iii) protection of floodplain from potential inappropriate and incompatible development, and (iv) potential future flood management improvements. In preserving and protecting these "multiple and complementary benefits," it is also the Conservation Easement's purpose to encourage and promote wildlife-friendly agricultural practices on the Island. The Conservation Easement does not prohibit the siting of water conveyance facilities or related improvements on Staten Island. The Conservation Easement actually provides for various land uses so long as the land uses are consistent with the Conservation Easement's purposes. The project design changes and the performance standards set forth in the EIR/EIS ensure that Alternative 4A would not interfere with the "multiple and complementary benefits" that the Conservation Easement protects or wildlife-friendly agriculture on Staten Island. Thus, the Project is consistent with the Conservation Easement's purposes.</p>
2644	36	<p>Despite improvements by DWR to minimize the direct effects of conveyance construction to Sandhill Cranes on Staten Island, TNC [The Nature Conservancy] has many of the same concerns previously expressed in detailed comments to the original EIR/EIS. There remains a high degree of uncertainty regarding the crane response to the construction impacts located on and around Staten Island. Although the physical footprint of construction activities on Staten has been reduced to 100 acres, project activities are likely to indirectly impact much of the surrounding area through lighting, noise, and construction traffic. While the REIR/S acknowledges the significant uncertainties regarding how cranes will respond to the disturbances and habitat modifications that will result from construction activities and post-construction operations and maintenance on Staten Island, it still concludes that no negative impact to cranes are expected due to the mitigation measures. However, the REIR/S lacks data on effectiveness of several of the mitigation measures, including the proposed noise and light barriers which are largely unknown. TNC is bound by a conservation easement held by the Department of Water Resources which conveys explicit obligations to protect habitat values for sandhill cranes and other migratory birds. These obligations are inviolable under the law.</p>	<p>The commenter expresses concern over the disturbances to cranes on Staten Island and the effectiveness of proposed measures in mitigating these effects. The impacts of noise and light and construction traffic on cranes have been analyzed in the RDEIR/RDEIS (see Impact BIO-71 Indirect Effects of the Project on Greater Sandhill Cranes), which concludes that the effect would not be adverse under NEPA and less than significant under CEQA. Although there is uncertainty associated with indirect effects, the proposed avoidance and minimization measures would minimize these effects to the greatest extent possible, i.e. activities within 0.75 mile of crane roosting habitat would reduce construction noise during night time hours (from one hour before sunset to one hour after sunrise) such that construction noise levels do not exceed 50 dBA Leq (1 hour) at the nearest temporary or permanent roosts during periods when the roost sites are available (flooded). In addition, the area of crane foraging habitat that would be affected during the day (from one hour after sunrise to one hour before sunset) by construction noise exceeding 50 dBA Leq (1 hour) would also be minimized.</p> <p>To address remaining uncertainty, unavoidable noise related effects would be mitigated by enhancing 0.1 acre of foraging habitat for every acre indirectly affected within the 50 dBA Leq (1 hour) construction noise contour. With these measures in place, indirect effects of noise and visual disturbance from construction activities are not expected to reduce the greater sandhill crane population in the study area.</p> <p>AMM20 will also be implemented during operations and maintenance.</p>

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			See Master Response 17 for more information on impacts on cranes and Staten Island.
2644	37	<p>TNC [The Nature Conservancy] cannot voluntarily agree to the Department of Water Resources' proposal to locate the water conveyance tunnels under Staten Island, we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p> <p>It remains unclear as to what construction activities will actually occur within the fall/winter time period of crane activity, leaving great uncertainty about how severe project impacts will be on the population. The REIR/S still provides no guarantee that construction activities will be limited to outside the crane wintering season. Nighttime construction may still occur during the crane season, despite insufficient evidence that it can effectively be mitigated. TNC continues to recommend that no project activities in the vicinity of crane use areas occur during the crane wintering period from September through March.</p>	<p>The effects of construction and operations and maintenance activities on cranes are evaluated under Impact BIO-71 in Chapter 12 of the EIR/EIS. AMMs are proposed to avoid and minimize construction related effects on cranes. For more information regarding sandhill crane mitigation please see Master Response 17.</p>
2644	38	<p>TNC [The Nature Conservancy] cannot voluntarily agree to the Department of Water Resources' proposal to locate the water conveyance tunnels under Staten Island, we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p> <p>The effects of fragmentation on the foraging/roosting habitat network within the landscape around Staten Island have yet to be addressed. Habitat changes occurring within the daily flight radius of crane roosting sites may affect roosting activity, even if local conditions remain suitable. Avoidance and Minimization Measure 6 specifically requires that the area used for Reusable Tunnel Material (RTM) storage be minimized in crane foraging habitat, however the significant RTM footprint has been moved from Staten Island to Bouldin Island, another important foraging area for cranes that roost on Staten. The relocation of RTM off of Staten Island is a step in the right direction, however the increased impact to Bouldin Island still results in significant habitat loss for cranes that depend on the area. Furthermore, in Chapter 12 and appendix D.3 of the REIR/S, there is inconsistent information on the location of the RTM and the associated impact to the cranes using the area. AMM20 still indicates the RTM footprint on Staten is a worst-case scenario, alluding to its continued consideration as a potential option. As suggested for migratory waterbirds and Sandhill Cranes, we recommend that protection and restoration efforts be implemented well in advance of implementation to ensure that the potential impacts on Staten and connected properties, like Bouldin Island, are fully mitigated prior to construction.</p>	<p>The commenter provides their opinion that, although the preferred alternative does not include RTM placement on Staten Island, RTM placement on Bouldin Island would also negatively affect sandhill cranes. Impacts on sandhill crane foraging habitat that would occur as a result of placement of RTM on Bouldin Island under the preferred alternative (Alternative 4A) have been analyzed in the RDEIR/RDEIS. These impacts would be minimized and mitigated by AMM20 and Resource Restoration and Performance Principal GSC 1).</p> <p>The commenter also states that AMM20 indicates continued consideration of an RTM footprint on Staten Island. AMM20 applies to all project alternatives (not only the preferred alternative), including Alternative 1A which includes RTM placement on Staten Island.</p> <p>The commenter recommends that protection and restoration efforts be implemented prior to construction. Restoration and protection will be implemented one season prior to the start of construction impacts in order for habitat to be in place prior to construction.</p> <p>For additional information regarding sandhill crane, please see Master Response 17. For additional information regarding RTM, please see Master Response 12.</p>
2644	39	<p>TNC [The Nature Conservancy] cannot voluntarily agree to the Department of Water Resources' proposal to locate the water conveyance tunnels under Staten Island, we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p> <p>The loss of crane habitat needs to be considered as part of cumulative effects including the loss of habitat already resulting from land conversion to unsuitable foraging crops affecting the forage availability and carrying capacity of the Delta overall for Greater Sandhill Cranes. Forced movement of sandhill cranes off traditional use areas to increasingly limited areas for roosting and foraging habitat regionally not only create challenges for ensuring the cranes identify and utilize new areas, but it also may result in increased competition between cranes and geese where suitable habitat remains.</p>	<p>The Nature Conservancy's position on Staten Island is noted.</p> <p>Alternative 4A is compared to the No Action Alternative in the Early Long-Term. The No Action Alternative analysis takes into consideration Existing Conditions, programs already adopted during the early stages of development of the EIR/EIS, facilities that were permitted or under construction during the early stages of development of the EIR/EIS, and foreseeable changes in land and water management associated with existing plans, policies and legal mandates that would occur with or without the project (see Table 12-7 in Chapter 12 of the EIR/EIS). The analysis does not include predictions or assess trends current or future crop selection that may or may not benefit sandhill cranes. Crop selection is dynamic and predominantly influenced by economic forces and therefore does not meet the standard for a reasonably foreseeable change in existing conditions based on existing plans, policies and legal mandates. Alternative 4A was determined to not have a significant cumulative impact on greater sandhill crane. For additional</p>

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			information regarding sandhill crane, please see Master Response 17.
2644	40	<p>TNC [The Nature Conservancy] cannot voluntarily agree to the Department of Water Resources' proposal to locate the water conveyance tunnels under Staten Island, we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p> <p>Impacts to cranes and the farming operation due to long-term operations and maintenance of permanent facilities were not discussed in avoidance and minimization measures, while the planned location of conveyance remains underneath some permanent crane roosting areas. Questions remain regarding what would happen if the underground equipment breaks and digging from the surface is required for repairs at the location of an active crane roosting site.</p>	<p>The commenter asks how operations and maintenance of permanent facilities such as the tunnel could affect crane habitat. Safe haven work areas and permanent shafts will be constructed as part of the project footprint and have been analyzed in the RDEIR/RDEIS. All maintenance work or repairs underground would be conducted by accessing the tunnel through these shafts. No additional digging from the surface would be required.</p>
2644	41	<p>TNC [The Nature Conservancy] cannot voluntarily agree to the Department of Water Resources' proposal to locate the water conveyance tunnels under Staten Island, we recognize that DWR, as a state agency, has the legal authority to condemn property under California's eminent domain laws.</p> <p>Larger habitat effects due to impacts on the farming operations and irrigation practices on Staten and surrounding areas have not been effectively addressed. Viable farming operations are essential for providing suitable crane foraging and roosting habitat. AMM20 says CM1 activities on Staten Island will be staged so they do not disrupt flooding and irrigation capacity; however, necessary irrigation occurs throughout the year for the crop growing season and for fall/winter habitat creation. Impacts to the pumping and irrigation structure on Staten and the potentially significant effects that dewatering for tunnel construction could have on island subsidence have also not been adequately analyzed. Salinity levels are also expected to increase throughout the Delta and salinity will move inland as a result of new north Delta diversions, potentially having significant effects to the crop production capacity on Staten Island.</p>	<p>Chapter 12 of the EIR/EIS contains a thorough and extensive assessment of the proposed project's potential effects on sandhill crane using the best-available information. The proposed project was developed with input from USFWS and CDFW staff to lessen the risk of adverse effects on cranes using Staten Island and includes additional mitigation measures to provide additional protections to the cranes. Since issuance of the 2013 Draft EIR/EIS, the proposed project has been modified to address concerns of impacts to Sandhill Cranes on Staten Island. Specifically, the project has been modified to minimize construction activities on Staten Island by removing: tunnel launch facilities, large reusable tunnel material storage areas, a barge landing site, and high voltage power lines. Furthermore, the avoidance and mitigation measures that address sandhill cranes have been substantially modified (see RDEIR/SDEIS, Appendix A, Appendix 3B). For more information regarding sandhill crane mitigation please see Master Response 17. Please refer to Master Response 18 regarding the evaluation of impacts on agriculture.</p> <p>As described in Chapter 7, Groundwater, and Chapter 14, Agricultural Resources, in the Draft EIR/EIS and the BDCP/California Water Fix Partially Recirculated Draft EIR/Supplemental Draft EIS, DWR would conduct site-specific groundwater analysis to determine the extent of the dewatering activities along the conveyance route. DWR would consult with local agencies.</p> <p>As described under Impact GW-1 in Chapter 7, Groundwater, in the Draft EIR/EIS, the impacts due to dewatering during construction of the conveyance facilities may not be able to be fully mitigated to a level of less than significant or become not adverse because replacement water supplies may not meet the preexisting demands or planned land use demands of the affected party, including agricultural production wells. The effects of dewatering could be reduced through installation of seepage cutoff walls during dewatering. The effects on agricultural activities are addressed under Agricultural Impact AG-2 (see Chapter 14, Agricultural Resources, in the Draft EIR/EIS). The impacts to agricultural production due to temporary construction activities that could result in disruption of irrigation or drainage infrastructure, and could jeopardize agricultural production. Implementation of Mitigation Measures AG-1, GW-1, GW-5, and WQ-11 will reduce the severity of these impacts by implementing activities such as siting project footprints to encourage continued agricultural production; monitoring changes in groundwater levels during construction; monitoring seepage effects; relocating or replacing agricultural infrastructure in support of continued agricultural activities; identifying, evaluating, developing, and implementing feasible phased actions to reduce EC levels; engaging counties, owners/operators, and other stakeholders in developing optional agricultural stewardship approaches; and/or preserving agricultural land through off-site easements or other agricultural land conservation interests. However, these impacts remain significant and unavoidable and adverse to agricultural resources.</p> <p>For information on the projects effects on salinity see Master Response 14.</p>

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2645	1	The Exchange Contractors further reserve the right to utilize the comments and objections of other parties to the sufficiency and compliance of the documents with legal requirements of CEQA and NEPA as a basis for satisfying the requirement of exhaustion of administrative procedures and notifications of the legal and factual insufficiencies of the Drafts and Recirculated Draft and Supplemental Draft in any legal or administrative challenges to the processes or documents.	The comment is noted and does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2645	2	<p>NEPA and CEQA are clear. The alternative projects proposed must be described in specific terms sufficient to identify the probable environmental impacts and provide for a weighing process of all significant impacts of the Project Alternatives. The proper lead agency must be chosen, and the Project Alternatives must be accurately described. Here, the assumption is that the requirement of ESA agency Section 7 entitled "Consultations and Incidental Take Authority" will determine how the facilities constructed will be operated and used. If this is so, the DWR is not the proper lead agency and cannot identify alternatives in an understandable form. The Project Alternatives are not properly described. There is an alternative approach that could comply with CEQA and NEPA which has not been employed.</p> <p>The proper way to define potential impacts of the Project Alternatives is to conduct the consultation and conclude the Section 7 process. If DWR is proposing to build these facilities subject to a constantly shifting Section 7 process in determining the operating criteria, the proper lead agency is the ESA Federal authorities and State authorities because they make the decisions. If we are to have an unreliable water supply system in California and expensive tunnel and pumping facilities potentially standing idle during significant periods, draining the financial resources that could be used to support other water projects and facilities, that alternative is not defined. The Endangered Species agencies are apparently placed in charge of that decisionmaking as lead agency under the DWR interpretation of the Federal and California ESA processes. If so, the proper Lead Agency for this Recirculation Process is NMFS, USFWS and California Department of Fish and Wildlife, and this Supplement and Recirculation Process only creates a cloud of words and no specific understanding of how the Project will operate and therefore impact the environment.</p>	The proper lead agencies for the EIR/EIS are DWR and Reclamation because of their authority and responsibilities to operate the SWP and CVP, respectively. The operation of the proposed project has been clearly presented in Final EIR/EIS Chapter 3, Description of Alternatives and in the Biological Assessment. During ESA Section 7 consultation and the CESA permit process, USFWS, NMFS and DFW may require modifications to proposed project operations as part of the BiOp and 2081(b) permit. Please refer also to Master Response 29, regarding ESA compliance.
2645	3	<p>In regard to the revision of Scenario H, Section 4.1.2.2 of the Supplement states: "Alternative 4A, Starting Operations, will be determined through the continued coordination process as outlined in the Section 7 consultation process and 2081(b) permit prior to the start of construction. An adaptive management and monitoring system, as described below, will be implemented.." (Page 4.1-5).</p> <p>This is a violation of CEQA and NEPA in describing alternatives. It arises from the fact that the operations, if any are permitted (unlike the 50-year habitat plan alternative) to transport water at times is not known when the decision to commence construction is made. The proper lead agency has the burden of including an analysis of alternatives and their impacts, but here there is no minimum improvement or change in reliable water conveyance or mortality to fish species from the project specified. Instead, whatever the Federal or State ESA agencies require will be a condition of the Project. It is well-established that the lead agency must be properly chosen, and although other agencies may be required to issue authority, the lead agency must determine the alternative project. Laurel Heights v. Regents of University of California, 47 Cal.3d 376, 406 (1988); Planning & Conservation League v. DWR, 83 Cal.App.4th 892, 904-907. Here, the lead agency (DWR) is proposing to construct facilities with no precondition that they</p>	<p>With regard to alternatives, the broad range of alternatives included in the EIR/EIS reflects a commonly used type of "bookend" analysis, referring to a range of decision-making options (alternatives) consisting of a continuum of choices. Under the "bookend" approach utilized by the Lead Agencies for the operational alternatives, the EIR/EIS evaluated alternatives that ranged from higher export deliveries at one end, and reduced exports and higher outflows to protect fish species at the lower end. (See Final EIR/EIS Appendix 3A, Section 3A.9 and Chapter 3, Section 3.2.1.4.) By analyzing various alternatives covering the entire spectrum of impacts, the alternatives included in the Draft EIR/EIS, RDEIR/SDEIS and Final EIR/EIS represent an appropriate range of alternatives and will permit the Lead Agencies to make a reasoned choice among alternatives. Thus, the range of alternatives included in the EIR/EIS fully complies with CEQA and NEPA.</p> <p>Please see Master Response 4, Alternatives Development. Regarding the purpose and need for the project, please see Master Response 3. See also Master Response 33 for additional information on adaptive management and monitoring.</p>

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		<p>will ever be used or how they will be used.</p> <p>This is analogous to writing an EIR for a new railroad mainline, never specifying what number of trips regulators will have to authorize to avoid the capital and operation costs of the new line requiring that passenger and rail traffic on existing railroad lines, and safety efforts on those existing lines, being slashed and eliminated.</p>	
2645	4	<p>Remedy: The Alternative needs to specify the minimum use and utility permitted for the new facilities that Section 7 consultation and California (California Endanger Species Act) authority related to smelt protection will permit. A specific statement that the Project will not proceed unless these operating characteristics are available would require completion of Section 7 and CESA before construction occurs.</p> <p>The problem that Section 7 authority lapses periodically and new consultation is required, or that authority may not be renewed, must also be considered. If the environmental impacts are too severe, a change in the Federal and State legislation is a permissible mitigation condition to be sought, permitting a Section 7 authorization for the life of the project which will allow the costs of the Project to be borne by the DWR and CVP.</p> <p>Without some range of operating capacity use during the 50-year debt amortization period, the impacts of an alternative cannot be appraised as to whether costs would deprive the levee maintenance and other water transportation budgets for facilities currently in use to pass water through the Delta from being maintained.</p>	<p>As described in the RDEIR/SDEIS, the preferred alternative would no longer include 50-year term HCP and NCCP permits. Reclamation has requested consultation by U.S. Fish and Wildlife Service and National Marine Fisheries Service under Section 7 of the Endangered Species Act. The permitted project by these agencies through the issuance of a biological opinion is similar to Alternative 4A and within the range of alternatives evaluated in detail in the Final EIR/EIS. The range of water deliveries and flows through the Delta channels are presented in Appendix 5A, Section C, of the Final EIR/EIS. The issue related to the cost estimate as raised by the comment does not raise any issues with the environmental analysis provided in the EIR/EIS.</p> <p>For more information regarding cost of the proposed project please see Master Response 5.</p> <p>For more information regarding the impacts to Delta Smelt please see Master Response 17.</p> <p>Please see Master Response 45 for discussion of permitting and Master Response 29 regarding Section 7.</p>
2645	5	<p>Alternative Remedy: If DWR truly intends to proceed with construction and does not intend to weigh in this document the environmental effects of constructing but not operating the Project Facilities to yield water deliveries because there is no 50-year assurance from Section 7 consultation, the USFWS, NMFS and California Fish & Wildlife may be the proper lead agencies instead of DWR. CEQA Guidelines '15051(b) (lead agency will be the agency with the greatest responsibility for supervising or approving the project). How can DWR weigh the alternatives when its description assumes that operational judgment and procedures will be determined by the ESA agencies, potentially after construction?</p> <p>Without such conditions, this project is similar to attempting to describe impacts from building a 100-floor presidential tower but being unable to analyze the impacts because it is never allowed to be occupied.</p>	<p>See Response to Comment 2645-2.</p>
2645	6	<p>Possible Further Correctional Measure: The Federal Endangered Species Act provides for a State to petition for appointment of a Federal panel (Endangered Species Committee) to override or determine alternative measures to those specified in a Section 7 consultation procedure. 15 USC 1535-6. If the lead agency (DWR) specified in its EIR that the Tunnel/WaterFix Project would not be implemented or constructed unless either the Section 7 consultation procedure or the exemption procedure from the Endangered Species Committee established under Section 7 permitted utilization of the facilities in such a fashion that there would still be sufficient monies to maintain levees and conveyance of the remaining waters to be transported through the Sacramento/San Joaquin Delta, the contention that DWR is the proper lead agency and the process under both Federal and State law may be supportable.</p> <p>Without such a statement and description of alternatives, no focus upon alternatives</p>	<p>The USFWS and NMFS are Federal cooperating agencies who will consider the proposed project during the federal ESA Section 7 consultation process and will issue a Biological Opinion. The DFW similarly will consider and issue an incidental take permit under Section 2081(b) of CESA. These agencies will provide critical project approvals related to effects on listed fish and wildlife species. DWR and Reclamation are the CEQA and NEPA lead agencies because of their authority to operate and modify the SWP and CVP. The lead agency for CEQA purposes is the government agency that has principle responsibility for carrying out or approving a project and therefore has the principal responsibility for preparing the CEQA document. NEPA regulations define a lead agency as the agency with the primary responsibility for preparing an EIS. Therefore DWR and Reclamation are the appropriate lead agencies for this EIR/EIS.</p>

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		and mitigation of significant environmental impacts is feasible because the Federal and State ESA agencies who it is presumed will attempt to utilize this document to satisfy their NEPA and CEQA requirements have no means of measuring the impacts of their edicts, and DWR (and the CVP) could well implement a costly project which denies reasonable maintenance of existing facilities with severe environmental impacts which have not been considered.	
2645	7	The Draft EIR/EIS failed to include or consider the environmental impacts caused by the economic costs of this Project. To avoid citing dry legal precedent, and in an attempt to gain the decisionmakers' attention to the failure to achieve the objectives of an EIR/EIS process which can be cured at this stage, the Supplement must consider that unless there is assurance that sufficient water can be diverted and transported through these facilities, the costs of repaying capital will for at least 50 years be devoted to this "tool" with no utility arising from its installation. The alternative must be considered of devoting those monies to local reservoirs, water conservation, dredging and Delta levee improvements. This is the purpose of an EIR/EIS: to weigh alternatives and their environmental effects.	Please refer to Master Response 6 for additional details on demand management. Also, please see Master Response 3 for additional details on the project purpose and need and Master Response 4 for additional details on the selection of alternatives.
2645	8	<p>The "Collaborative Science Process" referred to in pages 4.1-19-20 and the Memorandum of Agreement for Adaptive Management at 4.1-30-3 do not attempt to quantify the environmental impacts from terms that may be required in Section 7 as reasonable and prudent measures or as CESA Section 2081(h) permit conditions. To understand alternatives, they must be clearly spelled out. What the ESA and CESA agencies will require is key to describing alternatives and impacts.</p> <p>This alternative operation regime of waiting for the ESA agencies to order the suspension of use of CVP and SWP project facilities under claimed ESA authority or CESA authority has been proceeding unabated for more than 20 years. This Project Description proposes that vagueness and uncertainty as an underpinning for additional new facilities. NEPA and CEQA do not permit alternatives made of smoke and mirrors, no matter how politically correct "protecting the Delta fisheries" is viewed.</p> <p>This draft confronts the contradiction between NEPA and CEQA requirements and the supposed ESA/CESA authority. Delaying the confrontation and thus disguising impacts and alternatives is not lawful.</p>	The purpose of Section 4.1.2 of the RDEIR/SDEIS is to summarize the new proposed action (Alternative 4A) in terms relevant to the environmental analysis under CEQA and NEPA. This proposed action includes many environmental commitments, some of which are part of the project description used for the ESA Section 7 consultation and the state CESA 2081(b) permit application. The project description and environmental commitments in the RDEIR/SDEIS were designed to be inclusive of any permit terms or conditions that may be imposed by the Section 7 consultation or 2081(b) permit. Therefore, the final permit terms and conditions negotiated in the Section 7 Biological Opinion and CESA 2081(b) permit are expected to fall within the range of the project description and environmental commitments evaluated in the RDEIR/SDEIS (e.g., see Table 4.1-3 for the assumed levels of habitat restoration that are expected to exceed those ultimately required by the Section 7 consultation or 2081(b) permit). It is typical for projects evaluated through CEQA and NEPA to conduct their environmental analysis and finalize an EIR or EIS before the federal ESA consultation or state endangered species permit concludes.
2645	9	The State Water Resource Control Board requirements on proposed operation of the proposed facilities in regard to deliveries of CVP and SWP water must be described in regard to ranges of a specified preferred alternative. If the SWRCB orders some other range, the EIR/EIS cannot be sufficient for the SWRCB's desired or permitted Project.	<p>As described in Appendix 3A, Identification of Water Conveyance Alternatives, Final EIR/EIS, comments and suggestions received from the State Water Board were influential in defining the range and content of alternatives considered in the EIR/EIS, including the State Water Board's Delta Flow Criteria Report, prepared pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009. Scoping comments from the State Water Board included requests for an alternative providing for reduced diversions and an alternative incorporating changes to Delta outflows (and potentially inflows) that would reflect a more natural hydrograph. The Lead Agencies determined that an additional alternative would be required to be responsive to the State Water Board's comments. Informed by these comments, as well as several letters from the State Water Board to the Natural Resources Agency, DWR met with State Water Board staff to identify a general approach to model an increased spring Delta outflow alternative. This alternative was designed to increase spring Delta outflow by approximately 1.5 million acre-feet, on average, above the NEPA baseline assumptions. This became Alternative 8 as analyzed in the EIR/EIS.</p> <p>Furthermore, as described in Section 3A.10.6, consideration of outflows necessary to achieve biological goals and objectives for delta and longfin smelt have been explicitly incorporated into the proposed project</p>

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			through a decision tree process that allows for alternative outcomes for water operations based on the results of targeted research and studies; see also Master Response 17.
2645	10	Instead of specifying a water operation criteria conserving Shasta, Oroville and Folsom storage and providing a preferred operations scheme which will yield amounts of water deliverable North and South of the Delta in light of the existing coordinated Operations Agreement between the CVP and SWP, the authors describe the Project as one which will transport water permitted to be transported by the orders of the State Water Resource Control Board, with the SWRCB to "fill in the blanks". The result is that no realistic Project Alternative is actually identified, nor can the impacts of alternatives be judged.	For additional information on alternatives please see Master Responses 4. See Master Response 28 for information on operational criteria.
2645	11	<p>This document is supposedly to be relied upon by the State Water Resource Control Board as a responsible agency as the basis of its determinations, yet one is hard put to find the orders of the SWRCB that will be sought and the impacts to both the ecosystem and the users of water thereby which the SWRCB and public is entitled to in judging a means of mitigating for impacts of the proposed Project. Instead, the "Collaborative Science Process" and the Adaptive Management Process referred to on pages 4.1-19-20 and 30-33 is offered as a substitute.</p> <p>As an example, if the SWRCB insists upon released Shasta water temperatures not exceeding a certain temperature during monthly periods and releases cannot be made for Delta water quality mitigation or transportation through the tunnels, or for Delta outflow to the Bay as occurred in 2014 and 2015, the tunnel project has consumed more than \$20 billion that is not available for other projects and uses (such as fish hatcheries and cold water storage reservoirs). The absence of that money or funding which will be devoted to these facilities and no longer available for maintenance and operation of existing facilities or installation of others has potentially severe impacts upon the human environment. There is no discussion of those impacts because there is no specification of the operating criteria which will be sought from the SWRCB Water Quality Plan and for the addition of point of diversions for the tunnel intakes and exits. It is impermissible to propose facilities and then contend you cannot examine impacts from its operation because other agencies can direct operations. The public is entitled to comment upon impacts from the preferred operating criteria to be sought by the Lead Agency.</p>	<p>The potential impacts of Alternatives 4A, 2D and 5A are addressed in Section 4 of the RDEIR/SDEIS, including analyses of water supply, surface water and water quality, and Fish and aquatic resources effects. These alternatives would have no effect on water rights other than those of the SWP/CVP. The analysis provides sufficient information for the SWRCB to judge the potential effects on municipal and industrial, agricultural and fish and wildlife beneficial uses. In addition, the RDEIR/SDEIS included supplemental information for the SWRCB in Appendix C, Supplemental Modeling Requested by the State Water Resources Control Board Related to Increased Delta Outflows (which is now Appendix 5E in this Final EIR/EIS). Please also refer to updated analyses in Chapters 5, Water Supply, Chapter 6, Surface Water, Chapter 7, Groundwater, Chapter 8, Water Quality and Chapter 11, Fish and Aquatic Resources in this Final EIR/EIS. In addition, DWR and Reclamation are participating in the SWRCB's Change in Point of Diversion petition process in which effects on legal users of water and fish and wildlife are addressed.</p> <p>See also Master Response 28 regarding operational criteria.</p>
2645	12	Section 5.2.1.12 is entitled 'Socioeconomics' but contains no consideration of how the dedication of these costs by water users or by the State or Federal government to construction of this Project with no assured right to use the facilities to provide income from more reliable water use, would cause environmental impacts. Economic impacts which cause significant physical impacts on the environment must be identified and mitigated for if feasible. Public Resources Code '20180 subd. E(2); Hecton v. People of the State of California (2nd Dist. 1976) 58 Cal.App.3d 653, 656; Bakersfield Citizens for Local Control v. City of Bakersfield (5th Dist. 2004) 124 Cal.App.4th 1184; 40 CFR 1508.14 (NEPA EIS must consider foreseeable impacts on the environment from economic impacts of alternatives).	As discussed in Impact ECON-1 in Final EIR/EIS Chapter 16, Socioeconomics, significant environmental impacts within the meaning of CEQA would only result if the changes in regional economics cause reasonably foreseeable physical impacts. Such environmental effects are discussed in other chapters throughout the EIR/EIS. Removal of agricultural land from production is addressed under Impacts AG-1 and AG-2 in Chapter 14, Agricultural Resources; changes in recreation related activities are addressed under Impacts REC-1 through REC-4 in Chapter 15, Recreation; abandonment of natural gas wells is addressed under Impact MIN-1 in Chapter 26, Mineral Resources. When required, DWR would provide compensation to property owners for economic losses due to implementation of the alternative. While the compensation to property owners would reduce the severity of economic effects related to the loss of agricultural land, it would not constitute mitigation for any related physical impact. Measures to reduce these impacts are discussed under Impact AG-1 in Final EIR/EIS Chapter 14, Agricultural Resources, Section 14.3.3.2.
2645	13	The "Cumulative Impact" sections of the Recirculated document do not identify economic forces resulting in physical impacts to the environment (p. 5-43-44) and suggests the reader review Chapter 30 for indirect effects upon the physical environment. However, Chapter 30 contains no examination of the potential	Increased deterioration or blight is discussed in the Socioeconomic analysis in Impacts 3, 9, and 15, which analyze impacts to community character. Levee maintenance or repair is beyond the scope of the proposed project. The California Department of Water Resources' Levee Repairs and Floodplain Management Office is responsible for administering levee programs through evaluation and direct rehabilitation of structural

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		<p>environmental impacts if the costs of repayment of capital and operation/maintenance of these facilities are not recoverable from water users because the costs exceed either the benefits of greater reliability or there are no benefits of more reliable water delivery because adaptive management and collaborative processes do not create additional water delivery flexibility.</p> <p>The most obvious insufficiency in examining economic force caused environmental impacts in the draft EIR/EIS is the absence of any examination of the likely environmental impacts from increased deterioration, and therefore the failure of, Delta levee maintenance and repair. It is foreseeable that this diversion of available cost funding from Delta levee maintenance could result in potential interruption of agricultural supplies in mid-irrigation season in the Delta and South of the Delta and the loss of significant crop production and potentially permanently damaging a substantial portion of the South-of-Delta agricultural use environment. There is an assumption which is never tested in this Draft Report that public resources are unlimited and therefore no adverse environmental impacts can arise from having two systems rather than one. Pricing agricultural production water above crop income promptly ends farming production...an enormous environmental impact.</p>	<p>deficiencies in California's levee system. Overall levee repairs and improvement programs administered by DWR will continue with available funding. For additional information on the relationship between the proposed project and Flood protections in the Delta, please see Final EIR/EIS Appendix 6A BDCP/California WaterFix Coordination with Flood Management Requirements.</p> <p>The proposed project is designed to increase water supply reliability in the SWP/CVP export service area. Failure of the proposed project's water conveyance system is speculative. However, should the proposed project's water system fail temporarily, water contractors would still need to fund their ongoing project repayment obligations.</p> <p>The range of costs for water vary widely among contractors south of the Delta. Costs depend on the source of water, transport facilities, energy requirements, among other factors. For the agricultural customers of the CVP, prices range from \$100 per acre-foot to more than \$400 per acre-foot. The Metropolitan Water District of Southern California, which buys water from the SWP, estimates that the cost of the proposed project would translate into about \$5.00 extra per household, per month in its service area. The final cost of water from the new conveyance facilities would be determined by numerous factors. A number of these significant factors, such as the project yield and allocation of costs, have yet to be determined. Please see Master Response 5 for information regarding funding of the proposed project. For information regarding cumulative impacts please see Master Response 9.</p>
2645	14	Chapter 16 provides no discussion of the effects of a dual system and its costs, and the potential of depriving the DWR and CVP of the means to fund and pay for Delta levee maintenance for the "dual system."	Please see Appendix 6A, Sections 6A.2 and 6A.3, Final EIR/EIS, for discussion on existing levee improvement programs and funding mechanisms, which would not be affected by the BDCP/CWF. Levees are an important public safety resource and the proposed project would not change levee policy or replace ongoing programs and grant projects aimed at facilitating and supporting levee improvements in or outside the Delta. It recognized that levee maintenance and safety in the Delta is an important issue for the residents of the Delta and for statewide interests. Also, see Master Response 5 regrading cost of project implementation.
2645	15	In our initial comments we pointed out the absence of quantification of how economic viability would exist for dredging Delta channels and buttressing and repair of Delta levees to transport water, while at the same time the State of California was adding to water users' economic burdens the cost of paying bonds for a tunnel project in excess of \$20 billion dollars. This Supplement and its recirculation compounds the insufficiency. If the plan alternative is that municipal, industrial and agricultural uses will not pay all costs, it should be specified. Without cost projections to users, the alternatives cannot be appraised. Will every landscape service in every city served be put out of business? Will every dairy or new crop operation be shut down?	<p>Please see Master Response 3 regarding the purpose and need and see Master Response 5 regarding costs of the project.</p> <p>As discussed under Impact ECON-1, of Final EIR/EIS Chapter 16, Socioeconomics, construction of the water conveyance facilities would be anticipated to result in a net temporary increase of income and employment in the Delta region. Construction-related employment from the project is estimated to peak at 2,427 FTE jobs in year 3. Total employment (direct, indirect, and induced) would peak in year 12, at 8,673 FTE jobs. Throughout the five-county Delta region, population and employment would expand as a result of the construction of water conveyance facilities, as discussed under Impacts ECON-1 and ECON-2. Under Alternative 4A, additional regional employment and income could create net positive effects on the character of Delta communities.</p>
2645	16	Figure 9-6 entitled "Levee Vulnerability" shows almost all of the levees critical to maintaining a viable dual system as highly vulnerable (red) or medium vulnerability (purple), but there is no examination of whether devoting California citizens and water users' economic resources to a tunnel project will in fact limit or constitute a deprivation of funding ability for the existing levee system. The author of the EIR never asks or answers whether only municipal and industrial users will be able to afford the tunnel, and therefore, agricultural land use in the Central Valley is sentenced to extermination because municipal and industrial users will no longer bear the costs of maintaining and buttressing levee systems against rising ocean levels.	<p>Please see Master Response 3 and Chapter 2, Final EIR/EIS, for the purpose and need, and Appendix 6A Sections 6A.2 and 6A.3 for discussion on existing levee improvement programs and funding mechanisms, which would not be affected by the proposed project. Levees are an important public safety resource and the proposed project would not change levee policy or replace ongoing programs and grant projects aimed at facilitating and supporting levee improvements in or outside the Delta. It recognized that levee maintenance and safety in the Delta is an important issue for the residents of the Delta and for statewide interests.</p> <p>For more information regarding costs please see Master Response 5.</p>
2645	17	The EIR/EIS never examined or quantified the financing plan to maintain and pay the capital costs of both systems, and therefore, the significant environmental impacts of	The change in cost of water supply under the proposed project, as described in this comment is speculative as is the potential change in agricultural operations and acreages in export service areas that could result in

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		<p>spreading a limited resource (money to pay for water) over new, expensive tunnel facilities is not mentioned. If we were only told that municipal and industrial users would pay an additional \$400 acre/feet for all water received and SWP contractors for agricultural use and CVP contract waters would pay an additional \$200 acre/feet for all water received South of the Delta, we could determine whether agricultural land would be fallowed, and whether landscaping water use would be terminated in cities. If we were only given the economic costs of both systems to compare with proper improvement and maintenance of the existing levee system, some comparison of the environmental impacts from these new costs and expenses could be made. An EIR/EIS that does not provide this information is insufficient and is not in compliance with the law.</p>	<p>changes in water supply costs. This type of impact is an example of a potential indirect impact which need only be considered if it is a reasonably foreseeable impact caused by the project. Speculative impacts are not reasonably foreseeable and should not be considered (CEQA Guidelines Section 15064(d) (3)).</p>
2646	1	<p>The South Delta Water Agency submits the following comments to the RDEIR/SDEIS for the California Water Fix. SOWA is statutorily charged with the protection of the water quality and quantity in the channels of the southern Delta for the benefit of beneficial uses on the surrounding lands. The agency was also charged with seeking contracts with DWR and USBR for the protection of such water quality and quantity, but has been unable to do so. After some 20 years of negotiation, the development of a draft contract, and the implementation of the temporary tidal barrier program, the USBR abruptly left the negotiations and today claims is not authorized to negotiate or recommend any such contract. DWR similarly left the negotiations and has now taken the position that not only is it incapable of affecting water quality in the southern Delta, but that Sacramento River water does not reach the southern Delta. In the most recent attempt by SOWA to secure some sort of contract, DWR has taken the position that it does not operate the Delta by taking into consideration consumptive use in Delta channels and on Delta islands. Thus after 50 years of project adverse impacts visited upon southern Delta farmers, DWR and USBR propose implementing a re-plumbing of the Delta which will exacerbate the salinity problems in the area.</p> <p>SDWA strongly recommends that the projects instead embark upon a different approach which will comply with all existing rules, regulations and statutes and store and deliver water based upon water right priorities. It is only if the projects accept the fact that there is insufficient water for most export needs will appropriate actions be agreed upon whereby the supply will be increased, rather than using the "re-cut the pie" approach we currently operate under and which has decimated the Delta estuary and especially its fisheries.</p>	<p>All water diverted by the SWP and CVP is under existing water rights of those two agencies and respects the priorities of existing water rights. Exports do not come at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other water rights holders. The proposed project and its alternatives do not reduce the protections for other water right holders.</p> <p>Operations for the Proposed Project would still be consistent with the criteria set by the U.S. Fish and Wildlife Service and National Marine Fisheries Service biological opinions and State Water Resources Control Board, as described in Chapter 5, Water Supply of the EIR/EIS. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights. It is recognized by DWR and Reclamation that their water rights do not allow delivery of full SWP and CVP water contract amounts in many years due to the demands of senior water rights holders, regulatory requirements, and water availability, as shown in Chapter 5 and Appendix 5A, Section C, of the EIR/EIS.</p> <p>For more information regarding water resources in northern California, please see Master Response 26.</p>
2646	2	<p>1. The RDEIR/SDEIS fails to include with a water availability analysis.</p> <p>Before considering any massive project like the Water Fix, and in order to comply with the dual goals of water reliability and protection of the estuary, one must first determine how much water might be available for export and under what circumstances. The projects assume that modeling for comparative purposes includes some sort of reliable supply. The recent drought has shown this to be an incorrect approach.</p> <p>Prior analyses of the water supply, done at the time of the development and</p>	<p>For information concerning the available water supply and specific modeling results for all Alternatives, refer to Chapter 5, Water Supply, and Appendix 5A, BDCP/California WaterFix EIS/EIR Modeling Technical Appendix. For more information regarding water resources in northern California, refer to Master Response 26.</p> <p>Please note the EIR/EIS analysis is based upon a comparison of conditions under the proposed project and action alternatives as compared to Existing Conditions and No Action Alternative, but not to conditions that existing prior to the Existing Conditions.</p>

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		<p>authorization of the Central Valley Project indicated that over a six year drought such as in 1928-34, the Sacramento and San Joaquin watersheds produced approximately 17.5 million acre feet as a yearly average. At the same time, the in-basin needs for those watersheds during that same time frame was 25.5 MAF as a yearly average; thus indicating an 8 MAF shortage in each year of the six year drought. [See ATT1: Exhibit 1] In order to address this shortage, the SWP anticipated importing 5 MAF each year from north coast rivers (DWR Bulletin 76, see ATT2: Exhibit 2). That imported 5 MAF would partially address the in- basin shortages in those drought years, and allow for no exports at all (except for any excess flow opportunities). As year types change, the amount of exports might go from zero to potentially full contract amounts. None of this 5 MAF was ever developed, which means the projects begin each year with a 5 MAF shortage.</p> <p>Not having this planned for water, the projects tried to capture as much "excess flow" as possible and the natural results were the extreme impacts on the fisheries. At every flow opportunity, the project exported as much water as possible with fishery protections pushed aside. As Contra Costa Water District has previously shown, the estuary is actually less fresh now for the most part, with the projects having turned every fall into a drought year (See ATT3: Exhibit 3).</p>	
2646	3	<p>Before spending \$208, \$258, or \$408 on a facility which will allow the projects to continue to export amounts similar to those which they now export, they should be required to first see how much water is actually available after full protection of fisheries. This would entail the analysis and determination of the mitigation obligations of the projects. If the projects cannot mitigate their impacts, they should not be able to export water.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS; see response to Comment 1. Please also see Master response 5 for more information on project costs and funding.</p>
2646	4	<p>The projects have obligations both for mitigation and under statutory mandates. The projects have severely impacted the San Joaquin River by adding hundreds of thousands of tons of salt each year, which salt enters the southern Delta and collects and concentrates. The Central Valley Regional Water Quality Control Board estimates a mean of over 900,000 tons of salt each year [See ATT4:Exhibit 4]. The CVP has significantly impacted River</p> <p>flows. The operation of Friant dam decreases the San Joaquin River flow by 347-526 thousand acre feet from April through September and 544-943 thousand acre feet for the whole year (averages of all years). [See ATT5:Exhibit 5 1980 Report] The operation of the CVP and SWP export pumps causes reverse flows in southern Delta channels and exacerbates and creates null zones where the imported CVP salt collects and concentrates such that water quality deteriorates to the point where standards are regularly violated. Those pumps also draw down water levels to the point where local diversions are impeded if not precluded. The projects should be obligated to mitigate these adverse impacts before constructing a new facility which will not help address these conditions, but according to the RDEIR/RDEIS make them worse.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS, instead commenting on existing proposed project. DWR and the Bureau's fundamental purpose of the proposed project is to make physical and operational improvements to the SWP and CVP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. By establishing a point of water diversion in the north Delta and new operating criteria, the proposed project is designed to establish a more natural east-west flow for migratory fish, improve habitat conditions, and allow for greater operational flexibility. Refer to Master Response 3 for more information about how the proposed project was conceptualized in order to address some of the existing conditions described by the commenter.</p>
2646	5	<p>, the projects are obligated under state and federal law to repulse ocean salinity to protect all Delta beneficial uses. Under the Water Code Sections 12200 et seq the projects are supposed to protect the Delta and maintain a "common pool" whereby all users have a common interest in maintaining Delta water quality. Instead, the projects propose the current twin tunnels projects whereby they will allow less fresh water to enter and flow through the Delta; a proposition which can only degrade water quality in an estuary crisis. As the Federal EPA noted in its comment letter last year,</p>	<p>Under the proposed project, DWR and the Bureau would still be required to protect Delta water quality established by the SWRCB through project operations. Please see Master Response 32, Water Rights, as well as Master Response 14, Water Quality for more information on the state and Federal projects' operational obligations and analysis of the proposed project's effects on salinity levels in the Delta.</p>

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		<p>any project including operation of the two tunnels will result in a degradation of Delta water quality and corresponding violation of Clean Water Act.</p> <p>Section 12202 states in pertinent part that the projects must provide "... salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta (emphasis added). At this time the State Water Resources Control Board is still considering how to address the 2014 DWR and US Bureau of Reclamation letter complaining that in-Delta users are using water when the projects are adding water to the system.</p>	
2646	6	<p>Until the projects are forced to determine the amount of water they must provide to in-Delta uses and to protect the fisheries, there is no basis upon which to evaluate a project which assumes the projects will continue to ignore statutory obligations. Other interests will address the fishery aspects of the project. It is clear though that since the current standards and mandates do not prevent fish populations from plummeting a project that re-plumbs the Delta and fundamentally alters the operation of the Delta should not even be contemplated until the fish are protected from the adverse impacts of the projects. As</p> <p>the prior DEIR/DEIS and the current RDEIR/RDEIS show, moving the intakes of the projects simply transfers the projects adverse impacts to fisheries from one place to another.</p>	<p>The operational criteria included in the preferred alternative, 4A/WaterFix, is based on several years of coordination with fish agencies and incorporation of the best available science to avoid and minimize the effects of changes in Delta operations. The existing south Delta and proposed North Delta Diversions (NDD) would operate in coordination and the maximum diversion capacity at each facility is subject to various constraints included in the preferred alternative, 4A, as well as existing regulations such as D-1641. Overall entrainment of listed fish is expected to be reduced due to the design, location, and criteria of the proposed NDD.</p> <p>The shift in point of diversion from the existing south Delta facilities to the proposed NDD changes the types of effects on fish and hydrodynamics in the Delta, but the severity of impacts varies by species. As described in Chapter 11, Fish and Aquatic Resources, species that are not typically near the proposed NDD but that have historically been entrained in the south Delta will benefit from the preferred alternative, 4A. Sacramento River species, such as winter-run Chinook, will need to pass the proposed NDD. However, bypass flows built into the operational criteria and real time operations (RTO) transitional criteria described in Chapter 3 of the EIS/EIR, Description of Alternatives, allow for rapid response to fish presence and would minimize and avoid impacts to these fish during their migration. Interior Delta flows would improve as a result of less reliance on the south Delta facilities, promoting more successful out-migration of these fish.</p>
2646	7	<p>Other federal law mandates are being ignored. In 1992 Central Valley Project Improvement Act was enacted and signed into law. That law required the CVP (in consultation and cooperation with other federal and state agencies) to double the populations of anadromous fish. That timetable has long passed and the populations have dropped not increased. Neither CEQA or NEPA contemplate a project which ignores federal law and embarks upon actions that are known to not just fail to comply, accomplish the opposite. HR 2828, PL I 08-361 enacted in 2004 mandated the USBR to reduce its use of New Melones for meeting water quality standards, seek water purchases to meet such standards, to use recirculation of export water to meet such standards, and to adopted and begin implementation of a plan within a year to meet all water quality obligations of the CVP. None of that has been done, except a draft study on recirculation which concluded that if meeting standards affected export supplies, it was infeasible.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Both existing conditions and No Action Alternatives include the current regulatory requirements for operating the SWP and CVP under D-1641 requirements and applicable requirements of recent USFWS and NMPS BiOps. The California WaterFix would be operated to meet the current State and Federal Delta flow and water quality requirements.</p>
2646	8	<p>In 2006, and as amended in 2010, the State Water Resource Control Board adopted a Cease and Desist Order (See ATT6: Exhibit 6) against DWR and U.S. Bureau of Reclamation for their failure to plan and meet the water quality standards in the southern Delta. The amended CDO in 2010, anticipating relaxing the standards and ordered the projects to submit a plan specifying how they would meet the standards within 180 days of the newly changed standards. The CDO also stated that if the standards were not changed by a certain date or not in the process of being implemented, that by January 1, 2013 the plan would be required anyway. It is now over 1 year and 10 months since that deadline contained in a Cease and Desist Order</p>	<p>See response to Comment 2646-7.</p>

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		<p>and the projects have not submitted any such plan and have not asked for more time to submit such a plan. It appears the projects and the SWRCB have forgotten the terms of the Cease and Desist order.</p> <p>The (varying) base case and no-action alternatives in the RDEIR/RD EIS perhaps tangentially allude to being in compliance with all regulations and laws, but in fact the projects are ignoring numerous laws, regulations and rules which place specific obligations on their operations; arguably which preclude exports pending compliance. None of the odd assortment of base case scenarios mention or comply with the above mandates, and thus are lacking any useful analysis. Absent specified plans to meet all of their obligations, DWR and USBR cannot adequately analyze any project.</p>	
2646	9	<p>The modeling of the effects of the project on southern Delta salinity are ineffective and unreliable.</p> <p>Before relating specific critiques of the modeling, it must be noted that it is near impossible for even technical people to follow the conflicting and confusing modeling analyses done in the documents. The RDEIR/RDEIS make numerous attempts to explain how some project components were within the original modeling for BDCP but now removed from some of the modeling in the Water Fix documents. Some model runs are redone and some are not.</p> <p>Sometimes CalSimII is redone but DSM2 is not when making water quality comparisons. In the latter example, one can only wonder where the water quality data for the preferred alternative came from when the water quality model DSM2 was not re-run. Taken as a whole, the DEIR/DEIS and RDEIR/RDEIS present and unintelligible morass of comparisons of modeling runs which have little common inputs and even intentionally examine different conditions. This not only precludes the public from reviewing and commenting on the documents, but in fact makes these documents virtually useless. These issues are covered in more detail by Contra Costa Water District, the City of Antioch and others, the former being incorporated into South Delta Water Agency's comments.</p>	<p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p> <p>To review responses to comments submitted by Contra Costa Water District or others during the 2013 or 2015 comment periods, please refer to the index of commenters in the Final EIR/EIS to find the appropriate letter number(s).</p>
2646	10	<p>The RDEIR/RDEIS uses a variety of models to evaluate the alternatives, but especially CalSimII and DSM2. For DSM2, the range of calibration years do not capture the highest and lowest flow periods, and so the model is being asked to estimate flow and water quality conditions in high and low flow periods that are outside its range of calibration. The model was modified and calibrated in 2009. The lowest flow period used in the model calibration was Wet Year 2001. The late summer flow in 2001 is 140% higher than what is typical of an extreme drought like 1977 or 2015. As we have seen in these past few drought years, DWR modeling is unreliable during these conditions.</p> <p>The DSM2 model has 2 parts (actually 3, but the third does not appear to be relevant for these comments), the hydrodynamic model "HYDRO" and the water quality model "QUAL." In 2009, the Hydro model was only calibrated to Wet Year 2001, a moderately low water year, and then validated to data collected in WY's 2001 through 2008. For this validation, the Root Mean Square Error (RSME) of the model prediction ranged from 310 cubic feet per second to 3,000 cfs at different points across the delta (DSM2 Recalibration, CH2MHill 2009). In the south Delta, the RMSE ranged between 325 cfs and 1,500 cfs, with an average error of 625 cfs. This range of error becomes extremely</p>	<p>Please refer to Master Response 30 for a discussion of the adequacy of models used in the environmental analysis. Also see Section 8.3.1.1, Models Used and Their Linkages, in Chapter 8, Water Quality, of the EIS/EIR, and responses to comments 2646-11 and 2646-12.</p>

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		<p>important not only during "normal" flow regimes, but especially during times when the net flow is very low to begin with, as was the case for the last two years.</p>	
2646	11	<p>The second component of DSM2, "QUAL", calculates the water quality components in the system. It uses the output from HYDRO for the flows within the model stream network. The QUAL model was calibrated to data collected in WY 2001 through 2008. The QUAL model was not validated after it was calibrated (DSM2 Recalibration, CH2MHill 2009). An important step in verifying that a model is accurately modeling a physical system, is the calibration-validation procedure. Without validating the model, it is possible to create a model that is only able of accurately predicting flow and water quality for the specific period of time that was used to calibrate the model. A robust model is capable of accurately modeling time periods other than its calibration period. To test the robustness of a model, the model is used to evaluate one or more time periods that were not used in the calibration process. This is the verification step. The verification step compares the measured vs predicted results for these validation periods to determine if the model error is in the same range as what was seen for the calibration period. Without a verification process, it cannot be determined if the model can accurately predict conditions for years other than the ones that it was calibrated to, even if those other years have similar flow conditions, much less for years that are outside the range of flow that was in the calibration data set. In the Delta, a huge range of conditions and variables necessitate near constant calibration in order that any model be useful.</p> <p>In 2013, the model was adjusted and recalibrated again. The HYDRO calibration showed moderate improvement in the North Delta, and little to no improvement in the South Delta. No error statistics were provided on the HYDRO calibration. The etTor of the QUAL model to predict electroconductivity was as high as 22% in the Delta. For this error analysis, some monthly EC data points were removed from the comparison if the model could not predict them very well. The author of the analysis of this calibration claimed that this made the statistical analysis "more meaningful" (DWR Memorandum, Sept 3, 2013, pg. 20). This 22% error is of a model trying to match the data that was used in it's own calibration. The expected error for using the model in other time periods and flow regimes is unknown, but would in all likelihood be higher.</p> <p>The models and their limitations are described somewhat in 8.3 of the RDEIR/RDEIS beginning on page 8-46. The calibration of DSM2 is referenced on page 8-49 of the RDEIR/RDEIS, but the document does not mention how the calibration is limited as described above. CalSimII does not itself directly use DSM2 input directly, but uses another "program" (ANN, or artificial neural network) which mimics DSM2 but which can directly give input to CalSimII. On page 8-47 the document states "The ANN may not fully capture the dynamics of the Delta under conditions other than those for which it was trained ...It is possible that the (program) will exhibit errors in flow regimes beyond those for which it was trained."</p> <p>The projects use CalSimII to both plan and operate the system and to compare different future operational scenarios such as in the RDEIR/RDEIS. Thus the model tells them when changes in operations must be made in order to meet certain permit/statutory/BO mandates, such as when water quality must be improved. However, this use of the model is limited to only certain locations in the Delta; or certain water quality standards. Hence when the RDEIR/DEIS states that the projects are or</p>	<p>It appears that this comment is referring to the use of the DSM2 modeling over a 16-year period instead of the 82-year period used in the CALSIM II modeling. The EIR/EIS used the best available tools that are used by state and federal agencies. The full set of inputs needed for these tools are limited to 82-year (Water Years 1922 – 2003) at the time the analysis for the EIS/EIR was performed. The DSM2 analysis was limited to a 16-year analysis. Section D.12 of the Appendix 5A in the EIS/EIR discloses potential differences between the 16-year versus 82-year DSM2 simulations. As noted in this comment, given the 16-year simulation period used for the DSM2 modeling is drier than the 82-year period, the water quality impact analyses would be more conservative, and represents conditions similar to those found over the full 82-year period. The CALSIM II assumptions include compliance with Delta water quality over the long-term operations, and do not reflect changes that could occur during emergency situations such as the recent drought when long-term water quality criteria were modified for the drought conditions.</p>

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		<p>will be operating to comply with D-1641 or Biological Opinions, or other mandates, they are actually only operating to meet some of those requirements. This becomes extremely important for the South Delta as will be seen below.</p> <p>At Page 8-50 we are told the models only predict salinity at certain locations including Banks/Jones pumping plants and the San Joaquin River at Jersey Point. The former is the only place in the south Delta, and that location is measuring cross-Delta flow, not southern Delta channels in general. On pages 8-51 and 8-51 we are informed that none of the southern Delta compliance points for water quality standards (Vernalis, Brandt Bridge, Tracy Blvd. at Old River and Old River at Middle River) are included. This means that the operations of the projects are not done to meet these standards. Although there may be reasons that the projects cannot be operate to meet certain obligations, those obligations must be met anyway.</p> <p>With these sorts of errors, shortcomings and lack of calibration, it is clear that the RDEIR/DREIS do not use the "best science available." BDCP and the Water Fix have now been evaluating the tunnels projects for many years. During that time, they were required to update and calibrate their water quality analysis in order that the effects to the project can be adequately disclosed and mitigated if necessary. Instead, the proponents rely on highly criticized modeling under the DEIR/DEIS, which includes DSM2 modeling. That modeling is not calibrated to include all year types. They then only remodel portions of the project in the RDEIR/RDEIS using the model (CalSimII) which does not even give outputs for the southern Delta. The document could have included an extensive amount of known, measured data and a description of the hydrodynamics of the area in order to evaluate the projects impacts on water quality. It did not and so is deficient under both CEQA and NEPA. The specifics of the southern Delta salt problem are set forth below.</p>	
2646	12	<p>The 1980 Report, included herewith as Exhibit 5 [SEE ATT5:] sets forth the overall description of how the southern Delta works. The channels of the area are below sea level (all the way to Vernalis, the beginning of the "legal" Delta. Being below sea level, they always have water in them. The San Joaquin River flows into the area from the south while the tidal action in the estuary creates flow in the opposite direction twice daily. The incoming tidal flow during an average summer cycle is 330,000 cubic feet per second (See ATT7:Exhibit 7). When this tidal flow enters the southern Delta in the three main channels (Old River, Middle River and the main stem of the San Joaquin River) the flows in each of those channels is between 1,000 cfs and 2,000 cfs. The summer flows in the San Joaquin River are almost always less than 1500 cfs; this past summer it reached 129 cfs.</p> <p>As the water from the San Joaquin River enters the area, there is of course consumptive use of water from the channels. Previous estimates by South Delta Water Agency indicates that in the summer, the consumptive use by local farmers is 800 cfs -1400 cfs (Exhibit 8) [See ATT8:]. In addition, there is a loss of water due to evaporation from the channels and a loss due to the evapotranspiration from riparian flora and the like. This means that the net use of water in the area is more than the inflow from the river. Therefore, some of the tidal water is constantly providing supply for the consumptive uses of in the area. Put another way, the net flows in the area are upstream and not downstream. It is not commonly known that the San Joaquin River does not connect</p>	<p>The comment raises issues with the Delta water quality assessment as it relates to compliance with Bay-Delta Water Quality Control Plan objectives for electrical conductivity (EC) and reliability of the models used to conduct the assessment. The comment also questions the locations used to conduct the effects assessment for EC. It also raises comments regarding assessment of effects EC changes on crop production.</p> <p>The assessment of EC impacts focused on the Bay-Delta Water Quality Control Plan compliance locations, because those locations have been established for the protection of agricultural beneficial uses throughout the Delta. Including other locations would be arbitrary relative to current regulation and operation of the Delta water resources. The water quality assessment of EC changes (in Impact WQ-11, Chapter 8, Water Quality) provides a complete evaluation of the changes to EC that would occur under the alternatives, including evaluating the increase in the frequency of exceedance of water quality objectives, increases in levels relative to baselines, and potential for degradation. These are all fully discussed in Impact WQ-11 and supported with modeling results presented in Appendix 8H, Electrical Conductivity, of the EIR/S.</p> <p>The commenter suggests that the models used in the assessment are not reliable. The models used to support the EC assessment were used in the manner for which they were developed, as described further in Section 8.3.1.1, Models Used and Their Linkages, in Chapter 8, Water Quality, of the EIS/EIR. The models allow for accounting for the complex system operations and compliance with water quality objectives. The commenter suggests a mass-balance approach makes more sense. However, such an approach would not allow for accounting for the complex hydrology and hydrodynamics of the Delta source waters.</p> <p>CALSIM II is a water operations model that simulates Delta flows for regulatory and operational criteria assumed under the Existing Conditions, No Action Alternative, and action alternatives on a monthly time step. The model simulates compliance with salinity standards in the Delta on a monthly time step. CALSIM II</p>

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		<p>with the Bay as in most months in most years no San Joaquin River water makes it to the Bay or into the ocean. This is not disputed by DWR .</p> <p>This was not always the case, though low flow periods certainly occurred in the past. As referenced above, the CVP 's Friant dam caused significant depletion s of river flow; meaning that the CVP has caused or exacerbated the pull of Delta water into the area. Recall that the CVP also contributes a yearly mean of approximately 900,000 tons of salt being added to the river (as measured at Vemalis). This means we have a system that constantly delivers hundreds of thousands of tons of salt into an area that does not flush out to the Bay. The salt in fact stays in the area unless removed by some means.</p> <p>Some of the salt is naturally applied to the lands in the area as part of irrigation water. Per Exhibit 9 [See ATT9:], the application of this salt to the lands actually improves the water quality at the export pumps by "holding" some of the salt in the soil. During high flows, some of that salt is flushed out of the soils and exits the area, though the specifics of this natural flushing are not well known.</p> <p>Although local agricultural use consumes water but not salt, the salts are concentrated to some degree. However, since the concentration s are done as the water passes through the root zone, surface drainage in the area is not generally saltier than the water which was diverted. Local drainage systems which attempt to keep the shallow groundwater out of the root zone remove and discharge this groundwater which is generally of poor quality (high salt concentration). Thus, normal irrigation practices both help and worsen channel water quality to varying degrees.</p> <p>Historically, the consumptive use of water in the southern Delta did not create salt concentrations to rise to the point where they adversely affected local agriculture because the River quality was much better (See Chapter VI of 1980 Report Exhibit 5 [See ATT5:]). It was only when the CVP added hundreds of thousands of tons of salt and decreased flows that the salt build up in the are became a problem.</p> <p>Added to this situation are the export pumps of the CVP and SWP. The draw of these pumps is normally many times that of local agricultural diversions. Thus even though the San Joaquin River does not reach the Bay, it does reach the export pumps. Though the export pumps are intended to take the fresher Sacramento River from the cross-Delta flow, the channels are all connected and the pump s take water from both Rivers. This mean s that some of the salts in the area are removed by the export pumps. It also means that as the fresher Sacramento River water is draw into the south, it mixes with San Joaquin River water and provides dilution. Each of these provides a benefit to local agriculture by decreasing salt loads and concentrations; in effect a partial mitigation for the adverse impacts of the projects. Since the draw of the export pumps is greater than the flow in the San Joaquin River, the pumps cause reverse flows in a number of channels. This reversal of flow and the lack of a net downstream flow, causes null zones where water simply slushes back and forth. In such areas, salt concentration rise.</p> <p>It was originally thought that installing and operating tidal barriers would address these problems. The barrier, allow incoming tide to enter the channels but prevent the water from flowing out on the ebb tide. This mitigates the lowered water levels caused by the export pumps when the barriers are installed and operated. The barriers to some degree do improve local flows but in fact end up trapping most all of the salt flowing in from the San Joaquin River, thus holding all that salt in the area.</p>	<p>relies on an "Artificial Neural Network" (ANN) for monthly averaged flow verses salinity relationships in the Delta. DSM2 uses the monthly CALSIM II Delta flow results, and simulates Delta hydrodynamics and salinity from the water year 1976 to water year 1991, on a 15-minute time step and accounts for the sea level rise and the proposed restoration. Flow inputs assumed in DSM2 modeling for the EIR/EIS are based on monthly CALSIM II outputs downscaled to a daily time step using WY 1976 – 1991 (16 years) historical Delta inflow patterns. The daily patterns assumed are based on observed historical Delta flows, and do not represent any sub-monthly operational adjustments that could occur to address any potential issues with salinity control in the Delta under the EIR/EIS Alternatives 1 through 9. In other words, the compliance with Delta salinity standards was only modeled on a monthly time step. However, daily averaged salinity outputs from DSM2 simulations were used to evaluate compliance with salinity standards under the alternatives in the EIR/EIS.</p> <p>Given that the impact analysis was relying on a comparative analysis, and the action alternatives and the No Action Alternative have consistent daily patterning assumptions the changes in the frequency of compliance of the Delta water quality standards is representative of the effects of the project Alternatives, even though the absolute value may not be fully representative of actual SWP/CVP operations under all the days of the over 5,800 days of simulation period. A modeling sensitivity analysis was included in Appendix 8H to demonstrate whether the resulting salinity exceedances are due to the modeling limitations or if they are an impact of the project alternatives. As explained in Appendix 8H, the majority of the exceedances are because of the differences in the assumed operational criteria under the EIR/EIS alternatives. Therefore, the daily patterning assumptions did not affect the overall water quality impact conclusions in the EIR/EIS.</p>

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		<p>Some water does "leak" out over and through these temporary barriers which allows some salt to exit. DWR and SDWA have suggested and tried a few minimal actions to improve net flows in some channels to address salt concentrations, but to date have had little success. (See Exhibit I O, Excepts from the ISDP).</p> <p>The history of the salt problem in the southern Delta is well documented. Before New Melones on the Stanislaus (operated by the USBR to maintain Vernalis water quality) and before the temporary tidal barrier project was fully implemented, sever crop damage occurred in the area from the CVP introduced salt. As a result, in 1978 the SWRCB through a stakeholder process developed water quality criteria for protecting southern Delta agriculture. The Board balanced the facts and the science and determined that a 0.7 EC was needed from April through August and 1.0 EC from September through March. It was not until the 1995 Water Qaulity Control Plan that these criteria were adopted as standards. According to that Plan, compliance at Vernalis and Brandt Bridge should be implemented immediately with Middle River and Tracy Blvd. Bridge being implemented by December 31, 1997. The reason that Vernalis and Brandt Bridge were to be implemented immediately is that they are directly controllable by flow; that is to say increasing the flow down the San Joaquin River will necessarily improve water quality at these locations. [See page 29 of 1995 WQCP]</p> <p>Instead, the SWRCB did not implement these standards until D-1641 was adopted in 2000. In that Decision, the Vernalis objectives became operative immediately, with the other three being phased in by April of 2005; twenty seven years after being developed. Since 2005, hundreds and hundreds of violations have occurred some at every compliance location. The vast majority of violations being at the Tracy Blvd. Bridge measuring point. As referenced above, the projects are under a Cease and Desist order to first "obviate"future violations and then have a plan by which compliance will be accomplished by January 1, 2013. Instead, the projects do nothing to address these obligations; producing quarterly reports under the COO explaining why they should not obey the permi ts obligations requiring them to meet these standards. Included herewith is Exhibit 11 [See ATT11:] which show the number and degree of violations as well as the flows and exports occurring during the past three years. All of this data is from the DWR Delta Ops web page and can also be found on CDEC, the California Data Exchange Center.</p> <p>Although the water quality (salinity) standards are measured at the four locations mentioned above, the 2006 Water Quality Control Plan clarifies that the standards apply throughout the channels (see 2006 WQCP). While a fish flow standard or discharge standard might be met at one single location, the salinity standards apply in all reaches of the channels as the local agricultural diversions occur through the system; not at one point. In addition, an exceedance of the standard at different times will cause different results. Thus if the 1.0 electroconductivity is violated in December and only a few diversions are occurring the damage may not be great. However, when the 0.7 electroconductivity standard is violated in spring or summer when many crops are germinating or in the seedling stage, the impacts can be significant if not destructive (see Exhibit 12, [ATT12:]).</p> <p>The modeling and analysis done in the RDEIRJRDEIS take none of this into account, but merely list past violations and minimize potential impacts. There is no modeling or analysis of effects on crops from violations at various times of the year. There is no modeling or analysis of how the project might affect salinity in the tens of miles of Delta</p>	

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		<p>channels which are not near the three interior compliance stations. There is no analysis or modeling of the magnitude of impacts/damage resulting from incremental increases of water quality violations. There is no analysis or modeling of how the project affects southern Delta water quality during the times when barriers are installed and operated or when they are not.</p> <p>All of these analyses could have been done. Exhibit 13 is the prior testimony of Dr. Snaith, and economist who calculated impacts to crop production and values as salinity rises. DWR regularly does modeling of changes in southern Delta flows and quality as part of both the barrier program and as part of accomplishing transfers through the export pumps. DWR has numerous monitoring stations in the area which provide it with data showing the differences between salinity at the compliance locations and other locations in the area.</p> <p>Simply put, the RDEIR/RDEIS gives short shrift to the southern Delta salinity issues.</p> <p>The models used are known to not be reliable during flow regimes outside of the calibration data. DSM2 was only used on Alternative 4 from the DEIR/DEIS and not for Alternative 4A, the preferred Alternative in the RDEIR/RDEIS. The documents make no attempt to discern water quality at other than four locations when it is known that water quality is worse in some areas than it is at the four locations. The document makes no effort to quantify or put current and expected future violations, rather it simply lists the record of exceedances and mentions expected increases. The document does not examine how a small number or slight increase in violations affects agriculture production. If the plants are already stressed due to the projects normal violations, to what degree do additional, even slight increases affect the plants? Because of all of this, the RDEIR/RDEIS are inadequate and do not provide any meaningful evaluation of the projects effects on the southern Delta salinity problem.</p> <p>Applying common sense yields a more valid examination. The operation of the export pumps draws dilution water into the southern Delta and removes some of the CVP introduced salts. If the projects decrease the use of the export pumps in the southern Delta by operating the north Delta intakes for the tunnels, they will be providing less dilution water to the southern Delta and removing less salt. Since the area already has persistent violations of the salinity standards, the only result of operating the twin tunnels will be less dilution and more salts remaining in the area. Even if the tunnels were operated only during higher flow periods in winter and spring, the salt is still coming down the River and collecting in the area. A simple mass-balance analysis would reveal how much salt is left in the southern Delta now and how much if the tunnels are operated and when. Since the modeling is not reliable for water quality purposes and the projects are not (per CalSim II) operated to meet the southern Delta standards we have no real analysis of what the project effects are. The mass-balance would indicate how many additional tons of salt will remain in the area and when and how long. Such data would allow for a better analysis than the unreliable modeling numbers that DWR erases with its "sensitivity analyses" and other corrections. Thus we should be examining and evaluating how an additional X amount of tons of salt remain in the area rather than looking at incremental exceedances put on a chart to minimize the project's effects.</p>	
2646	13	The modeling appears to be focused on Alternative 4 and not all the models were run for 4A the preferred Alternative.	Regarding the model runs used to support the water quality assessment of Alternatives 4A, 2D, and 5A in the EIR/S, please see Master Response 30.

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		<p>The chloride analysis states that the only DSM2 node close to Tom Paine Slough is the one at Tracy Blvd Bridge)page 4.3.4-14). To the contrary, Exhibit 14 See[ATT14:] shows that not only are there numerous nodes in the Slough, but there are other nodes closer than the Tracy Blvd. Bridge one. Since Tom Paine Slough experiences worse water quality than many other places, it appears the authors of the document are intentionally trying to avoid any real analysis of this area. I have personally measured electroconductivity's of 1.8 - 2.2 in Tom Paine Slough and provided both DWR and the State Water Resource Control Board with those numbers.</p> <p>At numerous places in the document , the authors note that San Joaquin River salinity problems will be addressed through the CVSALTS process of the State and Regional Boards. As stated in comments to the DEIR/DEIS, that process anticipates timing and dilution of salts to meet a to-be-proposed upstream (of the Delta) standard. It does not anticipate somehow decreasing the salt entering the southern Delta. By focusing on timing of releases of upstream</p> <p>salts, that process specifically will be worsening water quality at some other time during the year.</p> <p>If that approach is somehow authorized, it can only present redirected problems and not a solution to southern Delta problems. Regardless, and EIR/EIS cannot simply refer to some other uncompleted process by which it will mitigate its impacts.</p> <p>The RDEIR/RD EIS at various places mentions "modeling artifacts" and "sensitivity analyses" as ways by which modeled impacts are detennined to be incorrect. It is not appropriate to remove the anticipated adverse impacts from the results in order to find no adverse impacts. The document's treatment of these issues is insufficient to allow for such biased corrections.</p> <p>The document anticipates significant increases in salinity at Emmaton during dry and critical years (ocean salts) and increased salinity in the southern Delta in many year types. To address this it states "these problems ifreal, will be addressed "via real-time operations." An EIR/EIS cannot adequately evaluate the impacts of a project if impacts are simply assumed to go away by doing something not specified in the document. The "real-time"operations might require more flow or less exports which in turn will have more effects. None of which is analyzed, much less can be relied upon to occur.</p> <p>The document notes that some model limitations include assumptions that water comes from somewhere, not specified, in order to meet needs under drier conditions. Not only does this mean the models are inaccurate and unreliaibl e, but it highlights that the proj ects simply do not know how to meet their obligations. On page 4.3.4-25 the document infonns the public that the projects will work cooperatively with the State Water Resources Control Board to deal with these instances. What this means is that the projects know they will rnn out of water to do what they are modeling they will do and will ask the SWRCB to relax the very standards they are modeling as commitments. [See Exhibit 15 [ATT:12] 2014 and 2105 Temporary Urgency Change Petition Orders]</p> <p>The documents appear to mistakenly address and explain expected water quality violations at Prisoner's Point (see page 4.3.4-25-26). The document talks about using the Head of Old River barrier as a means of providing more flow at that location and improving water quality as needed. Although the Head of Old River barrier does help</p>	<p>It was not practical to process and present DSM2 modeling results for all DSM2 nodes. Of the DSM2 nodes that were selected to represent water quality conditions throughout the Delta, Old River at Tracy Road was the closest location to Tom Paine Slough and thus used to support the chloride assessment in Impact WQ-7, in Chapter 8, Water Quality. Because the analysis is a comparative, it was more important to select a variety of locations across the Delta that could provide information regarding the direction of water quality changes, rather than focus solely on a specific channel that may have poorer or better quality relative to others.</p> <p>The mention of the CV-SALTS process is not intended to represent mitigation of impacts of any alternative. Rather, it is presented to acknowledge other actions separate from, but concurrent with, the alternatives that will have an effect on salinity levels in the Delta source waters.</p> <p>The modeling sensitivity analyses performed subsequent to the 2013 DEIR/EIS and presented in the 2015 RDEIR/SDEIS with the discussion of certain constituent impact assessments (e.g., chloride in Impact WQ-7 and EC in Impact WQ-11) were conducted to better understand the driver(s) of the modeling results, which allowed for better informing the impact determinations and mitigation measures, where still needed. The sensitivity analyses were not performed to simply change the impact results in the 2013 DEIR/EIS.</p> <p>The discussion of real-time operations in the EIR/EIS relative to the address of some of the identified water quality impacts to EC reflects current practice of DWR operations. Please also see response to Comment 6 for more information.</p> <p>The Final EIR/EIS indicates that for the purposes of the CALSIM II model runs, the modeling assumptions for operations of the Head of Old River Barrier In October included would result in the barrier to be open 50 percent of the time for 2 weeks (pre-pulse) and closed for 2 weeks (pulse). In November, the Head of Old River Barrier is required to be open 50 percent for 2 weeks (post-pulse) and 100 percent open for 2 weeks. It is assumed that the barrier would be open 100 percent of the time in December. In January, barrier becomes operational 50 percent of the time when salmon fry are migrating (based on real time monitoring), which generally occurs when flood flow releases are being made. The model assumptions include the initiation of the salmon fry migration to start on January 1. The model assumes that the barrier would be open 50 percent of the time in February through May. In June, the barrier would be open 50 percent for 2 weeks and 100 percent open for 2 weeks. The barrier is assumed to be open 100 percent of the time in July, August, and September.</p> <p>The Final EIR/EIS includes model results for Alternatives 2D, 4A, and 5A as compared to the No Action Alternative and Existing Conditions in Appendix 5A, Section C, in addition to the model results previously provided in the Draft EIR/EIS. The comparative results between Alternatives 2D, 4A, and 5A and the No Action Alternative and the Existing Conditions are generally consistent with the impact analysis results presented in the RDEIR/SDEIS.</p>

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		<p>redirect San Joaquin River flow from entering Old River, at very few times does any River water reach that location, and especially not during times when Prisoner's Point quality is bad. That location is threatened by intruding ocean salts, but San Joaquin River water is generally of worse quality than the cross Delta flow at Prisoner's Point. In addition, the HOR barrier is installed and operated under fishery agency rules and as agreed to by South Delta Water Agency. By blocking Old River, it creates problems of flow and stage in southern Delta channels and thus cannot simply have adjusted operations to mitigate downstream problems. The document once again simply mentions some possible future action rather than propose a specific action and analyze the effects therefrom .</p> <p>The modeling for water quality appears to be limited to Late Long Term, the long term aspect of the project. Thus the modeling would seem to first assume adverse impacts to water quality due to climate change and sea level rise. Assuming such adverse impacts as a starting point masks the impacts of the project in the shorter term.</p> <p>The document at page 4.3.4-28 assumes that lowered EC's at the export pumps will result in lowered EC in the drainage to the San Joaquin River from the CYP service area. Although such may eventually occur, there is no study provided to show the degree to which this will happen or when it may happen. The valley has accumulated over 40 million tons of CVP salt, which salt remains in the soils and much of it is slowly leaching out and making its way to the River. If in 50 years the River is somewhat better, that in no way addresses the current problem or impacts of the project. Damage to farmers in the southern Delta now is not somehow cured by better conditions in 2065.</p> <p>The document opines that replacing some agriculture in the southern Delta with habitat will improve water quality in the area. This is of course untrue. Habitat uses more water than agriculture (Exhibit 16 [ATT:16]), which means salts are concentrated at a faster rate. In addition, if the habitat is not irrigated, less salt is temporarily held in the root zones and water quality at the export pumps will be worse.</p> <p>For the above reasons, the RDEJR/RDEIS are inadequate in examining the tunnels project's effects on southern Delta salinity, and thus do not constitute adequate CEQA and NEPA compliance. The SDWA hereby incorporates the comments of Central Delta Water Agency, those of the County of San Joaquin and those of CalSPA to the degree they do not conflict with anything herein.</p>	
2646	14	<p>South Delta Water Agency also incorporates by reference its previous comments to the DEIR/DEIS. The Notice announcing the comment period for the RDEIR/RDEIS admonished the public to not incorporate previous comments and to comment only upon changes made from the first document. There appears to be no basis in law allowing a project proponent to limit the ability of the public to make comments on the project and its various permutations and alternatives. In light of the fact that the current document contains both new evaluations and incorporates old evaluations, it is perfectly appropriate for commentators to renew their previous comments.</p>	<p>Responses to comments received on the 2013 Draft EIR/EIS and 2015 RDEIR/EIS are provided in the Final EIR/EIS in compliance with CEQA and NEPA requirements.</p> <p>The size and complexity of these drafts reflect an unprecedented effort to analyze a proposed project under both state and federal laws for endangered species along with 15 Alternatives and 3 sub alternatives. Please refer to Master Response 38 for more information pertaining to the size and complexity of the documents.</p>
2646	15	<p>Exhibit 1- ATT1:Weber Foundation Studies Estimated Seasonal Natural Runoff</p>	<p>This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comments 2646-2 and 2646-12 for additional responses related to this attachment.</p>

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		Klamath, Eel, Van Duzen, Mad, and Russian Rivers, North Coast Area 1917-18 to 1946-47	
2646	16	ATT2: Preliminary Edition Bulletin No. 76 Delta Water Facilities December 1960. Department of Water Resources Edmund G Brown Governor State of California	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-2 for additional responses related to this attachment.
2646	17	ATT3: Contra Costa Water District Water Resource-December 2009 Exhibit 3 Historical Freshwater & Salinity Conditions on the Western Sacramento-San Joaquin Delta & Suisun Bay Report Highlights	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-2 for additional responses related to this attachment.
2646	18	ATT: Exhibit 4 Central Valley Regional Water Quality Control Board Salinity in the Central Valley, an overview, May 2006 California Environmental Protection Agency	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-4 for additional responses related to this attachment.
2646	19	ATT5: Exhibit 5 Effects of the CVP upon the Southern Delta water supply Sacramento-San Joaquin River Delta, California June 1980 Prepared jointly by the Water and Power Resources Service and the South Delta Water Agency	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comments 2646-4 and 2646-12 for additional responses related to this attachment.
2646	20	ATT6: Exhibit 6 Final Cease and Desist Order. State of California. State Water Resources Control Board ORDER WR 2006-0006 In the Matter of Draft Cease and Desist Order Nos. 262.31-16 and 262.31-17 Against the Department of Water Resources and the United States Bureau of Reclamation Under their Water Rights Permits and License and In the Matter of Petitions for Reconsideration of the Approval of a Water Quality Response Plan Submitted by the Department of Water Resources and the United States Bureau of Reclamation for their Use of Joint Points of Diversion in the Sacramento-San Joaquin Delta.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-8 for additional responses related to this attachment.
2646	21	ATT7: Exhibit 7: Sacramento Delta San Joaquin Atlas	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-12 for additional responses related to this attachment.
2646	22	ATT8: Exhibit 8: Letter From South Delta Water Agency dated July 15, 1997. To Ms. Stacey Gianoli, State Water Resources Control Board, Bay-Delta Division, Re: South Delta	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that

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		Channel Depletion Requirements Development of 1995 water Quality Control Project.	are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-12 for additional responses related to this attachment.
2646	23	ATT9:Exhibit 9 State of California Department of Water Resources, Investigation of the Sacramento-San Joaquin Delta, Report No. 4- Quantity and Quality of Waters Applied to and Drained from the Delta Lowlands, July 1956.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please also see responses to comment 2646-12 for additional responses related to this attachment.
2646	24	ATT10: Exhibit 10. Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Interim South Delta Program (ISDP) Volume 1. Prepared for: DWR and Bureau of Reclamation by NTRIX, Inc. and Resource Insights, July 1996.	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2646	25	ATT11:Exhibit 11 State of California-Department of Water Resources-Division of Operations & Maintenance-Operations Control Office	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please see responses to comment 2646-12 for additional responses related to this attachment.
2646	26	ATT12:Exhibit 12. Letter from Terry L. Prichard, Certified Consulting Professional Agronomist and Soil Scientist and Crop Advisor, dated Oct. 13, 2005 To Mr. John Herrick, Re: "SWRCB's Hear on a Cease and Desist Order Against DWR and USBR."	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please see responses to comment 2646-12 for additional responses related to this attachment.
2646	27	ATT13: Exhibit 13: The Economic Impact on San Joaquin County of Yield Decrement from Reduction in San Joaquin River Quality, Prepared for South Delta Water Agency et al. By Prairie Economics LLC	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2646	28	ATT14:Exhibit 14-DSM2 Nodes	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS. Please see responses to comment 2646-13 for additional responses related to this attachment.
2646	29	ATT15:Exhibit 15 State of California, California Environmental Protection Agency, State Water Resources Control Board. In the Matter of Specified License and Permits of the Department of Water Resources and US Bureau of Reclamation for the State Water Project and Central Valley Project. Order conditionally approving a petition for temporary urgency changes with license and permit terms and conditions requiring compliance with Delta water quality objectives in response to drought conditions. Jan 23, 2015-May 20, 2015	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2646	30	ATT16: Exhibit 16- Water Use- Habitat vs. Agriculture	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2646	31	ATT17: Title 1-California Water Security and Environmental Enhancement, Sec 101. Short title. This title may be cited as the "Calfed Bay-Delta Authorization Act." Public Law 108-361, Oct 25, 2004. 108 Congress	This comment describes an attachment to the comment letter. This attachment does not raise any additional issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in the comment referencing the attachment or the Final EIR/EIS.
2647	1	Were the League of Women Voters of California to support any new infrastructure for conveying water through or around the Sacramento-San Joaquin Delta, we would have to be persuaded that the proposed infrastructure conformed to League policies, such that	The commenter does not provide any specificity of deficiencies (e.g., what laws are not being followed). The proposed project was developed to meet the rigorous standards of the Clean Water Act and federal and state Endangered Species Acts and is intended to be environmentally beneficial, not detrimental. By establishing a point of water diversion in the north Delta and new operating criteria, the proposed project is

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		<p>1. realistic limits have been placed on the amount of water to be exported</p> <p>2. strategies such as water conservation and wastewater reclamation have been employed and will continue to be employed to the fullest extent by both agricultural and urban users to minimize reliance on water exported through the Delta</p> <p>3. federal and state entities intend to abide by high water quality standards in the Delta and the estuary</p> <p>4. the conveyance plan includes strong, binding environmental safeguards, including reserving stream flows for protection of fish and wildlife and their habitat, and for other in-stream uses</p> <p>5. the economic, social, and environmental costs and benefits of the project have been fully assessed.</p> <p>In all these areas, the RDEIR/SDEIS fails not only to meet the League's criteria for supporting new conveyance infrastructure in the Delta but also to conform to established law. We therefore cannot support the Administration's California WaterFix.</p>	<p>designed to improve native fish migratory patterns and allow for greater operational flexibility.</p>
2647	2	<p>Have realistic limits been placed on the amount of water to be exported from the Delta? (Also see Water Code § 85020(a): "Manage the Delta's water and environmental resources and the water resources of the state over the long term.")</p> <p>Any visionary plan for California's future must begin with the recognition that the State, through the State Water Resources Control Board, has approved at least five acre feet of consumptive water rights claims for every acre foot of unimpaired flow in the Sacramento and San Joaquin River basins. (footnote 1: "Paper Water in the Trinity and Sacramento River Basins," and "Paper Water in the San Joaquin River Basin," California Water Impact Network, accessed March 14, 2014. http://www.c-win.org/paper-water-trinity-and-sacramento-river-basins.html http://www.c-win.org/paper-water-san-joaquin-river-basin.html) California has based the world's eighth largest economy on heavily over-allocated, "paper" water, which cannot be relied upon even in an average water year, irrespective of limitations placed on water exports to protect endangered species in the Delta. The gap between expectations and supplies has become more stark as we experience serious drought in California and recognize that our water storage and delivery system was designed during a century, the 20th, that was unusually wet. (footnote 2: Robert Kunzig, 'Drying of the West,' National Geographic Magazine, February 2008. http://ngm.nationalgeographic.com/print/2008/02/drying-west/kunzig-text)</p> <p>Water planners in 1960 understood that the system could provide a "usable surplus" for export only in the range of 3 million acre feet per year on average without the addition of flows from North Coast rivers. (footnote 3: DWR Bulletins and Publications. "Bulletin 76, 1960, Delta Water Facilities." http://www.water.ca.gov/waterdatalibrary/docs/historic/bulletins.cfm) With the addition of flows from the Trinity River, the only north coast river that was actually developed, the average surplus available for export would be about 3.5 million acre feet per year. This level of exports would leave enough water in the Delta "common pool" to provide for the needs of the people and the ecosystem in the Delta and the Estuary and to maintain a freshwater barrier against salinity intrusion, which negatively affects</p>	<p>Water rights issued on rivers in the Trinity and Central Valley watersheds include a wide range of beneficial uses from hydropower to municipal, industrial, and agricultural water users. However, not all of the water diverted under the water rights is consumptively used. For example, water diverted for hydropower electric generation is fully returned to the water bodies; and a portion of the water diverted from municipal, industrial, and agricultural water uses is returned to the water bodies. In addition, the amount of water diverted is dependent upon water rights priorities and the need to meet environmental flow and quality requirements. Therefore, it is difficult to compare the total volume of water rights licenses to the total amount of water available in the system. For example, water rights issued to DWR and Reclamation are not fully available to provide water under the SWP and CVP water contracts in many years due to the demands of senior water rights holders and regulatory requirements.</p> <p>In accordance with the Project Objectives and Purpose and Need (see Chapter 2 of the EIR/S), all of the action alternatives would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation. The CVP facilities are used to convey both water rights for CVP water contractors and water rights users that hold water rights that are senior to the CVP. The CVP facilities are required to deliver water to senior water rights holders along the San Joaquin River (up to 840,000 acre-feet in most years, and up to 630,000 acre-feet in extremely dry years). In addition, the federal Central Valley Project Improvement Act requires the CVP facilities to deliver water to several federal and state wildlife refuges located to the south of the Delta (304,600 acre-feet in most years, and 228,450 acre-feet in extremely dry years). These deliveries must occur even when there is no water delivered to CVP water service contractors, as described in Appendix 5A, Section B, of the EIR/EIS.</p> <p>As shown in Chapter 5 and Appendix 5A, Section C, of the Final EIR/EIS, the proposed project, Alternative 4A, would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries to SWP and CVP water users in drier periods. The Final EIR/EIS includes model results specifically for Alternative 4A as compared to Existing Conditions and No Action Alternative. These results indicate that total Delta exports under Alternative 4A are approximately 6 percent higher in wet years and 3 percent lower in critical dry</p>

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		<p>exports as well as Delta agriculture and fisheries.</p> <p>No subsequent experience has shown this initial analysis to be unrealistic. However, rather than redrafting water contracts to adjust for modifications in supply, officials through the end of the 20th century and into the 21st continued to honor those contracts, relying on water that was supposed to be available for export only when it was surplus to water needs in the Delta itself. (footnote 4: A detailed explanation of the implications of "surplus" with respect to the Delta is covered in §§ 12200-12205 of the California Water Code.)</p> <p>WaterFix's Alternative 4A, the preferred alternative, involves three new intakes in the North Delta, each with a 3,000 cubic foot per second capacity. The plan projects an average annual yield of 4.9 million acre feet per year. This is clearly unrealistic, even given pre-drought conditions.</p> <p>The recirculated documents also analyze two alternatives: Alternative 2D, a 5-intake, 15,000 cubic feet per second facility-even more unrealistic; and Alternative 5A, a single-intake 3000- cubic feet per second facility. Only Alternative 5A appears to acknowledge realistic limits on the amount of water that can be exported from the Delta. However, Alternative 5A is not a good-faith alternative for long-term reduction in exports. It uses the same twin (dual-bore) tunnels intended for use by the three-intake preferred alternative. (footnote 5: "From the [single] intake water would flow into an initial single-bore tunnel, which would lead to an intermediate forebay on Glannvale Tract. From the southern end of this forebay, water would pass through an outlet structure into a dual-bore tunnel where it would flow by gravity to the south Delta" (RDEIR/SDEIS 4.1.4).) Once the two 30-mile-long tunnels-each 40 feet in diameter and up to 150 feet underground-have been constructed, one or two additional intakes could be added later. Building dual-bore tunnels doesn't make sense if the long-term plan is to transfer no more than 3000 cubic feet per second, which would allow a maximum diversion of around 2.2 million acre feet per year.</p>	<p>years as compared to the No Action Alternative. The results also indicate that total Delta exports under Alternative 4A are similar in wet years and 18 percent lower in critical dry years as compared to the Existing Conditions which includes changes due to climate change, sea level rise, and population growth.</p> <p>The North Delta intakes would have a capacity to divert 9,000 cfs. The SWP and CVP South Delta intake capacity is 15,000 cfs. The total amount of exports is defined by the combined capacity of 15,000 cfs of the SWP Banks Pumping Plant plus the CVP Jones Pumping Plant which would convey all water diverted at the North Delta and South Delta intakes, as described in Chapter 5 and Appendix 5A of the EIR/S. The allocation pattern between the North Delta and South Delta intakes is dependent upon the operational rules for each action alternative, No Action Alternative, and Existing Conditions, as described in Chapter 3, Description of Alternatives. These operational rules include the North Delta Bypass Flow criteria developed to maintain Sacramento River flows toward San Francisco Bay. As shown in Figures Appendix 5A, Section C, CALSIM II and DSM2 Model Results, of the EIR/EIS, the north Delta intake tunnels would not be fully utilized except for a few months in wet years.</p> <p>As described in the Conceptual Engineering Report referenced in the EIR/EIS, it would not be possible to operate the proposed tunnels at flows greater than 9,000 cfs unless the entire proposed pumping plant at the northern Clifton Court Forebay was reconstructed to provide for hydraulic flow of larger flows. This type of modification would require additional engineering and environmental studies and is not addressed in this EIR/EIS.</p>
2647	3	<p>Have strategies to reduce reliance on the Delta been fully implemented? (Also see Water Code § 85020(d): "Promote statewide water conservation, water use efficiency, and sustainable water use.")</p> <p>The Delta Reform Act of 2009 sets forth the policy of the state "to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency" (California Water Code § 85021).</p> <p>The difference between the 3-3.5 million acre feet per year originally anticipated to be available for export and the 5 million acre feet actually exported on average, (footnote 6: See, for example, Delta Stewardship Council, Delta Plan, (2013), Chapter 3, Figures 3-4a (p. 80) and 3-4b (p. 81).</p> <p>Http://deltacouncil.ca.gov/sites/default/files/documents/files/DeltaPlan_2013_CHAPTE RS_COMBINED.pdf) to the detriment of fisheries and other non-export uses, has fueled both urban and agricultural expansion in California, creating rigid demands for surface water that cannot be met reliably over the long term in a state that has experienced drought nearly 20 percent of the time in the last nine decades. (footnote 7: See "Executive Summary," Significant Droughts: Comparing Historical and Recent Conditions, California Department of Water Resources, February 2015. The estimate in this letter</p>	<p>As described in response to 2647-1, the SWP and CVP operations under the action alternatives would only deliver water under existing water rights issued by the State Water Resources Control Board to DWR and Reclamation for use by the SWP and CVP with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation.</p> <p>The Proposed Project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in agricultural and municipal/industrial water conservation, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).</p> <p>For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31.</p>

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		<p>includes the current year, 2015, in the calculation. Http://water.ca.gov/waterconditions/docs/California_Significant_Droughts_2015_small.pdf WaterFix continues the strategy of honoring contracts that over-allocate available water. The project's purpose statement (footnote 8: "DWR's fundamental purpose in proposing the proposed project is to make physical and operational improvements to the SWP/CVP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south of the Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations" (RDEIR/SDEIS, ES.1.2.2.1).) makes it clear that the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (USBR) intend to restore and protect water supplies of the State Water Project (SWP) and Central Valley Project (CVP) south of the Delta consistent with contractual obligations. (footnote 9: This purpose statement expresses a clear intent by DWR and the Bureau of Reclamation to perpetuate historic reliance on the Delta. RDEIR/SDEIS Section 4.2.4, "Water Supply"-No Action Alternative-projects a "potential 25% increase on average in south of Delta demands under SWP M&I [municipal and industrial] contracts between existing and future levels of development due to assumed additional development and demographics." Whatever the conveyance alternative ultimately chosen, this projected demand would appear to be the same, and the law requires that demand to be met without increased reliance on the Delta.)</p> <p>By protecting and restoring contractual amounts, even though only "when hydrologic conditions result in the availability of sufficient water," (footnote 10: RDEIR/SDEIS 1.1.4.1) WaterFix appears to violate the Delta Reform Act's mandate to reduce future dependence on Delta water. Availability of sufficient water has not governed exports in the past.</p> <p>The Natural Resources Defense Council and the Pacific Institute have estimated that each year, California uses 6 million acre feet more than the state's rivers and aquifers can sustainably provide; but through water reuse, storm water capture, and agricultural and urban efficiency, California could save up to 14 million acre feet each year. (footnote 11: http://www.nrdc.org/water/ca-water-supply-solutions.asp) No conveyance project should proceed in the absence of a data-driven record of 1) water consumption by entities receiving water exported through the Delta and 2) the efforts of those entities to reduce consumption and move toward sustainability.</p>	
2647	4	<p>Do federal and state entities intend to abide by high water quality standards in the Delta? (Also see Water Code § 85020(e): "Improve water quality to protect human health and the environment consistent with achieving water quality objectives in the Delta.")</p> <p>Delta water quality affects the lives and livelihoods of over half a million people in the Delta region alone, and it affects the health of fisheries and of fish species that evolved to take advantage of the estuary's annual and seasonal variations in salinity and flow. Since the 1970s, with increases in upstream storage and Delta exports that reduce freshwater outflow to the Bay, salt water has stayed in the Delta longer (residence time has increased), causing a dramatic decline in water quality. The RDEIR/SDEIS offers no assurance that the residence time of salt water in the Delta will decline and water quality will improve, especially in dry years, as the tunnels divert the largest remaining source of fresh water, the Sacramento River. It offers no assurance that the water projects will be operated differently in the future than they have been in the past to</p>	<p>For more information on water quality, please see Master Response 14. Regarding the project's purpose and need, please see Master Response 3.</p> <p>The quote in the comment regarding residence time is related to the Microcystis assessment in Impact WQ-32. This cited text refers to uncertainty in residence time because this was not directly modeled for Alternative 4A. However, numerous other constituents were directly modeled, including the salinity-related electrical conductivity (EC). Thus, this statement regarding uncertainty does not apply to EC impacts identified in the EIR/S.</p>

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		comply with salinity standards. (footnote 12: The RDEIR/SDEIS admits to "substantial uncertainty regarding the extent that operations and maintenance of Alternative 4A would result in a net increase in water residence times at various locations throughout the Delta relative to Existing Conditions" (Section 4.3.4, p. 4.3.4-67).)	
2647	5	<p>With operation of the twin tunnels, Sacramento River water now conveyed through the Delta would be replaced in various locations by other source water. One of those sources is the San Joaquin River, which provides both a lower flow and poorer quality water than the Sacramento River. Increasing the portion of San Joaquin River water in the Delta relative to Sacramento River water will lead to more concentrated pesticides reaching the central and western Delta and, with increased residence times, staying there longer. (footnote 13: The Clean Water Act has identified the San Joaquin River as an impaired water body for chlorpyrifos, diazinon, diuron, DDT, and Group A pesticides. US EPA, 2010 California 303(d) List of Water Quality Limited Segments. Accessible online at http://gispublic.waterboards.ca.gov/pub/303d/2010_USEPA_approv_303d_List_Final_122311wsrscs.xls.)</p> <p>In addition, reducing the proportion of fresh Sacramento River water relative to San Joaquin River water in the Bay-Delta Estuary will lead to increased concentrations of selenium, a trace element that is necessary to human health at normal levels but is toxic at elevated levels. (footnote 14: National Research Council, Committee on Sustainable Water and Environmental Management in the California Bay-Delta, Sustainable Water and Environmental Management in the California Bay-Delta, Washington, DC: The National Academies Press, 2012, p. 94. Accessed online 13 October 2015 at http://www.nap.edu/read/13394/chapter/5#94)</p>	The potential for higher pesticide concentrations in the Delta due to operations and maintenance of the water conveyance facilities is addressed in Chapter 8, Water Quality, Impact WQ-21. Impacts to selenium due to operations and maintenance of the water conveyance facilities are addressed in Chapter 8, Water Quality, Impact WQ-25. For alternatives 6A, 6B, 6C, 7, 8, and 9, the impact conclusion was significant and the contributing factor was the higher fraction of San Joaquin River water in the Delta; for all other alternatives, the impact conclusion was less than significant.
2647	6	Algae occur naturally in all fresh and marine water environments, and most species are harmless under normal circumstances. However, some cyanobacteria (blue-green algae) that use photosynthesis can "bloom," growing rapidly when flows decrease and temperatures rise in Delta waterways. This "bloom" can dramatically reduce or completely consume dissolved oxygen in the water, suffocating fish and other organisms. Cyanobacteria can produce cyanotoxins that are harmful to aquatic life and can affect taste, odor, and safety of drinking water, degrading waterways used for recreation and drinking water supply. Algal blooms are expected to increase with operation of WaterFix. (footnote 15: The RDEIR/SDEIS admits that "it is possible that increases in the frequency, magnitude, and geographic extent of Microcystis blooms in the Delta would occur relative to Existing Conditions" (RDEIR/SDEIS page 4.3.4-67, lines 28-29). Water temperature caused listing of three reaches of the San Joaquin River by the EPA in 2012. Op. cit. 2012 California 303(d) List.)	Please see refer to Impact WQ-32 in Chapter 8 of the Final EIR/EIS for a detailed analysis of the potential for effects on Microcystis bloom formation resulting from project facilities operations and maintenance, and WQ-9 for an analysis of potential effects on dissolved oxygen. Also see Master Response 14, Water Quality.
2647	7	Legacy mercury left over from the Gold Rush is found in sediments throughout the Sacramento Valley, the Bay-Delta Estuary, and San Francisco Bay. When mercury is disturbed, it can be taken up by algal cells or phytoplankton, entering the food web and eventually affecting fish and the humans who consume them. In 2012, the EPA listed mercury in six reaches of the San Joaquin River. (footnote 16: Id.)	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. Therefore, no response to this comment is necessary.
2647	8	Altogether, the EPA lists 145.5 miles of the San Joaquin River as impaired for multiple pollutants, which is worrisome when WaterFix intends to rely so heavily on the San Joaquin to replace water currently supplied by the Sacramento River.	The potential for water conveyance operations to affect contaminants in the Delta (including Suisun Marsh) under existing conditions and future no action conditions, and with implementation of each project alternative (including conservation measures), is assessed in detail in Chapter 8, Water Quality, of the EIR/EIS. Where significant impacts to uses would occur due to the alternative, as opposed to other forces

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		It is not clear that operation of WaterFix can ensure decent water quality even for state and federal export users, and it will certainly lead to a decline in water quality for other users.	including climate change and sea level rise, mitigation to lessen those impacts is provided.
2647	9	<p>Does the plan include strong, binding environmental safeguards? (Also see Water Code § 85020(c): "Restore the Delta ecosystem, including its fisheries and wildlife, as the heart of a healthy estuary and wetland ecosystem.")</p> <p>State and federal permitting agencies made it clear in their comments on the Bay Delta Conservation Plan (BDCP) that they were not convinced that habitat restoration and facility operation under the BDCP would meet the standards necessary for water contracts based on 50-year take permits. To move forward with the tunnel plan, DWR and the USBR have not included in WaterFix the habitat restoration and related conservation measures that were part of the BDCP, except to the extent required for mitigation—a much lower standard and, at about 2,300 acres, (footnote 17: http://www.californiawaterfix.com/solution/details, accessed 14 October 2015) an exceptionally modest commitment compared to the 100,000 acres of habitat restoration proposed under BDCP.</p> <p>Habitat restoration measures are to be implemented instead by the Resources Agency in a separate program, EcoRestore, and the RDEIR/SDEIS obviously is not required to include any analysis of that program. EcoRestore involves about 30,000 acres of habitat restoration and protection, a 70 percent reduction in habitat from that proposed by BDCP. (footnote 18: According to RDEIR/SDEIS pages 5-3, lines 21-29: "California EcoRestore will be led by the Delta Conservancy as the lead state agency, and will accelerate and implement a suite of Delta restoration actions prescribed in the 2014 California Water Action Plan by 2020. Under EcoRestore, the state will pursue restoration of more than 30,000 acres of fish and wildlife habitat. This habitat restoration will include creating 3,500 acres of managed wetlands; restoring 9,000 acres of tidal and sub-tidal habitat; restoring more than 17,500 acres of floodplain; and restoring more than 1,000 acres of aquatic, riparian and upland habitat projects, as well as flood management projects. EcoRestore will implement multiple fish passage improvement projects in the Yolo Bypass and other key locations, and will provide coordination with existing local Habitat Conservation Plans and Natural Community Conservation Plans.")</p>	<p>This Final EIR/EIS discloses the potential environmental effects of the action alternatives. Where impacts were determined to be significant/adverse, mitigation measures are provided to reduce the potential effect. The California WaterFix (Alternative 4A) and Alternatives 2D and 5A include Environmental Commitments to reduce the construction and operations effects of the proposed conveyance facilities. The EIR/EIS also lists environmental commitments and avoidance and minimization measures in Appendix 3B which will be implemented to reduce environmental effect of the proposed project. All of these measures are incorporated into the Mitigation Monitoring and Reporting Program (MMRP) which accompanies this Final EIR/EIS. The MMRP identifies all of the measures that will be implemented including who will implement the measure as how and when the measure will occur. All of the measures adopted as part of the Findings of Fact will be committed to and implemented to reduce the physical environmental effects of the project.</p>
2647	10	<p>In 2008 and 2009, the U. S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) issued biological opinions that led to measures to restore habitat in the Delta. (footnote 19: Programs associated with the 2008 and 2009 USFWS and NMFS BOs, including Yolo Bypass improvements and 8,000 acres of tidal habitat restoration, are part of the Cumulative Impact Analyses in Section 5 of the RDEIR/SDEIS. Section 5 Table 5.2.1-1, "Restoration Projects with Potential to Contribute to Meeting Habitat Conservation Measures or Environmental Commitments," lists both "planned" and "in progress" restoration projects. Verifying specific acreage is difficult because it is not clear whether some projects are at the "planning" or at the "in progress" stage.) These restoration measures will go forward with or without the tunnels, even under the No Action Alternative.</p> <p>The environmental measures under WaterFix consist primarily of activities intended to offset adverse effects of tunnels construction. (footnote 20: Section 4.1.4.3 states:</p>	<p>It is unclear what the commenter means by the phrase, "However, it is not clear that National Environmental Protection Act (NEPA) or Endangered Species Act requirements have actually been met by the process that produced the RDEIR/SDEIS." The RDEIR/SDEIS presents mitigation measures to reduce significant/adverse environmental effects. ESA consultation is currently underway. Should additional conditions or RPA's be required in the California WaterFix biological opinion those requirements would be met by the project. Please refer also to Master Response 29 which addresses the Endangered Species Act process.</p>

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		<p>... Repackaged and limited elements of the original BDCP Conservation Measures are instead referred to as 'Environmental Commitments'. . . . These commitments consist primarily of habitat restoration, protection, enhancement, and management activities necessary to offset—that is, mitigate for—adverse effects from construction of the proposed water conveyance facilities, along with species-specific resource restoration and protection principles to ensure that implementation of these commitments would achieve the intended mitigation impacts. . . . Additionally, pertinent elements included as Avoidance and Minimization measures and the proposed Adaptive Management and Monitoring Program would be implemented. . . . All of these components would function as de facto CEQA and NEPA mitigation measures for the construction and operations-related impacts. . . ." The RDEIR/SDEIS asserts that these measures, along with proposed adaptive management of the project (adapting operations to meet environmental objectives), constitute "de facto" means of meeting state and federal environmental protection guidelines.</p> <p>However, it is not clear that National Environmental Protection Act (NEPA) or Endangered Species Act requirements have actually been met by the process that produced the RDEIR/SDEIS. The Bureau of Reclamation has not taken the steps required for formal consultation with the federal fisheries agencies, a process that would include identifying "reasonable and prudent alternatives" (RPAs) for meeting environmental objectives. (footnote 21: http://www.friendsoftheriver.org/site/DocServer/9_9_15_BDCP_final_ltr_pdf.pdf?docID=10384)</p>	
2647	11	<p>Operations of the SWP and the CVP have modified critical habitat of fish species in the Delta by reducing flows, increasing the residence times of water, and increasing water temperature. Operation of the twin tunnels will perpetuate this pattern and worsen the effects. Substituting habitat for adequate freshwater flows cannot contribute to the recovery and delisting of listed species.</p>	<p>The operational criteria included in the preferred alternative, 4A, is based on several years of coordination with fish agencies and incorporation of the best available science to avoid and minimize the effects of changes in Delta operations. Additionally, habitat restoration to compensate for construction-related habitat effects is included in Alternative 4A. The proposed project was developed to meet the standards of the federal and state Endangered Species Acts, as such the proposed project is intended to be environmentally beneficial. By establishing a point of water diversion in the north Delta and new operating criteria the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.</p>
2647	12	<p>The RDEIR/SDEIS should include analysis of reasonable and prudent alternatives, including alternatives that increase flows through the Delta to San Francisco Bay by reducing exports. In the absence of these reasonable and prudent alternatives to the twin tunnels, the public does not have the information necessary during this public comment period to analyze the WaterFix plan in a meaningful way.</p>	<p>Please refer to Master Response 4 regarding how the selection of alternatives was determined. The alternatives included in the Draft EIR/EIS represent a legally adequate reasonable range of alternatives and the scope of the analysis of alternatives fully complies with both CEQA and NEPA. The specific proposals that were considered but ultimately rejected by the Lead Agencies are discussed in Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1. Analysis of additional modeling scenarios with higher Delta outflow, requested by the State Water Resources Control Board, will be included in Appendix 5E of the Final EIR/EIS.</p>
2647	13	<p>Have the economic, social, and environmental costs and benefits of the project been fully assessed? (Also see Water Code § 85020(b): 'Protect and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place"; § 85020(f): "Improve the water conveyance system and expand statewide water storage"; and § 85020(g): "Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and investments in flood protection.")</p> <p>Since the inception of BDCP, planners have assumed economic benefits of isolated conveyance in the Delta and have essentially dismissed costs, arguing that exporters</p>	<p>Please refer to Master Response 3 regarding the need for the project and its goals and Master Response 5 regarding costs and implementation. Additionally, DWR is revising the Socioeconomic Impact Analysis for the project based on changes included in the RDEIR/SDEIS.</p>

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		<p>themselves, not taxpayers and the general public, would be paying for the project through rates charged to water users. Opponents have argued that this project has impacts far beyond its immediate beneficiaries.</p> <p>In response to public pressure, the water contractors in 2013 paid for a benefit-cost analysis by ICF International and the Brattle Group. This analysis identified benefits based on the reliability of deliveries that could be expected with 50-year take authorization (permits limiting future regulatory actions to protect fish that would be justified by the conservation plan portion of BDCP), and with a reduction in seismic risk to Delta water supplies—for example, an earthquake in the Delta interrupting export deliveries. According to this analysis, the state and federal water contractors could expect a net benefit of \$4.7 billion from BDCP. (footnote 22: "The state and federal contractors would enjoy an enhanced level of water supply reliability, and would avoid prolonged water shortages that may result in the future from increasing environmental restrictions in the Delta. The net welfare gain to the state and federal contractors as a result of implementing the BDCP is \$4.7 billion in 2012 dollars." Draft Bay Delta Conservation Plan Statewide Economic Impact Report, August 2013, page ES-8 http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Draft_BDCP_Statewide_Economic_Impact_Report_8-5-13.sflb.ashx)</p> <p>ICF/The Brattle group estimated cumulative 50-year benefits (10-year planning and construction period, 40-year operating period) in three categories: water supply reliability - 87 percent; water quality - 10 percent; and reduced seismic risk - 3 percent. (footnote 23: Ibid. Table ES-1, page ES-3)</p> <p>When planners removed the conservation plan elements from the twin tunnels project as WaterFix, they removed by far the largest benefit for the state and federal contractors: the protection from environmental restrictions that might have been expected with 50-year take authorization.</p>	
2647	14	<p>Reduced seismic risk represented the smallest benefit to water contractors—3 percent—under the 2013 analysis. Consultants were unable to quantify benefits of BDCP relative to flood risk. (footnote 24: Ibid. Section 4.3.6, p. 4.3-5) Earthquakes are always a danger in California, but it is difficult to demonstrate that the earthquake risk to levees in the Delta is higher than it is to aqueducts and reservoirs that make up the rest of the state's water transfer system. Nor is it clear that disruptions to water deliveries in the event of levee failures in the Delta would be economically crippling. Without the tunnels, a worst-case scenario predicts a shortage of less than half of the 10 MAF per year reduction in surface water supplies caused by the current drought—a reduction that the state has dealt with, while nonetheless managing to grow the state's economy, farm revenue, and employment. (footnote 25: Dr. Jeffrey Michael, "Interpreting the Economic Impacts of Drought," PowerPoint presentation to the State of the San Francisco Estuary Conference, Oakland, 18 September 2015. Accessed through personal communication. The presentation should be available shortly on the website of the San Francisco Estuary Partnership. Http://www.sfestuary.org/soe/)</p> <p>Reliability and reductions in seismic risk aside, the twin tunnels might still be worth the investment to the state and federal water contractors if they could expect to get more water at least part of the time. But WaterFix cannot provide that assurance.</p>	<p>The effects of an earthquake on the water conveyance features specific to each alternative during construction are described in Chapter 9 of the EIR/EIS. As described in Master Response 16 and Section 3E.2.6.2 of Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, major seismic events could result in reduced or total cessation of SWP and CVP water deliveries to areas located to the south of the Delta for 2 to more than 6 years for repairs; and for some time after the repairs.</p> <p>The fundamental purpose of the project to make physical and operational improvements to the SWP system in the Delta, water supplies of the SWP and CVP for users located south of the Delta, Delta aquatic resources, and Delta water quality consistent with statutory and contractual obligations of the SWP and CVP, as described in Section 2.3 of Chapter 2, Project Objectives and Purpose and Need, of the EIR/EIS. Please see Master Response 3.</p> <p>The proposed project, Alternative 4A, is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. The project is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies. It is important to note that the project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, storage, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).</p>

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2647	15	<p>According to an early estimate by Dr. Jeff Michael, Director of University of the Pacific's Center for Business and Policy Research, the average annual incremental water yield with the tunnels compared to "No Action" is only 257,000 acre feet per year. (footnote 26: Valley Economy, "Revised Delta Tunnels EIR Further Worsens the Project's Already Lousy Economics," 9 July 2015.</p> <p>http://valleyecon.blogspot.com/search/label/Delta water exports) Calculations based on one table in the RDEIR/SDEIS show a long-term increase under the most favorable scenario of only 121,000 acre feet per year over existing conditions. (footnote 27: "North and South Delta Exports for Alternative 4A Long-Term Average" (Figure 4.3.1-15). Calculations based on this bar graph show an increase under the most favorable (Fall X2) scenario of only 121,000 acre feet a year over existing conditions. (The LLT, or Late Long Term, for this project is 2060.) Elsewhere, the RDEIR/SDEIS says that "Delta exports would remain similar or increase in wetter years and decrease in drier years" with the tunnels, and "[total] long-term average annual Delta exports . . . Would decrease as compared to exports under Existing Conditions. . . ." (footnote 28: See Section 4.3.1-3 - 1-4, "Change in Delta Exports")</p> <p>Statements such as this do not inspire confidence that WaterFix will result in improved exports worth the currently estimated cost: almost \$15 billion, exclusive of interest and financing costs. (footnote 29: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/California_WaterFix_RDEIR-SDEIS_FAQ_Aug-15.sflb.ashx) The economic benefits do not seem to outweigh the costs. The twin tunnels project pencils out only if contractors figure out how to deliver more water than the RDEIR/SDEIS projects. This does not bode well for sustainable management of the Bay-Delta Estuary and its tributaries.</p>	<p>Please see Master Response 3 regarding the purpose and need of the proposed project, and Master Response 26 for information on how the project will affect the quantity of exports.</p> <p>All of the action alternatives would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The proposed project does not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation.</p> <p>As shown in Chapter 5 and Appendix 5A, Section C, of the Final EIR/EIS, the proposed project, Alternative 4A, would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high to improve conditions for aquatic resources in the Delta. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries to SWP and CVP water users in drier periods. The Final EIR/EIS includes model results specifically for Alternative 4A as compared to Existing Conditions and No Action Alternative. These results indicate that total Delta exports under Alternative 4A are approximately 6 percent higher in wet years and 3 percent lower in critical dry years as compared to the No Action Alternative. The results also indicate that total Delta exports under Alternative 4A are similar in wet years and 18 percent lower in critical dry years as compared to the Existing Conditions which includes changes due to climate change, sea level rise, and population growth.</p>
2647	16	<p>Farmers receive the majority of export water and might be expected to assume the majority of the project cost, although they will get very little additional water. They will have very uncertain information on which to base cropping decisions. Despite the fact that agriculture historically uses much more managed surface water than do urban users, urban water districts can be more flexible in their planning, so Metropolitan Water District and the Santa Clara Valley Water District may be the main beneficiaries of WaterFix.</p> <p>Reviewers of the RDEIR/SDEIS can only speculate on costs and benefits because no financial plan or benefit-cost analysis of WaterFix has been made available.</p>	<p>As described in Appendix 5A, Section C, the majority of the anticipated SWP and CVP water uses south of the Delta would be for municipal and industrial water users. Please refer to Master Response 5 regarding the costs and funding of the proposed project.</p>
2647	17	<p>Regarding economic, social, and environmental costs and benefits to the Delta, the preferred alternative under BDCP was criticized for the negative impact of tunnel facilities and operations on the Delta as Place. The preferred WaterFix Alternative 4A incorporates changes intended to address some of these concerns. (footnote 30: Changes made by WaterFix Alternative 4A to address impacts in the Delta: the reduction in power requirements by the elimination of the three pumping facilities (although two pumps have been added in a different place); a reduction in construction and associated impacts on Staten Island; a reduction in water quality impacts; and the increased use of more state-owned property rather than private property. Under Alternative 4A earthen bays would be used instead of concrete sedimentation bays, eliminating the need for pile driving by 75 percent at each intake site, as well as reducing construction noise, truck trips, and the amount of concrete needed for construction.) However, the WaterFix tunnels plan still elevates potential economic benefits to water users south of</p>	<p>Please refer to Master Responses 28 and 33 with respect to implementation of operational criteria and adaptive management, respectively. The new preferred alternative, Alternative 4A, was developed in response to public and agency input, and results in fewer significant and unavoidable impacts than the former preferred alternative, Alternative 4, under the BDCP. Please refer to Table ES-8 in the Final EIR/EIS for a summary of BDCP EIR/EIS impacts and mitigation measures, as well as Master Response 10 (Significant and Unavoidable Impacts) and 22 (Mitigation, Environmental Commitments, Avoidance and Minimization Measures and Alternative-Specific Environmental Commitments). Mitigation measures included in the adopted Notice of Determination and Record of Decision for this EIR/EIS will be implemented by the project proponents in accordance with the Mitigation Monitoring and Reporting Plan. For responses to comments related to the Delta Independent Science Board's letters, please refer to comment letters BDCP 1448 and/or RECIRC 2546.</p>

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		<p>the Delta over the social, economic, and environmental needs of the Delta region, including the estuary and portions of the San Francisco Bay area. The Delta Counties Coalition of the five Delta counties (Sacramento, Yolo, Solano, Contra Costa, and San Joaquin) protested nearly 50 "significant and unavoidable" adverse impacts to the Delta from construction and operation of the twin tunnels. (footnote 31: In a July 2014 letter, the Delta Counties Coalition commented as follows on the Conservation Measure for Water Facilities and Operation, CM-1 under BDCP, which is the current tunnels plan under WaterFix: "It is both poor public policy and an unacceptable outcome for the State and federal governments to pursue a water operations project/habitat conservation plan of this scale when it will result in close to 50 significant unavoidable impacts and irreversible alteration of the physical, cultural, and socioeconomic landscape of the Delta community." http://www.sacramentoriverdelta.net/wp-content/uploads/BoardLetter_072814.pdf Most of these impacts remain under WaterFix, and water contractors are now under no obligation to view facilities operation from the standpoint of a conservation measure. For the complete list of Significant and Unavoidable Adverse Impacts, see Table 31-1 of the Bay Delta Conservation Plan Draft EIR/EIS, November 2013, pp. 31-9 to 31-13.)</p> <p>Under WaterFix, the state and federal water projects would continue to rely on exports from the south Delta, especially in dry years. (footnote 32: The Alternative 4A discussion notes that a dry year will still see "south Delta diversions . . . Provid[ing] the majority of the CVP and SWP exports" (4.1-11, lines 14-15). Also, "Alternative 4A would entail the continued use of the SWP/CVP south Delta export facilities" (4.1.2.1, lines 5- 8, page 4.1-5).) The problems with south Delta exports are already well known, not only because of the impact on fish but because of compromised water quality affecting human water users in the entire Bay-Delta Estuary. Scientific uncertainty regarding the impact of operations will be addressed through a process of adaptive management, but the process as outlined does not allow for timely adjustments in operations. (footnote 33: Hypotheses will be tested using four steps (page 4.1-7, lines 3-12). The process will result in a written report that presents findings for submittal to an independent panel review process. No provision appears in this part for 1) triggers that may be used, and 2) what action may be required; nor does the "independent panel" appear to be specified. Table 4.1-2 describes Alternative 4A water operations flow criteria (but no clear summary is given) with such uncertain qualifiers as "specific criteria for determining operations will be developed . . . Based on real-time fish monitoring and . . . Cues"; "adjustments are expected to be made to improve water supply and/or migratory conditions". In other words, amounts are not certain and are based on criteria that are not yet available to and assessable by the public; compliance with water quality standards is not assured.) The Independent Science Board report has dealt particularly well with the adaptive management shortcomings of the RDEIR/SDEIS. (footnote 34: http://deltacouncil.ca.gov/docs/delta-isb-s-review-rdeirsdeis-bdcp-california-waterfix)</p> <p>Flow criteria are applied seasonally (month by month) according to five water-year types. (footnote 35: RDEIR/SDEIS, page 4.1-11) However, the type of water year is not reliably known until the end of the water year. This practice does not protect the Delta from shipments of water south during what turns out to be a very dry year.</p>	
2647	18	<p>The Delta Reform Act called for improving the water conveyance system but did not specify how that should be done. DWR and the U.S. Bureau of Reclamation have focused on tunnels under the Delta as the best way to improve the water conveyance system. One alternative not considered by WaterFix for improved Delta conveyance-investment</p>	<p>15 alternatives and 3 additional subalternatives were analyzed in the EIR/S and the RDEIR/RSEIS respectively. Four major alignments have been included in the EIR/S: Through-Delta, East of the Sacramento River, West of the Sacramento River, and a Tunnel under the Delta. Many additional proposals by public and private individuals and organizations have also been evaluated and described in Chapter 3 of the EIR/S and</p>

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		in levees-would also have benefits for emergency preparedness and flood protection in the Delta as called for in the Water Code.	Appendix 3A, Identification of Water Conveyance Alternatives, Conservation Measure 1. Regarding development of alternatives for the EIR/EIS, a description of the process the Lead Agencies followed to develop and screen alternatives is provided in Master Response 4. For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31.
2647	19	Chapter 5 of the Economic Sustainability Plan produced by the Delta Protection Commission, as required by the 2009 Delta Reform legislation, thoroughly analyzed the condition of levees in the Delta and their actual vulnerability to the kinds of flood and earthquake events that are to be expected in California. This Plan found that investments in levee improvements to create seismically resilient levees "have created significantly improved Delta levees through modern engineering and construction, making obsolete the historic data that is still sometimes used for planning or predicting rates of levee failure". (footnote 36: Business Forecasting Center, Eberhardt School of Business, University of the Pacific et al., "Chapter 5: Flood, Earthquake and Sea-Level Rise Risk Management" in Economic Sustainability Plan for the Sacramento-San Joaquin Delta (Delta Protection Commission, 2012), 56. http://www.delta.ca.gov/res/docs/ESP/ESP_P2_FINAL.pdf Also see "Appendix E: Clarification of Some Basic Issues with Regard to Delta Levees.") The Economic Sustainability Plan estimates that improvements to levees that would protect both export supplies and the people and property in the Delta itself could be done with a state investment of \$2 billion to \$4 billion. That figure should be compared to an estimated cost of nearly \$17 billion just to construct the tunnels. Delta levees will need rehabilitation even if the tunnels are built because \$20 billion in infrastructure (railroads, gas lines, power facilities, public highways), and four million people in the Delta need protection. The Economic Sustainability Plan found that if a hypothetical catastrophe such as a flood or an earthquake were to occur, only 20 percent of the economic costs and none of the loss of life would be borne by exporters. (footnote 37: Ibid. p. 82) The Delta itself and its people would bear by far the greatest losses. For that reason, it is hard to see any moral justification for prioritizing reliability of water exports over the safety and security of the people of the Delta.	By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility. Refer to Master Response 8 regarding the State plan of flood control. Please refer to Master Response 4 for additional details on the selection of alternatives. Also, please see Master Response 3 for additional details on the project purpose and need. Please refer to Master Response 24 for details on the Delta as a place and the impacts of the proposed project on the Delta.
2647	20	Given likely increases in the frequency of drought and changes in the amount and timing of precipitation even in non-drought years, storage upstream of the Delta will need to be operated not just for fish but for salinity control for water quality for all users, export as well as Bay-Delta Estuary users. We can anticipate years when insufficient water is available to convey through the tunnels, and urban and agricultural ratepayers will not get what they have been promised and are paying for in terms of reliable water deliveries. A realistic appraisal of likely water conditions in the future suggests that WaterFix is proposing to invest tens of billions of dollars to construct and operate a facility that may become a stranded asset.	The action alternatives and the No Action Alternative assume future changes in climate change and sea level rise. As indicated in this comment, it is anticipated that due to the reduction in rainfall and increased sea level rise, western Delta salinity could become greater than under the No Action Alternative and action alternatives. Water would be released from the SWP and CVP reservoirs to reduce the Delta salinity, however, in some years, adequate water supplies may not be available to reduce the surface water salinity, as described in Chapter 8, Water Quality. Operations to reduce salinity increases due to climate change and sea level rise would reduce long-term average SWP and CVP deliveries by approximately 9 percent under the No Action Alternative as compared to the Existing Conditions; and by approximately 5 percent under Alternative 4A (proposed project) as compared to the Existing Conditions.
2647	21	The League of Women Voters of California is firmly committed to transparency in government. Indeed, our policy on water specifically requires that documents dealing with planning and management of water resources present clear, concise information, readily available to the public. Given the complexity of the RDEIR/SDEIS material and the difficulty in accessing different parts of the documents in order to analyze and synthesize, the time allotted for review is insufficient. As presented, these documents	For more information regarding the document's length and complexity please see Master Response 38. Please see Master Response 39 for more information about the public review period. In order to facilitate a more easy review of the changes in the RDEIS/SDEIS compared to the Draft EIR/EIS, a version of the document was made available that included hyperlinks and track changes, in addition to a Section 508-compliant version.

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		<p>do not meet the League’s criteria for transparency.</p> <p>The 112-day period granted for public review of the RDEIR/SDEIS is inadequate under CEQA standards. CEQA Guidelines recommend that the "text of draft EIRs . . . for proposals of unusual scope or complexity should normally be less than 300 pages" while also recommending public review for such documents of up to 60 days. By these criteria, given the tens of thousands of pages of the RDEIR/SDEIS, the review period would be measured in years rather than in days or months.</p>	
2647	22	<p>Disks originally made available to reviewers in mid-July 2015 were in a format that did not contain hyperlinks or allow for making and saving annotations. Not all reviewers were aware that by August, documents with hyperlinks in some sections and a track changes feature were made available. Some reviewers have thus been working with documents that are not searchable easily, or at all, across sections. Even in the August version, a reviewer cannot move back and forth reliably between a hyperlinked section and the original reference to it; some hyperlinks do not work at all, and many portions of this monumental document that should be hyperlinked are not.</p> <p>Tables and figures often do not accompany the text where they are described and/or mentioned. Thus, a reader must leave the referring section and access a completely different part of the RDEIR/SDEIS-in the process losing his/her reference point. There is no "search" feature of the kind common in PDFs. (footnote 38: For instance, Figures 4.4.1-1 through 4.4.1-3 are not retrievable using the "search" bar in the upper right hand of the page image on the screen (disk copy), nor could those figures be located anywhere near the referral point 4.5.1.1 of the RDEIR/SDEIS.) The documents lack comprehensive tables and figures comparing all alternatives. Comparisons that are presented are sometimes incomplete and insufficient. (footnote 39: For instance, a seemingly meaningless comparison analyzes Alternative 5A (one intake) and "existing conditions" regarding incremental changes in Delta outflow, but it uses a 15,000 cubic feet per second north Delta intakes capacity as a facility/operations assumption. (RDEIR/SDEIS Section 4.5.1.1, page 4.5.1-1, lines 34-36). Neither Alternative 5A nor existing conditions reportedly contain a north Delta capacity of 15,000 cubic feet per second as a facility/operations assumption, so why is that figure used? Changes in long-term average outflow under Alternative 5A for the Early Long Term (ELT) are compared to Existing Condition (ELT) and No Action Alternative (ELT) in Tables B.1-4 and B.1-5 in Appendix B and Figures 4.4.1-1 through 4.4.1-3 in the RDEIR/SDEIS. However, changes in long-term average outflow under Alternative 5A are not compared to Alternative 4A.)</p> <p>Project proponents for the twin tunnels have deferred issues that should have been addressed before close of the public review period: (footnote 40: Per Concerned Citizens of Costa Mesa: 'CEQA compels an interactive process of assessment of environmental impacts and responsive project modification which must be genuine. It must be open to the public, premised upon a full and meaningful disclosure of the scope, purposes, and effect of a consistently described project. . . .' We argue that the disclosure represented by the RDEIR/SDEIS is not "meaningful." Informed public participation cannot occur when the public cannot access the pertinent information.)</p> <p>Deferred alternatives comparisons (inadequate analysis) (footnote 41: "Final EIR/EIS will include summary alternative comparison tables in the Executive Summary and resource chapters that compare selected impact information across the alternatives presented in</p>	<p>The commenter states that some disks provided were different than others but only one set of disks was created and they were all the same. The disks include both 508 compliant files as well as the digitally hyperlinked files. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Chapter 32 of the EIR/EIS and Master Response 40.</p> <p>Keeping figures separate from the text of the chapters ensures that the file size of the chapter and the file size of the figures pdf are manageable and can be downloaded from the website at a reasonable speed using standard home internet service.</p> <p>The pdfs are searchable using the “Control+F” feature. Without knowing what pdf viewing software the commenter was using there is no way to know what issues the commenters may have been encountering.</p> <p>For more information regarding the document's length and complexity please see Master Response 38.</p> <p>As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation duty to provide the public with educational information that is rooted in fact, based on reasonable assumptions supported by facts and expert opinions substantiated by facts. Doing so for a project of large scale and complexity can be a challenge. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project website, www.BayDeltaConservationPlan.com and is available for review. Historical materials remain available for review and are labeled as achieved or superseded.</p> <p>More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.</p> <p>As explained in the Executive Summary of the RDEIR/SDEIS, all of the comments received during the Draft EIR/EIS 2013–2014 public review period were considered in the development of the RDEIR/SDEIS. The RDEIR/SDEIS does not include responses to comments on the Draft EIR/EIS, though some revisions have been made in response to comments received on the Draft EIR/EIS. Consistent with the requirements of the California Environmental Quality Act (CEQA Guidelines §15088) and the National Environmental Policy Act (Council on Environmental Quality § 1503.4) and policies held by all Lead Agencies governing the implementation of CEQA and NEPA, all comments received on the DEIR/EIS and RDEIR/SDEIS are included with the Final EIR/EIS. Please see Master Responses 42 regarding treatment of public comments.</p> <p>This Final EIR/EIS includes comparison of alternatives in text and graphic form in the Executive Summary and individual resource chapters. This Final EIR/EIS also presents Appendix 29D which addresses potential future effects of climate change and sea level rise on SWP/CVP operations. This additional analysis does not affect the modeling analyses presented in the EIR/EIS. Additional EIR/EIS information was made available</p>

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		<p>the Draft EIR/EIS and RDEIR/SDEIS" (RDEIR/SDEIS at 1.4.3, 16-18.)</p> <p>Deferred responses to public input regarding adequacy of alternatives (footnote 42: "Responses to comments received on the adequacy of alternatives addressed in the Draft EIR/EIS will be provided in the Final EIR/EIS" (RDEIR/SDEIS, page 1.4.2, lines 13,14).)</p> <p>Deferred response to climate change (footnote 43: "An explanation and analysis describing potential scenarios for future SWP/CVP system operations and uncertainties will be provided in the Final EIR/EIS" (RDEIR/SDEIS, 1.4.4, lines 24-26).)</p> <p>Deferred response to the great majority of public comments. (footnote 44: "Following the close of the public review period, the lead agencies will: Consider and respond to all significant environmental issues raised in comments on the RDEIR/SDEIS (along with comments previously received on the Draft EIR/EIS)" (RDEIR/SDEIS, Section 1.6, lines 4-6).)</p> <p>Lack of transparency in this RDEIR/SDEIS is the predictable culmination of a costly multi-year process focused on justifying a project that cannot demonstrate statewide benefits commensurate with its statewide costs.</p>	<p>during the NEPA coordination period.</p>
2647	23	<p>The League of Women Voters of California strongly protests the non-transparent, pro forma nature of the entire RDEIR/SDEIS process and finds that the Water Fix plan fails to meet the League's criteria for supporting new conveyance infrastructure in the Delta. Water Fix does not represent a good-faith effort by federal and state agencies representing water contractors to craft a water management strategy that fairly and realistically balances urban, agricultural, and environmental water uses north, south, east and west of the Delta.</p>	<p>The commenter raises issues related to public education, transparency, and the range of alternatives studied. As state agencies, the Department of Water Resources and the California Natural Resources Agencies have an obligation to provide the public with educational information that is rooted in fact, based on reasonable assumptions supported by facts and expert opinions substantiated by facts. Doing so for a project of large scale and complexity can be a challenge. The BDCP website, blog, Your Questions Answered, and social media platforms have been the primary vehicle for communicating important project information and correcting misinformation. Brochures, factsheets, webinars and videos are other tools the State has employed to educate the public about the proposed BDCP and the EIR/EIS process. Representatives from the State have also held numerous meetings and briefings around the state to educate stakeholders and provide them with critical information about project developments and the EIR/EIS process. Brochures, factsheets, webinars, reports and other information is kept on the project websites, www.BayDeltaConservationPlan.com and www.californiawaterfix.com and is available for review. Historical materials remain available for review and are labeled as achieved or superseded. For more information on the public outreach efforts made during the BDCP and EIR/EIS process, please see Master Response 40.</p> <p>For more information regarding alternatives to the proposed project please see Master Response 4.</p>
2647	24	<p>The current statewide drought is demonstrating that water will not be available in all water years to justify construction of a costly twin tunnels facility that will contribute in all but the wettest years to degradation of water quality in the Delta, the estuary, and the San Francisco Bay, with accompanying adverse impacts on endangered species and on Delta, Bay, and upstream agricultural and urban users and economies. Conservation, recycling, watershed management, regional water supply development, and local off-stream storage projects such as groundwater storage offer much more flexible, reliable, and fiscally prudent ways to achieve water security throughout the state. Those are the strategies in which available resources should be invested.</p>	<p>Although conservation components, water storage, and demand management measures have merit from a statewide water policy standpoint, and are being implemented or considered independently through the state, they are beyond the scope of the proposed project. The proposed project is just one element of the state's long-range strategy to meet anticipated future water needs of Californians in the face of expanding population and the expected effects of climate change. The California WaterFix is not a comprehensive, statewide water plan, but is instead aimed at addressing many complex and long-standing issues related to the operations of the SWP and CVP in the Delta, including reliability of exported supplies, and the recovery and conservation of threatened and endangered species that depend on the Delta.</p> <p>Appendix 1C, Water Demand Management, in the EIR/EIS, describes conservation, water use efficiency, and other sources of water supply including storm water drainage. While these elements are not proposed as part of the BDCP or the California WaterFix, the Lead Agencies recognize that they are important tools in</p>

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			<p>managing California's water resources.</p> <p>Please also refer to Master Response 26 regarding changes to Delta exports.</p>
2648	1	<p>I received a copy at the Open House in Sacramento on 7-28-15 of the BDCP/California WaterFix Partially Recirculated DEIR/Supplemental DEIS, where I took the opportunity to speak with the representative regarding fisheries issues. The answers I got were related to structures and installations "to better protect fish," with no answers to the number of increased counts. I was hoping to be able to read answers, and was disappointed to find that habitat restoration measures beyond what is considered mitigation for conveyance structures has been moved to EcoRestore.</p> <p>How can these be separated, when all must be considered in Cumulative Effects Analysis?</p>	<p>This comment letter is in part a form letter that has been submitted by many commenters. To locate the response to the form letter portion of the comment, please refer to the index of commenters in Chapter 4 of Volume II of the Final EIR/EIS, and cross reference the Form Master letter number shown there with the index of Form Masters also provided in Chapter 4 of Volume II of the Final EIR/EIS. The text below responds to the specific substantive portions of the comment letter that were submitted by the commenter.</p> <p>Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta. Such larger endeavors, however, will likely be implemented over time under actions separate and apart from these alternatives. The primary parallel habitat restoration program is called California EcoRestore (EcoRestore), which will be overseen by the California Resources Agency and implemented under the California Water Action Plan. Under EcoRestore, the state will pursue restoration of more than 30,000 acres of fish and wildlife habitat by 2020. These habitat restoration actions will be implemented faster and more reliably by separating them from the water conveyance facility implementation. The cumulative analysis includes those actions under EcoRestore that are expected to occur in the reasonably foreseeable future.</p>
2648	2	<p>It is clear that even with mitigation, the adverse negative water quality effects are in violation of both state and federal water quality laws. This is a reason to stop this re-evaluation of this project. Full stop.</p> <p>A cornerstone of the State Water Board and Regional Water Board's regulatory authority is the Antidegradation Policy (Resolution 68-16), which is included in the Basin Plans as an appendix. However, the Water Tunnels project Draft EIR/EIS and RDEIR/SDEIS fail to discuss or analyze constituents which will "degrade" water quality. These documents do not evaluate whether the designated beneficial use is degraded and what it means for Clean Water Act [CWA] compliance.</p> <p>A CWA Section 401 certification cannot be legally issued unless the project as a whole (i.e., rather than the individual discharge mandating the 404 permit) meets water quality standards, which includes meeting beneficial uses designed to protect Delta species and ecosystems. The Water Tunnels project will fail across the board.</p> <p>There is no defensible antidegradation analysis.</p>	<p>The assessment of potential water quality effects of the project alternatives fulfills a primary public disclosure purpose of the CEQA and NEPA process. The Clean Water Act section 404 and 401 regulatory compliance processes are separate from the CEQA/NEPA process, and involve their own procedures and policies.</p>
2648	3	<p>In its August 2010 flow criteria report, the Water Board found that "[t]he best available science suggests that current flows are insufficient to protect public trust resources," and that "[r]ecent Delta flows are insufficient to support native Delta fishes for today's habitats." However, flow regimes proposed by the current Water Tunnels project rely on water quality (including flow) objectives that have been failing to protect Delta ecosystem and aquatic species beneficial uses for the last 15 years or more. These include: Water Right Decision 1641 (D-1641)28; the 2006 San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan; the 2009 NMFS Biological Opinion (BiOp); and the 2008 USFWS BiOp.</p> <p>Further, the Water Tunnels project notably incorporates "bypass flows" that ostensibly</p>	<p>Please refer to Master Response 14 regarding assessment of water quality degradation in the EIR/EIS, and the relevance of federal and state antidegradation policy considerations in the CEQA/NEPA process.</p>

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		<p>establish the minimum amount of water that must flow downstream of the planned north Delta intake. Rather than protecting Delta flow, the Water Tunnels project reduces average annual Sacramento River flow downstream of the North Delta intakes. Reduced flows downstream of the north Delta intakes extend all the way past Rio Vista as well. Because it fails to put needed flows back into failing waterways, the Water Tunnels project will violate water quality standards.</p> <p>Section 101(a) of the Clean Water Act (CWA), the basis for the antidegradation policy, states that the objective of the Act is to "restore and maintain the chemical, biological and physical integrity of the nation's waters." Section 303(d)(4) of the CWA carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR [Section] 131.12 before taking action to lower water quality. These regulations (40 CFR [Section] 131.12(a)) describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy and implementing procedures.</p> <p>The CWA requires the full protection of identified beneficial uses. The Federal Antidegradation Policy, as required in 40 CFR 131.12 states, "The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following: (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."</p> <p>The Delta is classified as a Tier II, "high quality," waterbody by U.S. EPA and the SWRCB. EPA Region 9's guidance on implementing antidegradation policy states,</p> <p>"All actions that could lower water quality in Tier II waters require a determination that existing uses will be fully maintained and protected."</p> <p>California's antidegradation policy is described in the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 (APU 90-004) and U.S. EPA Region IX, (Region IX Guidance), as well as Water Quality Order 86-17.</p> <p>California's Antidegradation Policy (Resolution 68-16) requires that:</p> <ul style="list-style-type: none"> -Existing high quality water will be maintained until it has been demonstrated that any change will be with the maximum benefit to the people of the State. -The change will not unreasonably affect present and anticipated beneficial uses. -The change will not result in water quality less than prescribed in the policies. 	
2648	4	<p>Beneficial uses includes fisheries. The Delta is recognized as being threatened by reductions in freshwater flows through the Delta. "[H]igher water exports" are among the factors the RDEIR/SDEIS admits "have stressed the natural system and led to a decline in ecological productivity." (RDEIR/SDEIS 1-10). Further, "There is an urgent need to improve the conditions for threatened and endangered fish species within the Delta." (Draft EIR/EIS ES-10; RDEIR/SDEIS ES-6). The RDEIR/SDEIS admits that "the Delta is in a state of crisis" and that "Several threatened and endangered fish species . . . have recently experienced the lowest population numbers in their recorded history."</p>	<p>The RDEIR/SDEIS has disclosed the impacts and required mitigation measures for revisions to Alternative 4 and new Alternatives 4A, 2D and 5A. These analyses include revisions to the Alternative 4 analyses, including those for fish and aquatic resources (Chapter 11) and new analysis of Alternatives 4A, 2D and 5A for all of the resource topics included in the Draft EIR/EIS. These analyses are also included in this Final EIR/EIS. No further recirculation of EIR/EIS analyses is required.</p>

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		<p>(RDEIR/SDEIS ES-1).</p> <p>In chapter 4 of the RDEIR/SDEIS, the Water Tunnels "would degrade the quantity and quality of rearing habitat for steelhead relative to Existing Conditions" and "would reduce the quantity and quality of rearing habitat for larval and juvenile green sturgeon relative to Existing Conditions." (Ch. 4, 4.3.7-22; 4.3.7-296). In chapter 5, "Effects Analysis" of the BDCP Draft Plan (December 2013), "Sacramento River attraction flows for migrating adult winter-run Chinook salmon will be lower from operations of the north Delta diversions under the BDCP" and "Plan Area flows have considerable importance for downstream migrating juvenile salmonids and will be affected by the proposed north Delta diversions . . . Because of the north Delta diversions, salmonids migrating down the Sacramento River generally will experience lower migration flows compared to existing conditions . . . As with winter-run Chinook salmon, it was assumed with high certainty that Plan area flows have critical importance for migrating juvenile spring-run Chinook salmon." (Plan, Ch. 5, 5.3-29; 5, 5.4-17).</p> <p>Aqua-60 in Executive Summary shows Adverse impacts after mitigation for migration conditions.</p> <p>CEQA requires that unless the Water Tunnels project is dropped, a new Draft EIR/EIS sufficient to provide for meaningful public review and comment must be prepared and circulated.</p>	
2648	5	<p>ES.1.3 Areas of Known Controversy:</p> <p>As noted in your long list of controversial areas, these proposals have been a highly contentious issue within the electorate, courts and regulatory agencies because of the potential damage to one of the largest estuaries on the west coast of North America and the impacts to surrounding watersheds, communities and water dependent industries. Past efforts to build similar water export projects were rejected by voters, and with good reason.</p>	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S.
2648	6	As currently proposed, the State of California's water tunnels project does not comply with Federal law.	Comment does not identify which federal law or what action is responsible for the noncompliance. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
2648	7	<p>Under Recreation, there are no mitigations recommended to prevent long-term reduction of recreation opportunities and experiences as a result of constructing the proposed water conveyance facilities (REC-2 and REC-10). Although there is a typo in the footnote, only conveyance-structure mitigations are mentioned. This leaves a SU=Significant and Unavoidable negative impact to boating and fishing recreation under CEQA and A=Adverse under NEPA.</p> <p>Alone, these make the whole project unacceptable.</p>	Mitigation has been incorporated into the project as much as possible. Due to the duration of construction, some impacts would remain significant and unavoidable. However, recreation would still be able to occur throughout the Delta.
2648	8	Admissions are made [of unavoidable negative impacts], even after mitigation, in the critical areas of Spring Chinook Salmon (AQUA-60), Groundwater (GW-5&6&7)(except in the immediate area of construction), and Permanent Farmland conversions including Williamson Act Lands (ES-82 & ES-43).	The RDEIR/SDEIS does identify significant impacts for Alternative 2D on chinook salmon migration conditions, for some groundwater effects and for agricultural land effects. Please note, that mitigation measures for groundwater effects have been expanded in the Final EIR/EIS to reduce impacts after mitigation to a not adverse/less-than-significant level.
2648	9	Impacts to water-dependent industries that count on a healthy Bay and estuary have been ignored or brushed aside. Drinking and recreational contact water quality impacts, including flow-related toxic harmful algae blooms, will impact millions of people who	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S.

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		depend on a healthy estuary to live, play, work, farm and fish.	
2648	10	Have the CVP and SWP made progress in meeting required mitigation measures, including the required purchase of 27,000 acres of endangered species habitat for current operations?	Requirements for habitat restoration under the current BiOps are occurring under a separate process that is related but not necessarily included in the current preferred CEQA and NEPA alternative (Alternative 4A). The State is also implementing the California EcoRestore program, a related but separate program to further improve the Delta ecosystem. EcoRestore would restore up to 30,000 acres of habitat in the Delta.
2648	11	Trinity River below Lewiston: I am concerned that Figures 4.3.2-9 [and] 10 do not reflect realistic values for average wet years or long-term average years.	The modeling tools chosen are the best available tools, but all models have limitations.
2648	12	People need to vote. It seems essential that all people in the nation need to vote on this project, since the economic viability and natural resources have so much effect on the people of the United States of America.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. In 2009 the California legislature passed and the Governor signed into law the Delta Reform Act, one of several bills passed related to water supply reliability, ecosystem health, and the Delta. Among many provisions, the Delta Reform Act imposed certain requirements on Department of Water Resources related to the creation of the Bay Delta Conservation Plan (BDCP) in order to be included in the Delta Plan and eligible for state funding for habitat conservation. These requirements include comprehensive review and analysis, and consultation with the Delta Stewardship Council during the planning process and once the project permits have been approved by California Department of Fish and Wildlife. Within the framework of the existing 2009 Delta Reform Act, the BDCP does not require a public vote to move forward. However, in spring of 2014, DWR announced that it would be pursuing a new preferred alternative, Alternative 4A, also known as California WaterFix. Alternative 4A has been developed in response to public and agency input and embodies a different implementation strategy that would not involve a 50-year HCP/NCCP approved under ESA Section 10 and the NCCPA, but rather would achieve incidental take authorization for a much shorter period (between 11 and 15 years) under ESA Section 7 and California Endangered Species (CESA) Section 20181(b). Prior to construction, the EIR/EIS must be certified and adopted by the implementing agencies, and permits must be obtained but does not require a public vote to move forward.
2649	1	Here's excerpt from http://yubanet.com/california/California-s-Twin-Tunnels-Water-Plan-Abandons-Delta-Protection-Public-Participation.php#.VjP5j7vlnN ----- "The new plan is a giant step backward. If it goes through, this massive project's boosters will be able to build these tunnels without having to do anything to protect our wildlife and waters -- and will neatly sidestep input from the public," said Chelsea Tu, a staff attorney with the Center for Biological Diversity.	The commenter does not offer any evidence on how the project would result in significant impacts to wildlife and water related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Please refer to Chapter 32 of the Final EIR/EIS and Master Response 40 for information regarding outreach conducted for California WaterFix (and previously the BDCP). More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41. Refer to Master Response 3 for information on the purpose and need for the proposed project.
2649	2	Let's start with the fact that conservation measures have been scaled back, by at least 70%, from the Twin Tunnels Project. Take a look at the following excerpt from http://www.redding.com/news/wire-news/state-cuts-habitat-restoration-for-delta-twin-tunnels-project -----	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts, as such the proposed project is intended to be environmentally beneficial. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility.

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		<p>California officials have dramatically scaled back the habitat restoration planned during construction of two massive tunnels under the Sacramento-San Joaquin River Delta to send water to farms and millions of people.</p> <p>California Department of Fish and Wildlife Director Chuck Bonham told The Associated Press Wednesday that the project now calls for restoring 30,000 acres for wetland and wildlife habitat — down from 100,000 acres.</p> <p>Bonham said the amount of land targeted for environmental improvements was revised because there was "too much complexity" in the original 50-year plan, given the need to get permits from federal wildlife agencies against a backdrop of uncertain future climate change impacts.</p> <p>The original environmental improvements were projected to cost \$8 billion, and officials said the new plans to be announced Thursday will cost about \$300 million.</p> <p>-----</p> <p>So, according to that excerpt, the downscaling of the conservation measures was done in order to make the project more feasible, thus revealing the REAL purpose for the BDCP --- NAKED AQUAPLUNDER!!!!</p>	<p>Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP</p> <p>The comment expresses a general opinion regarding the overall project, and does not present any specific CEQA or NEPA issues.</p>
2649	3	<p>Here's another excerpt from http://www.redding.com/news/wire-news/state-cuts-habitat-restoration-for-delta-twin-tunnels-project</p> <p>-----</p> <p>State officials decided to split their plans for the Delta into two parts — the construction of the tunnels and efforts to restore wildlife habitat along waterways.</p> <p>"Separating them doesn't change the science," said Barbara Barrigan-Parrilla, executive director of Restore the Delta and a critic of the plan. "The tunnels are going to leave us with a permanent drought in the Delta."</p> <p>The new approach doesn't come with 50-year permits, which was a goal of the previous plan because that would shield Central and Southern California water agencies from future cutbacks of Delta water for endangered species protection. Bonham said the state couldn't achieve the longer approvals and now is seeking permits of 10 years or less.</p> <p>-----</p> <p>Guess which part of the Plan will, if adopted, actually be performed. The Twin Tunnels project. Why? Because the purpose of the BDCP has never been about conservation! It has always been about one thing --- naked aquaplunder!</p>	<p>No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.</p>
2649	5	<p>Here's excerpt from http://calsport.org/news/innews/brown-fails-to-discuss-wholesale-draining-of-reservoirs-in-drought-statement/</p>	<p>It is important to note that the proposed project is not intended to serve as a state-wide solution to all of California's water problems and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage. Nor is the proposed project intended to solve all</p>

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		<p>Bill Jennings, Executive Director of the California Sportfishing Protection Alliance, explained how the water was mismanaged.</p> <p>“We entered 2013 with Shasta, Oroville and Folsom reservoirs at 115 percent, 113 percent, and 121 percent of historical average storage. In April, they were still at 101 percent, 108 percent and 96 percent of average,” said Jennings.</p> <p>“With no rainfall and little snowpack, the Department of Water Resources and the Bureau (of Reclamation) notified their contractors that water deliveries would be reduced. But they didn’t reduce deliveries. Instead, they actually exported 835,000 acre-feet more water than they said they would be able to deliver,” said Jennings. (http://www.sacbee.com/2014/01/26/6097073/viewpoints-better-solutions-for.html)</p> <p>Ironically, the Metropolitan Water District of Southern California will have enough water in 2014, 2015 and 2016 to supply its users while Sacramento, Folsom and other cities have been forced to cut water use by 20 percent.</p> <p>“We’ll have plenty of water in 2015,” Jeffrey Kightlinger, Metropolitan’s general manager, told the Sacramento Bee. “And even if it’s still a drought, we’ll still have enough water in 2016.” (http://www.sacbee.com/2014/01/12/6063205/california-drought-will-test-jerry.html#storylink=cpy)</p> <p>Now that our salmon and steelhead populations are in this crisis situation, it is crucial that Bonham and other officials meet with key leaders from the recreational and commercial fishing community, along with non-government fishery scientists and other stakeholders, to map out a drought action plan.</p>	<p>environmental challenges facing the Delta. Please see Master Response 6 for further information regarding how many of the suggested components have merit from a state-wide water policy standpoint, and some are being implemented or considered independently throughout the state, but are beyond the scope of the proposed project.</p> <p>Although many of the proposed alternatives included meritorious water policy principles, the proposals rejected by the Lead Agencies did not qualify as appropriate alternatives for various reasons. For example, proposals were rejected because they were inconsistent with the project’s objectives and purpose and need or included components that are beyond the scope of the project. The text of the Draft EIR/EIS in Chapter 3 (section 3.2) and Appendix 3A to that document thoroughly explain the process used to develop the alternatives, and explain why certain potential alternatives were considered but ultimately rejected by the Lead Agencies.</p> <p>Please refer to Master Response 4 (Alternatives).</p>
2649	6	<p>Last summer, high water releases down the Sacramento, Feather and American rivers left Shasta, Oroville and Folsom reservoirs at dangerously low levels. Shasta is at 36 percent of capacity and 54 percent of average; Oroville, 36 percent of capacity and 54 percent of average; and Folsom, 17 percent of capacity and 34 percent of average.</p> <p>Yet Pyramid Lake in Southern California is at 98 percent of capacity and 105 percent of average; and Castaic Reservoir, 86 percent of capacity and 105 percent of average.</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>
2649	7	<p>the definition applied to the term “water supply reliability”. Now, the water supply situation, South of the Delta, would be in much better state, were it not for the fact that water supplies sourced South of the Delta are dedicated to the L.A. Basin & to the Pacific Ocean. But there seems to be, on the part of the parties responsible, so much a desire to plunder Northern California water supplies down to levels not even sufficient to satisfy minimum Health & Safety standards that alternatives to that do not typically get the consideration they deserve, if they get any consideration at all! There is an enormous body of water that is exactly due west of California. With proper desalination, that body of water can serve as almost inexhaustible resource for Southern California. But that seems not to be in any conformity with the will certain of those who are yet still intent on aquaplunder.</p>	<p>While the proposed project does not include desalination as a project component, nothing about the proposed project precludes water contractors near the coast from pursuing desalination projects to supplement water supplies they receive from the State Water Project (SWP) and Central Valley Project (CVP). These supplemental projects, in fact, would help water contractors to facilitate state policy, as found in the 2009 Delta Reform Act, to “improve...regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.” (CA Water Code, § 85021). Please see Master Response 4 regarding the development of alternatives, and treatment of desalination as an alternative. Please also refer to Master Response 26 (Changes in Delta Exports), 51 (MWD Supply), and 63 (Desalination).</p>

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		Remember what happened to Lake Owens at the hands of LADWP!	
2649	8	<p>The definition applied to the term "water supply reliability" by BDCP promoters --- one that has as essential element, the ability of end-users south of the Delta to rely on water supplies north of the Delta, & that with no thought whatsoever for any end-users north of the Delta.</p> <p>End-users South of the Delta are not currently allowed to use their own "area-of-origin" water supplies, & that so that: a) the L.A. Basin can be amply supplied; and b) the whole thing can serve as a pretext for the aquaplunder of all of Northern California! It begs the question of "Mistake or malice". Does it not? And what will end-users North of the Delta be allowed to use? Nothing? Again, there seems to be, on the part of the parties responsible, so much a desire to plunder Northern California water supplies down to levels not even sufficient to satisfy minimum Health & Safety standards that alternatives to that do not typically get the consideration they deserve, if they get any consideration at all!</p> <p>The assumption, by promoters of BDCP, appears to be that somehow all water north & upstream of the Delta to belong to parties south of the Delta, regardless of any to whom it really belongs. Under that assumption, those to whom water really belongs are regarded, for all practical purposes, as having stolen it from those deemed to own it. While that may sound a bit harsh to say, how else is it to be explained, the carefully crafted definition applied to the term "water supply reliability".</p> <p>Of course, it is well enough known that the "Peripheral Canal / Twin Tunnels Project" is designed to divert substantial numbers of cfs away from the Sacramento River, at points north of the Delta, to benefit end users south of the Delta. San Joaquin River levels, south of the Delta, are expected to rise, benefiting urban end users south of the Delta, thus providing benefit to all So-Cal end users, including those in the L.A. Basin. According to the available official literature, the benefit accrues to So-Cal at the expense of Nor-Cal.</p> <p>Because end-users South of the Delta are effectively prohibited from the use of water originating South of the Delta, pressure is thus created for the aquaplunder of all of Northern California! What will end-users North of the Delta be allowed to use? Again, there seems to be, on the part of the parties responsible, so much a desire to plunder Northern California water supplies down to levels not even sufficient to satisfy minimum Health & Safety standards that alternatives to that do not typically get the consideration they deserve, if they get any consideration at all!</p> <p>River levels north of the Delta will inevitably decline, owing to the "Peripheral Canal / Twin Tunnels" project, thus increasing demands on upstream reservoirs & aquifers. The "Peripheral Canal / Twin Tunnels" project, under any circumstances, is harmful to the North State, but during a drought such as we currently suffer it is categorically insane. All THIS falling under the rubric of so-called "water supply reliability". Now, under the normal & ordinary definition, people & communities can rely upon the water to which they have right, & that without fear of aquatheft.</p>	<p>In accordance with the Project Objectives and Purpose and Need (see Chapter 2 of the EIR/S), all of the action alternatives would continue the operation of the SWP and CVP in accordance with the existing water rights and regulatory criteria adopted by the State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements, as described in Chapter 5, Water Supply of the EIR/EIS. The proposed project and the other action alternatives do not seek any new water rights nor reduction in total water rights issued to DWR and Reclamation. It should be noted that some, but not all, of the water users located to the south of the Delta also have water rights allocated by the State Water Board, and are used in conjunction with the SWP and CVP water contracts to meet their water demands.</p> <p>Over the long-term, the proposed project would decrease total exports of SWP and CVP water as compared to Existing Conditions and No Action Alternative in the summer and early fall months; and increase exports in the wet winter months when the river flows are high. The water would be stored at locations south of the Delta during the high flow periods to allow reductions in deliveries to SWP and CVP water users in drier periods.</p>
2649	9	The promoters of BDCP Lake Owens speak of Lake Owens as ready source of water for L.A. Basin. They are oft loathe to speak of any impacts of L.A. Aqueduct, to Lake Owens	The proposed project does not seek any new water rights nor include any regulatory actions that would

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		itself (LADWP, by the operation of the L.A. Aqueduct, has turned Lake Owens into a dried up alkali salt flat), and this, apparently, is by design.	<p>affect water rights holders other than DWR, Reclamation, and SWP and CVP contractors.</p> <p>Importantly, all water exported by the SWP and CVP is subject to the existing water rights of those two agencies. Exports do not come at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other water rights holders. The proposed project and its alternatives do not reduce the protections for other water right holders.</p> <p>The proposed project's facilities, including water intakes and pumping plants, would be operated in accordance with permits issued by, U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Department of Fish and Wildlife, and the State Water Resources Control Board, among other agencies. The proposed project would be permitted to operate with regulatory protections, including river water levels and flow, which would be determined based upon how much water is actually available in the system, the presence of threatened fish species, and water quality standards.</p> <p>Through the Legislature and through executive agencies, California has embraced water conservation on numerous fronts, as have many California water agencies. Many of these efforts are highlighted in Appendix 1C, Demand Management Measures, EIR/EIS, which describes conservation, water use efficiency, and other sources of water supply, including recycled water. While these elements are not proposed as part of the project, the Lead Agencies recognize that they are important tools in managing California's water resources. It is important to note that the proposed project is not intended to serve as a state-wide solution to all of California's water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage.</p> <p>For more information regarding alternatives development, water demand management, and purpose and need please see Master Response 4, Master Response 6, and Master Response 3.</p>
2649	10	From pg. 3-10 of BDCP Draft Scoping Plan (Comment Deadline for which was May 14 2009), "The operation of new facilities may require modifications of the operations of upstream reservoirs. This would require modification of the various agreements & licenses governing the operation of these reservoirs. This may require changes in minimum instream flow requirements, minimum drawdown levels, flood control operations, temperature standards, & riparian & geomorphic flow requirements. Such modifications may require modification of Clean Water Act § 404 permits for these projects, as well. Additionally, hydroelectric facilities may need modification to their FERC licenses." Translation, greater demands will inevitably be imposed on upstream water supplies north of the Delta, thus jeopardising end users north of the Delta as well as hydroelectric generation capacities severely, not to mention jeopardizing upstream ecosystems, all in the event of the construction & operation of the "Peripheral Canal / Twin Tunnels". Thus the purpose & intent of the "Peripheral Canal / Twin Tunnels" project is further revealed.	The potential for modifying operations of reservoirs located upstream of the Delta was discussed in the 2009 Scoping Report. However, the proposed project does not include modification of upstream reservoir operations, as described in Chapters 3 and 5 of the EIR/EIS.
2649	11	In response to concerns raised about reservoir drawdown, announcement was made, July 25 2012, several of the intermediate pumps originally in the design for the proposed project were removed therefrom, thus reducing the conveyance capacity of the proposed project. But what has been removed can be reincorporated. And given the intent underlying the Peripheral Canal proposal that was in circulation back in 2009, it entirely conceivable that the intermediate pumps will be put back in the project design. Consider that several of the Action Alternatives in the current EIR/EIS yet contain proposal for the 15,000 cfs conveyance facilities. Consider, also, that outside the scope	<p>The EIR/EIS includes a range of alternatives with different number of intakes located in the north Delta. The proposed project would provide similar Delta exports with three intakes as with five intakes. The number of intakes were reduced from five to three to minimize the physical effects in the Delta. The conveyance pipelines, tunnels, and pumping plants would be designed only for flows from three intakes. If future intakes were added, the conveyance facilities, especially the pumping plants, would need to undergo major revisions. This could not occur without completion of future environmental and engineering documentation, additional permits, and associated public involvement.</p> <p>As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not</p>

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		<p>of the Proposed Project, different parties South of Delta have been attempting to procure groundwater transfer agreements under</p> <p>which groundwater is pumped to replace water that is sent down to the Delta (as opposed to being used by the party/parties from whom the water transfer has been sought). This increases aquifer drawdown rates. Yet the EIR/EIS, where it refers to groundwater drawdown, only discusses groundwater in the Delta region & groundwater South of the Delta region. But it does not discuss at all groundwater depletion possibilities north of the Delta. What reason would there be for such an omission? Would it have anything to do with the intent behind the Peripheral Canal?</p>	<p>include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and this EIR/EIS does not constitute the CEQA/NEPA coverage required for any specific transaction. Rather, it provides an analysis of how transfers relate to the conveyance facilities. As indicated in Appendix 5D, the analyses are conservative because it is not known if adequate water would be available from other water users for transfer. As shown in Table 5D-8, the maximum cross-Delta transfers under the action alternatives would be greatest under Alternative 8 because there would be the most available capacity. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.</p>
2649	12	<p>Given the Minimum Delta Outflow Requirements, requirements which exist, in part, to ensure against excessive salinity & to protect covered species, the only way to ensure that both the new diversion facilities & the estuary are adequately supplied with inflows of water would be to increase drawdown rates of upstream reservoirs --- a task made all the easier (in the case of Lake Shasta) by the presence, at the base, of an automated temperature control device (a device that can automatically increased drawdown rates, based on certain temperature presets, etc.). A "Peripheral Canal / Twin Tunnels" project, such as is & has been proposed, would most certainly increase reservoir drawdown rates. Has this fact somehow escaped the minds of those who yet push for the "Peripheral Canal / Twin Tunnels" project? If has escaped their minds, it would be an example of gross negligence --- the failure to adequately consider the impacts of the proposed project on upstream reservoirs. If is has not escaped their minds, it would be an example of grave malice against the people who live north & upstream of the Delta.</p> <p>Such a statement, as in the above excerpt, defies all reason. Here's how. If water temperature is purely a function of air temperature, with neither water volume nor flow rate being factors at all, then what would be the point of installing any kind of automated temperature control device at the base of Shasta Dam? Why would water temperature be a factor at all in the determination of requirements for minimum river depths if water temperature be not at all influenced either by volume or by flow rate?</p> <p>Now, the "Peripheral Canal / Twin Tunnels" project is incontrovertibly going to increase demands on upstream water supplies, lowering river levels as they do. With the operation of the automated temperature control device (TCD) at the base of Shasta Dam, every time river levels decrease, the device opens more outlets (until, when necessary, they are all open) thus increasing drawdown rates. This is yet another way that the "Peripheral Canal / Twin Tunnels" project is manifestly intended to increase drawdown rates of upstream reservoirs.</p> <p>And to claim that the proposed project would have no impact whatsoever on reservoir levels is to expect of the reader(s) of said claim the height of credulity --- indeed, an insult to the intelligence of all.</p>	<p>The lead agencies believe that the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS are complete in their evaluation of impacts (using the best available science and modeling), direct and cumulative, that project description is complete and satisfies the requirements of NEPA, and that the project objectives are also precise and complete and satisfy the requirements of CEQA. The lead agencies believe that the 2013 Public Draft EIR/EIS and 2015 RDEIR/SDEIS provided the public and decision-makers with sufficient information on which to make informed comments which have been considered and incorporated into the Final EIR/EIS.</p> <p>Please see Master Response 14 for additional discussion regarding temperature. Please see Master Response 25 for information regarding upstream reservoir effects.</p>

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		<p>Of course the claim that water temperature is purely a function of air temperature is not the</p> <p>only claim that defies all common sense. There are claims, concerning some of the Action Alternatives, that reservoir levels at Lake Shasta would actually increase as compared with the No Action Alternative.</p>	
2649	13	<p>It is a matter of common knowledge that more water is traded & re-traded than exists in reality. And it is also a matter of common knowledge that a supply of paper water is too often, by the relevant administrating agencies, deemed to satisfy the Subdivision Map Act's requirements for water supply availability.</p> <p>An excerpt from http://www.northcoastjournal.com/humboldt/waters-for-fighting/Content?oid=2360940</p> <hr/> <p>Today, powerful water brokers have made contracts that promise far more water than nature can deliver — particularly in the face of growing populations and climate change.</p>	<p>The State Water Resources Control Board is responsible for issuing water rights in California, and not DWR or Reclamation who are evaluating the project in this EIR/EIS. Water rights issued on rivers in the Central Valley watersheds include a wide range of beneficial uses from hydropower to municipal, industrial, and agricultural water users. However, not all of the water diverted under the water rights is consumptively used. For example, water diverted for hydropower electric generation is fully returned to the water bodies; and a portion of the water diverted from municipal, industrial, and agricultural water uses is returned to the water bodies. In addition, the amount of water diverted is dependent upon water rights priorities and the need to meet environmental flow and quality requirements. Therefore, it is difficult to compare the total volume of water rights licenses to the total amount of water available in the system. For example, water rights issued to DWR and Reclamation are not fully available to provide water under the SWP and CVP water contracts in many years due to the demands of senior water rights holders and regulatory requirements.</p> <p>In accordance with the Project Objectives and Purpose and Need (see Chapter 2 of the EIR/S), all of the action alternatives would continue the operation of the SWP and CVP in accordance with the existing water rights and regulatory criteria adopted by the State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife. All of the alternatives evaluated in the EIR/EIS would only divert water under existing water rights which were issued to DWR and Reclamation by the State Water Board with consideration for senior water rights and Area of Origin laws and requirements. The amount of water that DWR and Reclamation can pump from the new north Delta facilities is set by Federal regulating agencies, ESA compliance and project design, and not by the water contractors.</p> <p>As described in Chapter 3, Description of Alternatives, the alternatives considered in the EIR/EIS do not include specific water transfers. The EIR/EIS acknowledges that water transfers would continue in a similar manner as historic transfers and in accordance with State and Federal laws and regulations. The EIR/EIS also acknowledges that the use of water transfers between agencies could increase in the future as SWP, CVP, and other surface water supplies are reduced due to climate change, sea level rise, and increased water demand in the Delta watershed, as described in Appendix 1E, Water Transfers in California: Types, Recent History, and General Regulatory Setting, and Appendix 5D, Water Transfer Analysis Methodology and Results, of the Draft BDCP EIR/EIS. Because specific agreements have not been identified for water transfers and other non-project voluntary water market transactions, project level analysis of impacts upstream of the Delta is highly speculative and this EIR/EIS does not constitute the CEQA/NEPA coverage required for any specific transaction. Rather, it provides an analysis of how transfers relate to the proposed project facilities. As indicated in Appendix 5D, the analyses are conservative because it is not known if adequate water would be available from other water users for transfer. As shown in Table 5D-8, the maximum cross-Delta transfers under the action alternatives would be greatest under Alternative 8 because there would be the most available capacity. Any future water transfers will require separate approvals. The analysis of any potential upstream impacts is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.</p>
2649	14	<p>Here is an excerpt from http://calsport.org/news/innews/brown-fails-to-discuss-wholesale-</p>	<p>The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.</p>

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		<p>draining-of-reservoirs-in-drought-statement/</p> <p>-----</p> <p>“Governor Brown has called on all Californians to voluntarily reduce their water usage by 20 percent and the Save Our Water campaign has announced four new public service announcements that encourage residents to conserve. Last December, the Governor formed a Drought Task Force to review expected water allocations and California’s preparedness for water scarcity. In May 2013, Governor Brown issued an Executive Order to direct state water officials to expedite the review and processing of voluntary transfers of water,” the statement concluded.</p> <p>I’m glad that CAL-FIRE has hired 125 additional firefighters to help address the increased fire threat due to drought conditions, the California Department of Public Health has identified and offered assistance to communities at risk of severe drinking water shortages, the California Department of Fish and Wildlife has restricted fishing on some waterways due to low water flows worsened by the drought and the Governor is calling for increased water conservation.</p> <p>However, the big question is: where were Jerry Brown, Natural Resources Secretary John Laird, Department of Water Resources Director Mark Cowin and other officials when the state and federal water agencies drained Shasta, Oroville, Folsom and other reservoirs last summer in order to ship water to the Kern Water Bank, the Westlands Water District, and Southern California water agencies?</p> <p>The Bureau of Reclamation and Department of Water Resources systematically drained northern California reservoirs, resulting in low flows and endangering salmon and steelhead in the Sacramento, Feather and American rivers, while filling water banks and Southern California reservoirs. This is “Chinatown” all over again.</p>	
2649	15	<p>The BDCP exposes numerous covered species to different contaminants. Where this is mentioned in the Plan Document, the impact is rationalised by claiming that either the passage of time, reduced agricultural production, etc. These rationalisations appear numerous times in Chapter 5 of the Plan Document. And these are not unexpected, given that the impacts to NorCal water supplies, are repeatedly minimised & otherwise denied, all over the BDCP EIS/EIR.</p> <p>Nevertheless, there is a partial list of adverse effects of BDCP that the author(s) of the Plan Document actually admit to (in the Plan Document, itself):</p> <p>It can give one cause to wonder just what is the fundamental purpose of the BDCP.</p>	<p>Chapter 12, Terrestrial Biological Resources, of the EIR/EIS does address the effects of the inadvertent release of construction related chemicals, methylmercury, and selenium exposure on wildlife that may result from implementing the proposed project. These analyses are conducted for individual species and the relevant measures (AMMs) to avoid and minimize these effects are discussed.</p>
2649	16	<p>The BDCP makes no mention of addressing the threat posed to fish populations by over-abundance of those marine mammals that feed specifically on listed fish species, doing so at</p> <p>& near the mouths of rivers, harbors, & other similar geographic features.</p> <p>It can give one cause to wonder just what is the fundamental purpose of the BDCP.</p>	<p>For a discussion of the purpose of the BDCP, please see Section 1, Introduction, of the RDEIR/SEIS. The process used to identify conservation measures was provided in Appendix 3.G, Background on the Process of Developing the BDCP Conservation Measures, of the DEIR/EIS. This process did not identify marine mammals as a concern for listed fishes; the examples that the commenter provides related to this issue do not pertain to the San Francisco Bay-Delta.</p>
2649	17	<p>A number of fields have already gone fallow. Shall we make the problem worse via the “Twin</p>	<p>The issue raised by the commenter does not concern the environmental analysis provided in the EIR/S.</p>

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		<p>Tunnels / Peripheral Canal” Project? Industries of all types will be further curtailed beyond that which otherwise would be the case. And what of hydro-power?</p> <p>Electricity from hydro-generators depends on turbine speed. RPMs, there, result from hydraulic force brought to bear on turbine blades. Force is the product of pressure multiplied by area. And pressure, here, is a function of depth. So when depth at the dam is reduced, hydroelectric capacity is thus reduced, thereby increasing grid-dependence on the very non- renewable fuels the Air Resources Board is currently disincentivising for such use.</p>	
2649	18	<p>We would do well to remember the history of Lake Owens. Fredrick Eaton & William Mullholland cooked up quite a scheme to benefit the L.A. Basin at the expense of Owens Valley. Shall history repeat itself?</p> <p>There seems to be an elaborate plan intended, ultimately, to plunder Northern California of her water to such an extent as has not been seen since the plunder of Lake Owens at the hands of the Los Angeles Dept. of Water & Power (LADWP), under the leadership of William Mullholland, working hand in hand with Frederick Eaton, a plan cleverly cloaked in the language of conservation.</p>	<p>The proposed project does not seek any new water rights nor include any regulatory actions that would affect water rights holders other than DWR, Reclamation, and SWP and CVP contractors.</p> <p>Importantly, all water exported by the SWP and CVP is subject to the existing water rights of those two agencies. Exports do not come at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other water rights holders. The proposed project and its alternatives do not reduce the protections for other water right holders.</p> <p>The proposed project’s facilities, including water intakes and pumping plants, would be operated in accordance with permits issued by, U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Department of Fish and Wildlife, and the State Water Resources Control Board, among other agencies. The proposed project would be permitted to operate with regulatory protections, including river water levels and flow, which would be determined based upon how much water is actually available in the system, the presence of threatened fish species, and water quality standards.</p> <p>Through the Legislature and through executive agencies, California has embraced water conservation on numerous fronts, as have many California water agencies. Many of these efforts are highlighted in Appendix 1C, Demand Management Measures, EIR/EIS, which describes conservation, water use efficiency, and other sources of water supply, including recycled water. While these elements are not proposed as part of the project, the Lead Agencies recognize that they are important tools in managing California’s water resources. It is important to note that the proposed project is not intended to serve as a state-wide solution to all of California’s water problems, and it is not an attempt to address directly the need for continued investment by the State and other public agencies in conservation, recycling, desalination, treatment of contaminated aquifers, or other measures to expand supply and storage.</p> <p>For more information regarding alternatives development, water demand management, and purpose and need please see Master Response 4, Master Response 6, and Master Response 3.</p>
2649	19	<p>I must now pose the following question, “How is it at all true, this thing we are being attempted to be led to believe; that somehow no species listed for protection under ESA can be properly protected apart from the wanton & abject aquaplunder of all points in California north & upstream of the Delta? How is it true, this thing we are being attempted to be led to believe, this thing we are being told by at least some promoters of the BDCP?” The short answer? That idea of theirs, regardless of the source of it, is patently false! Another question, “Does proper protection of Delta & estuary ecosystems really necessitate the abject aquaplunder of all points north & upstream of the Delta? Is this thing at all true, what at least some promoters of BDCP are attempting to lead us to believe?” Of course not! But that is manifestly not the</p>	<p>The BDCP is not the first, nor will it be the last proposal to protect and restore the Delta ecosystem. Please note that the preferred alternative is now Alternative 4A and no longer includes an HCP. Alternative 4A has been developed in response to public and agency input. The EIR/EIS analyzes all alternatives, including Alternative 4A. The proposed project was developed to meet the rigorous standards of the federal and state Endangered Species Acts; as such the proposed project is intended to be environmentally beneficial. By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, the proposed project is designed to improve native fish migratory patterns and allow for greater operational flexibility. Refer to Master Response 3 regarding the purpose and need for the proposed project.</p>

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		purpose of the BDCP.	
2649	20	Now, when looking at the Delta Vision website, et al, back in 2009, 'twas found the phrase "Peripheral Canal" to have mysteriously disappeared somehow from any official discussion, at the time. Instead, what was found there then was a cavalcade of glowing rhetoric extolling the alleged virtues of the so-called Delta Vision, rhetoric that was almost quasi-messianic in tone. Much effort at review of the documents collected was required before the first mention of any kind of "peripheral canal" was found, at all. The exact phrase "Peripheral Canal" was, of course, found nowhere in the discussion appearing at the Delta Vision website, back then. Instead, terms such as "conveyance," "dual conveyance," & "Delta Fix" were used. Only such descriptions as be light on detail were there to be found anywhere inside the avalanche of propaganda favorable to the promoters of the idea of a Peripheral Canal, there at the Delta Vision website. And that was not the only such propaganda-laden webpage.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Refer to Master Response 36 for information on how the proposed project differs from the peripheral canal.
2649	21	The peripheral canal twin tunnels are now being done in the name of protecting those species listed as endangered & / or threatened under both the Federal ESA & the California ESA. But is there substance to all the messianic promises being made in this attempt to set parts of Northern California well on their way to each potentially becoming another Lake Owens, for all practical intents & purposes? Well, there are certainly a great deal of promises, but that alone can't prove much. The stated purpose of the "Twin Tunnels / Peripheral Canal" Project may never be thereby fulfilled. Let's list a few factors: food limitation, invasive species, discharges of contaminants, temperature trends, etc. Again from pg. 3-8 of BDCP Draft Scoping Plan, "Even if construction & operation of North Delta facilities completely eliminates negative effects to covered species [...], other stressors may ultimately result in failure of these species to recover." Even if? What's this "even if" business? Is it not an admission, at least of sorts, that the "Twin Tunnels / Peripheral Canal" Project likely cannot deliver on its promises?	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/S. Please see Chapter 2 in the Final EIR/EIS for a description of the project purpose and need. The new proposed Project, Alternative 4A, relates to achieving the project goals and objectives, focusing on the conveyance facility improvements necessary for the SWP to address more immediate water supply reliability needs in conjunction with related ecosystem improvements, such as significantly reducing reverse flows and direct fish species impacts associated with the existing south Delta intakes. Other state and federal programs will continue to address the long-term conservation efforts for species recovery in programs separate from the proposed project.
2649	22	But in the midst of such a drought as we now suffer, the Peripheral Canal is not only an abominably bad idea, it is also categorically insane! And as water is diverted upstream of the North Delta, Delta salinity naturally increases, thus placing Delta & Estuary ecosystems at increased risk. To counter this, bypass flows must needs be suffered to increase. And indeed the BDCP calls for exactly that. However, bypass flow rates cannot, ultimately, be made to increase, except that upstream reservoir discharge rates likewise be made to increase. And this is because even if diversion rates are ever commensurately reduced, under no diversion plan now being contemplated will rates ever be brought down to zero. After all, who builds a canal who does not also intend for it to be used at all?	The issue raised by the commenter addresses the merits of the project and does not raise any issues with the environmental analysis provided in the EIR/EIS.
2649	23	Of all the several means by which electricity is generated for a given population of rate payers, which means are contemplated to be suffered to proliferate, solar, water, and wind result in lower levels of emissions of so-called greenhouse gases (GHGs) than any other such means by which such electricity is to be generated. And of these, water is in the greatest jeopardy, thanks, at least in part, to the "Twin Tunnels / Peripheral Canal" Project, & that by design. Where hydroelectric generation capacity is reduced, an electricity deficit is thus created. That deficit must be made up somehow, or else the risk of area – wide utility service failure, of one form or another, escalates considerably. Additional sources of electricity are time consuming to bring on-line, needless to say. It is so for additional sources of low carbon electricity sources as it is for additional	As noted by the commenter, operation of the CVP yields a net generation of clean, GHG emissions-free, hydroelectric energy. Currently, hydroelectric energy represents approximately 10% of total in-state generation (see http://energyalmanac.ca.gov/electricity/electricity_generation.html). Operation of CM1 would increase the amount of hydroelectric energy that would be sold to energy users throughout California (see Impact AQ-23). It is currently unknown what type of power source (e.g., renewable, natural gas) would be substituted for CVP electricity. However, potential indirect emissions that may result if previous CVP electricity users acquire energy from a source that results in GHG emissions are presented in Chapter 22, Air Quality and Greenhouse Gases. These emissions would result from decisions made by dozens of independent electricity users, which are beyond the control of Reclamation or any of the other Lead Agencies. Accordingly, the EIR/EIS concludes that potential indirect GHG emissions generated by increased

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		<p>higher carbon electricity sources. When hydroelectrical capacity is reduced, the only two ways to make up the resulting deficit, at least in the shorter term anyhow, are to: (a) allow reservoirs levels to sufficiently increase (a thing that will likely never be allowed to happen, in the event of the construction & subsequent operation of the "Twin Tunnels / Peripheral Canal" Project); (b) generate more electricity from higher carbon sources; and / or (c) institute rolling blackouts. And given the policy goals of the California Global Warming Solutions Act of 2006 (commonly identified as AB32), the Western Climate Initiative (WCI), etc., the idea of the "Twin Tunnels / Peripheral Canal" Project is especially repugnant. The "Twin Tunnels / Peripheral Canal" Project is manifestly designed to increase statewide GHG emission rates, and may therefore (at least in theory, anyway) be classifiable as an indirect gross polluter. To paraphrase a popularly known anti- drug slogan "Just say no to the "Twin Tunnels / Peripheral Canal" Project!"</p>	<p>CVP pumping would be adverse.</p>