DEIRS Ltr#	Cmt#	Comment	Response
1500	1	Protect our children and grandchildren	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1501	1	The San Francisco/San Joaquin Delta must be saved but the BDCP is not the way to save it! The co-equal goals of restoring the Delta and providing reliable drinking water are laudable and necessary, but the current BDCP is not the vehicle to accomplish either goal. In fact, additional diversions via the proposed twin tunnels (BDCP "Proposed Action", EIR #4 Alternative) will cancel out any benefit from the proposed delta restoration projects and guarantee the death of the delta. Pursuing expensive, destructive, outdated concrete heavy diversions of Northern California water to Southern California is not the best way assure a reliable water supply to the thirsty end of the state. Greed, masked as good intensions, have driven this project from the beginning, and given it a very powerful political life of its own. We must step back, apply common sense and 21st century science, and re-think the BDCP before it kills both the California economy and its environment.	The action alternatives could only change the amount of water diverted under the existing SWP and CVP water rights and 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. More information on the ranges of project water diversions, based on water year types and specific flow criteria, can be found in Chapter 3, Section 3.6.4.2, North Delta and South Delta Water Conveyance Operational Criteria, EIR/EIS. 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 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).
1501	2	Estuaries are the nurseries of nature. As the largest estuary on the west coast of the Americas, the San Francisco/ San Joaquin Delta plays a crucial role in the health of the planet. It is a very productive ecosystem, with marsh grasses and tulles efficiently converting solar energy into usable chemical energy to power the biosphere. It is ground zero for food webs that extend across the land and ocean. In addition to the species that live in the Delta, and the marine species that are born in the Delta, and the anadromous fish that adapt to marine life in the Delta, and the water fowl that need it as a migration refueling station on the Pacific Flyway, there are countless marine organisms far from California that depend on the delta without ever passing through it because they eat something that eats something that eats something that was born or that grew in the delta. Upstream land ecosystems are also dependent on the delta. We cannot have eagles, or bears, or even Christmas trees without salmon, nature's great re-cyclers, to bring the nutrients that wash down stream into the ocean back up to the forests. And we won't have salmon without adequate attraction flows. We must reduce diversions from the rivers that feed the Delta.	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. 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. 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 with the goal of improving water volume, timing, and salinity, 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.
1501	3	The BDCP, as written, cannot fix the delta. The plan attempts to put a few Band-Aids on a few cuts but then slashes the jugular. The delta has sustained many injuries: loss of habitat from urban development, habitat fragmentation, toxic agricultural run-off, toxic urban run-off, invasive species, and fish gobbling, flow-reversing pumps. But by far the greatest injury is diversion of water. Nature can survive a few wounds but it cannot survive the draining of its life blood: water. The "CP" in BDCP is a complete fraud. It pretends to be a conservation measure by trying to address a few of the problems listed above. But the only way to restore the Delta is to decrease diversions. Yet the BDCP seeks to increase diversions. This guarantees the death of the Delta even if we design better fish screens, change the intake point of the pumps, and carry out the various habitat restoration projects. We should, by all means, perform the conservation projects but this only makes sense within a wiser water policy that decreases, not increases diversions. As long as the twin tunnels are part of the BDCP, BDCP will kill the Delta. BDCP is like putting a Band-Aid on a finger cut then slashing open the jugular vein. Death results; the Band-Aid is meaningless.	The proposed project is being proposed to address the conflict between the ecological needs of a range of at-risk Delta species and natural communities, while providing for more reliable water supplies for people, communities, agriculture, and industry. 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. Estimated changes in deliveries for each of the alternatives are provided in Chapter 5, Water Supply, of the EIR/EIS. Please see Master Response 26 regarding changes in Delta exports.
1501	4	There is a system in ecosystem. We are all part of that system and dependent upon it. The environment needs 100% of its water. Nature designed it that way. The Delta is limping	The SWP and CVP were planned and constructed with an emphasis on delivering water to develop California's agricultural economy and urban growth, before environmental laws and regulatory practices

DEIRS Ltr#	Cmt#	Comment	Response
		along with about 70% of the water nature intended. It cannot survive the loss of another drop. We mess with nature at our peril. The Delta is in crisis because water contractors failed to mitigate environmental damage as required by prior permits. No further take permits should be issued.	emerged to protect endangered species, and when much less was known about the Bay-Delta ecosystem and the potential ecosystem impacts of water development. However, since about 1968, emerging laws, regulations, and policies were enacted to protect, conserve, and restore environmental resources, shaping the way that DWR and Reclamation manage and operate the SWP and CVP facilities (refer to Chapters 1 and Appendix 1A of the Draft EIR/EIS). Today, the amount of water DWR 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. 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). In addition to permitting constraints on daily operations of the SWP and CVP, DWR must maintain proper performance and bypass flows across fish screens when endangered and threatened fish species are present within the north Delta facilities area. The intake fish screens drive the overall size of the intake structure on the riverbank, and have been numbered and sized to permit water to flow through the screens within a predetermined flow regime set by CDFW and NMFS fish screen criteria (BDCP Appendix 5B Section 3.B.3.3).
1501	5	The twin tunnels are so 20th century. There are cheaper, more effective, and less destructive ways of providing a reliable water source. The twin tunnels are an ineffective method of providing a reliable water source. The twin tunnels move water; they will not make water. There are promising new technologies, such as graphene filtering, that can actually create fresh water from salt water and promise to do so at a cheaper cost than current desalinization methods. Why invest in an outdated, concrete heavy method of moving water? We should invest in these new 21st century technologies that actually create water. Only then will we have a reliable water source.	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. Please see Master Response 4 for discussion of the scope of the proposed project and alternatives (such as desalination or water storage) that were not carried forward for analysis in this document due to the fact that required actions beyond the scope of the proposed project. 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. For more information regarding purpose and need please see Master Response 3.
1501	6	While conservation does not actually create water, it makes more water available by capturing rain water, recycling household and industrial waste water into urban irrigation, and reducing water usage through common sense methods such a low flow or no flow toilets, and repairing plumbing leaks. New, inexpensive conservation and water efficiency methods are popping up every day and have allowed Los Angeles to greatly grow in size without increasing its water usage. New agricultural technologies, when farmers choose to implement them, increase yield while reducing water usage by carefully monitoring soil moisture and delivering water through drip irrigation only when needed. "Conservation and efficiency are critical solutions with high potential, low cost and real environmental benefits; expanded use of high-quality treated wastewater and storm water - are also needed." (Peter Gleick, president, Pacific Institute Read more here: http://www.sacbee.com/2014/07/13/6548166/another-view-busting-water-conservation.html#storylink=cpy) Further conservation methods should be researched and mandated before we spend billions on damaging diversions that do not do diddly to create a single drop of water.	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. 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 proposed project. 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. For more information regarding water demand management please see Master Response 6. For more information regarding purpose and need please see Master Response 3.
1501	7	Twin tunnel water will be used primarily for agricultural irrigation in the south San Joaquin Valley. This will create toxic agricultural runoff that will harm both wildlife and humans. The BDCP EIR fails to deal with these long term consequences and is therefore inadequate.	Chapter 16 of the EIR/EIS and RDEIR/SDEIS Appendix A (Socioeconomics) identifies the unique features of the Delta and describes the potential effects on Delta communities. The water quality assessment in Chapter 8 of the DEIR/EIS and Section 4.2.7 of the RDEIR/SDEIS assessed

DEIRS Ltr#	Cmt#	Comment	Response
		The twin tunnels are the latest version of a plan that was hatched a hundred years ago. Back then we did not understand the consequence of diverting water. We should know better by now. Delta water is exported primarily for agricultural irrigation in the south San Joaquin Valley. This area has no natural drainage and high levels of salts and selenium in its soil. Delta water diversions to arid land with poor drainage have already caused serious damage. Selenium build-up damaged both wildlife and human fetuses. No further diversions should be considered without a serious review of the Kesterson disaster, the Tulare selenium crisis, and other prior environmental problems cause by shipping Delta water south for agriculture. (Please see, for example, The Tragedy at Kesterson Reservoir: A Case Study In Environmental History And A Lesson In Ecological Complexity, by Philip Garone, http://environs.law.ucdavis.edu/issues/22/2/articles/garone.pdf) The BDCP EIR completely ignores these long term consequences on the theory that the twin tunnels will not increase diversions. This flies in the face of the history of water politics in California.	impacts of salinity and selenium in the CVP and SWP export service areas. As described in Appendix 3D of the EIR/EIS, the Existing Conditions includes partial implementation of the Grasslands Bypass consistent with actions that were implemented as of 2009 when the Notice of Preparation and Notice of Intent were published. The No Action Alternative and all action alternatives assume completion of the ongoing construction of the Grasslands Bypass program to reduce effects of drainage that have occurred in the western San Joaquin Valley (including at Kesterson National Wildlife Refuge). The No Action Alternative and all action alternatives assume approaches by the irrigators in the San Joaquin Valley to comply with regulatory requirements to reduce water quality effects of agricultural drainage to attain Total Maximum Daily Load criteria associated with agricultural drainage by 2030, including mercury by 2021, selenium by 2019, and sediment toxicity by 2021 in several drainage courses to the San Joaquin River and the Tulare Basin. Please see Master Response 18 regarding Agricultural Mitigation, Master Response 17 regarding Biological Resources, and Master Response 14 for more information regarding Water Quality.
1501	8	Agriculture in the south San Joaquin valley will be short lived. Encouraging dependence on an agricultural economy in that area is a disservice to the community. It is like giving heroin to an addict. Proponents of the twin tunnels in Fresno and Kern counties claim further diversions of water are necessary to save agricultural jobs in those areas (ignoring the fact that those same diversions will cost jobs in counties around the Delta, as discussed below.) Those low paying seasonal ag jobs in the south San Joaquin Valley are doomed anyway because irrigated agricultural is not sustainable in that area. The combination of salty, selenium laced soil and poor drainage will eventually make the earth unable to support crops. The huge corporate interests that control most of the agriculture in the south San Joaquin Valley will make big bucks then move on to other areas and other industries, leaving the local economy in shambles. The best way to assist that area is to gradually move it away from an irrigated agricultural economy into something more sustainable, such as solar energy generation. Any remaining agriculture should be non-irrigated. Former Energy Secretary Steven Chu has researched a biofuel plant that grows successfully in California without any irrigation. We must embrace 21st century science and put unsustainable practices behind us.	In its efforts to achieve the co-equal goals of water supply reliability and ecosystem restoration, the BDCP seeks to protect dozens of species of fish and wildlife in the Delta while also securing reliable water deliveries for two-thirds of California. Please refer to Master Response 3 for additional information regarding the purpose and need behind the proposed BDCP. State constitutional restrictions require the reasonable and beneficial use of water and state law requires that water supplied from the Delta be put to beneficial uses. The Lead Agencies do not have the authority to designate what water deliveries are used for. Please refer to Master Response 34 regarding the potential uses of water delivered via BDCP proposed conveyance facilities.
1501	9	BDCP favors large corporate interests conducting unsustainable agriculture over small sustainable family farms . This is terrible social policy. There is a reason farming started in the north end of the San Joaquin Valley a hundred years before it began in the south central valley. The conditions are much better for farming here: better soil, good drainage, more water. San Joaquin County, at the north end of the San Joaquin Valley, has an agricultural economy consisting primarily of small family farms that have been operating for generations. These farms do not need heavily subsidized water that has been pumped hundreds of miles through concrete. Many have old riparian rights. Water comes to them naturally, after it has performed most of its tasks supporting the upstream environments. These sustainable old family farms in and around the Delta contrast sharply with the large corporate ag businesses that have sprung up in the last few decades in the south San Joaquin valley in what is essentially a desert. Theses corporate interests have lots of money, tremendous political pull, and have already finagled plenty of public water.	The commenter's opposition to the proposed project is acknowledged. In its efforts to achieve the co-equal goals of water supply reliability and ecosystem restoration, the BDCP seeks to protect dozens of species of fish and wildlife in the Delta while also securing reliable water deliveries for two-thirds of California. Please refer to Master Response 3 for additional information regarding the purpose and need behind the proposed BDCP.

DEIRS Ltr#	Cmt#	Comment	Response
		(Please see attached articles on Resnick and the Kern Water Bank.) The twin tunnels would give short term gain to Resnick, Bossley, and other fat cats, while destroying family farms around the Delta. The only thing keeping the Delta fresh is hydraulic pressure. The San Joaquin, Calaveras, Mokellumne, and Sacramento Rivers all flow through the Delta to the San Francisco Bay and out to the Pacific. That outward flow keeps the Bay at bay. Upstream diversions have already robbed these rivers, especially the San Joaquin, of much of that hydraulic pressure, allowing salt water to intrude farther inland than nature intended. Rising sea levels caused by global warming will also push salt water farther inland. The Stockton Record recently reported that herring, a salt water fish, turned up in the Tracy pumps, indicating that salt water is intruding into the Delta. Any further diversions robbing the Delta of outgoing fresh water could turn the Delta into the ocean. Delta agriculture would come to an end, as you cannot grow crops with salt water. Delta economies would dry up. Our nation is already losing its middle class as wealth gets concentrated in the richest 1%. The twin tunnels would encourage this trend; it is terrible social policy. Please do not approve the BDCP.	
1502	1	I am writing to strongly oppose the "Twin Tunnels" project (aka Bay Delta Conservation Plan) that threatens to dewater the Sacramento-San Joaquin Delta for the benefit of a few water contractors and agribusinesses. These tunnels would sharply reduce water flow throughout the Delta and harm thousands of sensitive aquatic species, including chinook salmon, steelhead trout, smelt, and green and white sturgeon. The tunnels would also wipe out food sources and habitat for migratory birds and other wildlife that depend on a functioning Delta ecosystem to survive.	Operation of the proposed water delivery system could not drain the Delta rivers and channels dry, including the Sacramento River. The proposed water 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 State Department of Fish and Wildlife. The proposed project only 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. More information on the ranges of project water diversions, based on water year types and specific flow criteria, can be found in Chapter 3, Section 3.6.4.2, North Delta and South Delta Water Conveyance Operational Criteria, Final EIR/EIS. Specific analysis pertaining to the effects on specific aquatic and terrestrial species is included in Chapters 11 and 12.
1502	2	The project's heads justify this killing by proposing future habitat restoration even as they readily admit uncertainty about where and how to make such a plan work. Further, the $25-60 billion tunnels will rely on taxpayers to fund most of this restoration. Water is a public trust resource, and taxpayers should not have to shoulder the burden of this project while water contractors turn a profit from exporting the Delta's water.	The proposed project is costly, but proponents have assessed the benefits as described in the funding sources. Notably, the water contractors benefitting from the proposed project and their constituents will bear all costs associated with constructing new conveyance facilities and mitigating for the impacts of those facilities. Expenditures of public money from other sources would be limited to restoration activities beyond those needed to mitigate the impacts of facility construction. 2013 Public Draft Chapter 8, which deals with cost issues, and cost-benefit analysis information are available on the BDCP website. Please see Master response 5 for more information on project costs and funding.
1502	3	California's water crisis is best solved by adopting a combination of water conservation, efficiency, reuse and desalination strategies for both cities and farms. The state and nation should invest in these proven strategies, instead of wasting tax dollars and sacrificing our precious natural resources. Please protect the Delta and deny this project's permit.	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. 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 proposed project. 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

DEIRS Ltr#	Cmt#	Comment	Response
			supply and storage. Please see Master Response 4 for discussion of the scope of the proposed project and alternatives (such as desalination or water storage) that were not carried forward for analysis in this document due to the fact that required actions beyond the scope of the proposed project. Also, refer to Master Response 6 and Appendix 1C for further information on demand management measures, including increasing agricultural water use efficiency and water conservation.
1503	1	The City of Antioch, located along the San Joaquin River in the western portion of the Sacramento and San Joaquin River Delta ("Delta"), is one of the oldest towns in California. Since the 1860s, Antioch has obtained all or part of its freshwater supply directly from its intake on the San Joaquin River (and from the tributary flow of the Sacramento River) pursuant to a pre-1914 appropriative water right with a priority of 1867. [footnote 1: Antioch has vested pre-1914 water rights to water from the San Joaquin River as well as to the tributary flow of the Sacramento River via Georgiana and Three Mile Sloughs. This was determined as a matter of law by the California Supreme Court.] Therefore, we are very concerned about various issues with the Draft Implementing Agreement.	This comment is on the 2014 Draft Implementing Agreement (IA), a document prepared in connection with the proposed BDCP. The IA defines the obligations that the Department of Water Resources, the participating public water agencies, the state and federal fish and wildlife agencies, State of California, and the United States would have had regarding the implementation of the draft BDCP (Alternative 4). An IA is required for approval of a Natural Community Conservation Plan under section 2820(b) of the Fish & Game Code to satisfy the requirements of the Natural Community Conservation Planning Act (NCCP Act), and is frequently entered in conjunction with approval of a Habitat Conservation Plan (HCP) under the federal Endangered Species Act. It was circulated for public review and comment for 60 days pursuant to section 2815(a) of the Fish & Game Code. Many key elements of the draft BDCP were incorporated by reference into the draft IA, such as the conservation strategy, governance structure, implementation schedule, and public funding to be made available by state and federal governments. The draft IA also includes the relationship of the BDCP to future regulatory processes; regulatory assurances that are anticipated to be provided to the Department of Water Resources and the public water agencies; and remedies and procedures in the event of a funding shortfall or a failure to comply with the terms of the Agreement, the Plan, or the associated incidental take permits. But aside from making more specific certain aspects of implementation of the BDCP, executing the IA would not cause any environmental impacts. Nor does the draft IA contemplate or allow for violation of any regulatory requirements applicable to the BDCP. For more discussion of BDCP governance, please see Master Response 5 (BDCP). Please note, however, that the BDCP is no longer the preferred alternative. The proposed project is now Alternative 4A (the California WaterFix) as evaluated in the RDEIR/SDEIS and Final EIR/EIS, and it does not include an NCCP/HCP. Since the current California WaterFix Project is no longer an NCCP or HCP, an implementing agreement was not released with the RDEIR/SDEIS or the Final EIR/EIS. For detailed responses on the underlying issues being raised with regard to the proposed project's impacts to the City of Antioch's water supplies, please refer to the following master responses: 14 (Water Quality), 22 (Mitigation, ECs, and AMMs), 26 (Area of Origin), 28 (Operational Criteria), 32 (Water Rights), 34 (Beneficial Use of Water), and 45 (Permitting).
1503	2	The Implementing Agreement lacks any operational safeguards or criteria to protect senior water rights holders such as Antioch who will be impacted from BDCP operations as the result of increased salinity. For example, the Decision Tree process only applies to outflows to satisfy biological objectives. The lack of mitigation measures in the BDCP and the lack of any specific operating mitigation criteria in the IA appear to indicate that the BDCP process has no intent to mitigate adverse impacts to senior water rights now or in the future.	The proposed project does not seek any new water rights or include any regulatory actions that would affect water rights holders other than DWR, Reclamation, and SWP and CVP contractors. The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. DWR holds water rights approved by the State Water Resources Control Board but does not have the power or authority to issue water rights to others. Importantly, all water exported by the SWP and CVP is the subject of the existing water rights of those two agencies. Exports do not occur at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS documentation only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other appropriative water rights holders. The proposed project and its alternatives do not alter the protections in D-1641 designed to protect other beneficial uses of water in the Delta. In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to

DEIRS Ltr#	Cmt#	Comment	Response
			add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701.) The State Water Resources Control Board may issue the order granting the change petition on a showing, among others, "that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) On September 24, 2015, DWR filed an application for water quality certification under section 401 of the federal Clean Water Act with the State Water Resources Control Board for the Clean Water Act section 404 permit for placement of dredge or fill material into waters of the United States associated with the California WaterFix (Alt 4A). Under section 401 and associated regulations, the State Water Resources Control Board must certify that all activities associated with the proposed project will comply with applicable state water quality standards, and may impose conditions to ensure the permitted activities comply. For more discussion of other permitting processes, please see Master Response 45 (Permitting). The Lead Agencies will make the final decisions regarding the selection of an alternative (and therefore, an operational scenario), and a range of operational criteria was studied for the various project alternatives, including the preferred alternative 4A 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 section 7 of the federal The proposed project does not seek any new water rights or include any regulatory actions that would affect water rights holders other than DWR, Reclamation, and SWP and CVP contractors. The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. DWR holds water rights approved by the State Water Resources Control Board but does not have the power or authority to issue water rights to others. Importantly, all water exported by the SWP and CVP is the subject of the existing water rights of those two agencies. Exports do not occur at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS documentation only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other appropriative water rights holders. The proposed project and its alternatives do not alter the protections in D-1641 designed to protect other beneficial uses of water in the Delta. In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701.) The State Water Resources Control Board may issue the order granting the change petition on a showing, among others, "that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) On September 24, 2015, DWR filed an application for water quality certification under section 401 of the federal Clean Water Act with the State Water Resources Control Board for the Clean Water Act section 404 permit for placement of dredge or fill material into waters of the United States associated with the California WaterFix (Alt 4A). Under section 401 and associated regulations, the State Water Resources Control Board must certify that all activities associated with the proposed project will comply with applicable state water quality standards, and may impose conditions to ensure the permitted activities comply. For more discussion of other permitting processes, please see Master Response 45 (Permitting). The Lead Agencies will make the final decisions regarding the selection of an alternative (and therefore, an operational scenario), and a range of operational criteria was studied for the various project alternatives, including the preferred alternative 4A 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 section 7 of the federal Endangered Species Act (ESA), and CDFW, a CEQA responsible agency, has authority to determine if the proposed project meets the regulatory standards of section 2081 of the

DEIRS Ltr#	Cmt#	Comment	Response
			California Endangered Species Act (CESA). Please see RDEIR/SDEIS Section 4.1.2, Description of Alternative 4A, for additional information on proposed project operations. Additionally, please see Master Responses 28 and 5 for more information regarding operational scenarios and compliance with ESA, respectively. See RDEIR/SDEIS Section 4.3.4 for a discussion on the proposed project's effects on water quality, salinity and electrical conductivity. Effects of the alternatives on salinity levels are also described in Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity, EIR/EIS and Appendix A of the RDEIR/SDEIS. For more information on water quality impacts and associated mitigation measures, please see Master Response 14 (Water Quality). For the reasons discussed in the EIR/EIS and Master Response 14, Alternative 4A will have a less than significant impact on salinity.
1503	3	The Implementing Agreement and the BDCP appear to be attempting to change water rights priorities within the Delta. The vast majority of water to be diverted by the BDCP will go to agricultural uses—not to environmental uses. The BDCP agricultural diversions have lower priority rights to water than does Antioch, which provides drinking water to over 106,000 residents. The BDCP's lower priority agricultural diversions, however, will significantly impact Antioch's ability to use its higher priority rights to provide water for drinking purposes as well as for health and safety purposes within the City. By failing to provide any mitigation or operating criteria to protect Antioch's superior water rights, the IA is effectively attempting to give the BDCP's junior water rights higher priority than Antioch's superior water rights.	With respect to the Implementing Agreement/BDCP and related water right issues, please refer to the response to comment nos. 1- 2 of this letter (LTR#1503). If the BDCP is approved, the IA would not alter any water rights priorities. None of the project alternatives, including Alternative 4A, the proposed project, will alter any water rights priorities. In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701.) The State Water Resources Control Board may issue the order granting the change petition on a showing, among others, "that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) See Master Response 45 (Permitting) for additional information. Please also refer to Master Responses 26 (Area of Origin), 32 (Water Rights), and 34 (Beneficial Use of Water).
1503	4	The Five Year and Annual Operating Plans required in the Implementing Agreement do not require the protection or consideration of the impacts on non-BDCP-related in-Delta water quality. The IA fails to explain (or set forth operational criteria) how BDCP planned actions to meet export water supply and BDCP-related ecosystem goals will meet the State Water Resources Control Board ("SWRCB") water quality requirements under various SWRCB decisions.	Please see responses to comment nos. 1-3 of this letter (LTR#1503) regarding the draft Implementing Agreement and water quality impacts. As demonstrated, the EIR/EIS includes extensive analysis of water quality impacts from implementing the BDCP (Alternative 4) or the proposed project, Alternative 4A. An Implementing Agreement under the NCCP Act is not required to include an explanation of how conservation measures will comply with conditions in DWR's and the U.S. Bureau of Reclamation's respective water rights permits, including the State Water Resources Control Board's Water Rights Decision 1641 (D-1641) or any subsequent Water Rights Decision superseding D-1641. CEQA requires disclosure, analysis and avoidance or mitigation, where feasible, of significant impacts resulting from implementing the proposed project or an alternative. Please see the extensive analysis of water quality in the EIR/EIS and Master Response 14 (Water Quality) for additional details on the impact analysis and proposed mitigation.
1503	5	The Implementing Agreement fails to incorporate any specific funding and operational provisions for mitigation to protect and sustain non-BDCP-related in-Delta water quality, beneficial uses, or non-BDCP-related public trust resources. Again, this indicates that the BDCP does not intend to mitigate such impacts at all.	Please see the response to comment 1503-4.
1503	6	The Implementing Agreement provides certain guarantees and assurances to BDCP participants and beneficiaries regarding flows and water that could potentially conflict with the BDCP's requirements to comply with other applicable laws such as the Delta Protection Act and the co-equal goals of the Delta Reform Act. The IA commits only to operating to address covered species and provides no commitment or operational provisions to comply with other legal requirements with respect to water supply and water quality such as protecting in-Delta water supply and rights.	The commenter is referred to the responses to comments 1503-1- 1503-3 regarding the function of the Implementing Agreement, water quality analysis and mitigation, as well as the various water rights protections afforded by other permitting processes. Neither the BDCP nor the proposed project, Alternative 4A, will violate the Delta Protection Act or the Delta Reform Act. For more discussion on water rights, please see Master Responses 32 (Water Rights), 34 (Beneficial Uses of Water), and 26 (Area of Origin). The physical effects of all project alternatives are disclosed, analyzed, and, where appropriate, feasible mitigation is proposed to address potentially significant impacts throughout the EIR/EIS. Neither the BDCP nor the proposed project, Alternative 4A, is required to achieve the coequal goals, but

DEIRS Ltr#	Cmt#	Comment	Response
			both would further the coequal goals, consistent with the state's policy in the Sacramento-San Joaquin Delta Reform Act of 2009. For additional discussion of Delta Reform Act compliance, please see Master Responses 24 (Delta as Place) and 31 (BDCP/California Water Fix and 2009 Delta Reform Act), as well as Appendices 3I (BDCP Compliance with the Delta Reform Act) and Appendix 3J (California WaterFix Compliance with the Delta Reform Act) of the Final EIR/EIS.
1503	7	The Implementing Agreement does not provide adequate funding assurances for habitat conservation, restoration and management, which are the primary measures to protect and recover the specified covered species. Instead, the IA provides a broad and non-binding outline of potential funding sources including alleged funding sources that are "generally available" and potential future state and federal bonds and grants. The IA fails to specify how funding would be collected and secured from the contractors. Given the projected construction and operation costs of the BDCP conveyance and habitat restoration, the IA needs to provide firm funding commitments and sources of such funding. It would certainly be ironic and unjust if in-Delta water users adversely impacted by the BDCP end up having to pay portions of operational and restoration costs via bonds or administrative fees.	The commenter is referred to the responses to comments 1503-1 and 1503-2 regarding the nature and function of the draft Implementing Agreement. The construction of the water delivery facilities is estimated to cost $14.9 billion. Pursuant to Water Code section 85089, subdivision (a): "Construction of a new Delta conveyance facility shall not be initiated until the persons or entities that contract to receive water from the State Water Project and the federal Central Valley Project or a joint powers authority representing those entities have made arrangements or entered into contracts to pay for both of the following: [¶] The costs of the environmental review, planning, design, construction, and mitigation, including mitigation required pursuant to Division 13 (commencing with Section 21000 of the Public Resources Code), required for the construction, operation, and maintenance of any new Delta water conveyance facility." If the BDCP is ultimately approved and becomes the proposed project/preferred alternative, it would have to include sufficient financial assurances that all conservation measures will be implemented to be approved as an HCP/NCCP under federal and state law. Please see Master Response 5 (BDCP) for more information regarding funding of Alternative 4.
1503	8	The Implementing Agreement governance structure includes project beneficiaries (e.g. contractors) in position to make critical determinations of implementation and operation. This creates a conflict of interest. At the same time, the governance structure fails to provide any consultation with potentially impacted, non-BDCP parties and no administrative remedies for those parties (unless such parties agree to become part of the BDCP process).	The draft Implementing Agreement is not required to avoid conflicts between parties to an IA and non-parties. Under an Implementing Agreement, the permittees must implement the HCP/NCCP and fulfill all requirements of their incidental take permits. Thus, there is no conflict of interest with respect to compliance with the NCCP Act or Endangered Species Act. Please see BDCP Chapter 8 and Master Response 5 (BDCP) for information regarding governance of the proposed project and non-BDCP parties. The BDCP implementation structure is explained in the draft BDCP Chapter 7. Transparency is ensured via notification of public meetings by the Authorized Entity Group (e.g., Department of Water Resources, Reclamation, SWP and CVP Contractors, and Other Entities as explained on page 7-10 of the Draft BDCP) and public meetings with the Permit Oversight Group (USFWS, NMFS, and CDFW), with respect to the various permits, conditions, and measures that would be carried out should the BDCP (Alternative 4) be approved. Should the proposed project (Alternative 4A) be approved, an adaptive management and monitoring program would be implemented to develop additional scientific information during the course of project construction and operations to inform and improve conveyance facility operational limits and criteria. The structure of the collaborative science elements of the adaptive management and monitoring program is summarized in the Final EIR/EIS, Executive Summary, . As part of this structure, a memorandum of agreement (MOA) will be executed between a variety of stakeholders and regulatory agencies. Compliance with CEQA and NEPA mitigation measures, along with regulatory permit conditions and applicable laws, would be adhered to and carried out by the lead agencies. This is not a conflict of interest issue, but a standard process of which all applicable environmental planning laws, regulations, and guidelines require of the lead agencies. For additional information regarding adaptive management, please see Master Response 33. In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701.) The State Water Resources Control Board may issue the order granting the change petition on a showing, among others,

DEIRS Ltr#	Cmt#	Comment	Response
			"that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) For more discussion of other permitting processes, please see Master Response 45 (Permitting).
1503	9	The Bureau of Reclamation operates the largest export project and is not a party to the Implementing Agreement. And yet, Reclamation has specified duties under the IA. Reclamation's compliance with its obligations under the IA is a yet to be disclosed "other" agreement. It is simply not possible to properly assess and comment on the IA, the BDCP and the EIR/EIS without having all applicable implementation documents provided for review.	For a complete listing of Reclamation's purposes and obligations related to the California WaterFix, refer to the Purpose and Need section on page ES-6 of the Executive Summary of the RDEIR/SDEIR. Additionally, Reclamation will be a party to the MOA related to the adaptive management and monitoring program and collaborative science participation (refer to page ES-37 of the Executive Summary of the RDEIR/SDEIS). The impacts of each project alternative, including Alternative 4 (BDCP), have been analyzed in combination with a range of operational scenarios. If subsequent modifications to operations are made in light of new scientific information, the impacts, if any, of such changes will be analyzed at the appropriate time to determine what, if any, subsequent or supplemental environmental analysis and documentation is required.
1503	10	The State Water Resources Control Board needs to be a significant part of BDCP's governance structure given that BDCP operations will impact Delta water quality, non-covered public trust resources and downstream beneficial uses such as senior water rights. There needs to be a streamlined administrative process to allow impacted Dno elta landowners, recreational users, water right holders and others to address such impacts directly to the SWRCB.	The State Water Resources Control Board would not be a permittee under the BDCP, nor does it have jurisdiction over issuance of an incidental take permit under the NCCP Act, so it would be inappropriate for it to be included in the governance structure for the BDCP. To the extent the comment suggests establishing a streamlined administrative procedure with the State Water Resources Control Board as a potential mitigation measure for impacts to water quality, such a mitigation measure would be infeasible because DWR lacks the legal authority to require the State Water Resources Control Board to take such steps.
1504	1	Restore the Delta, which represents people and communities of the Sacramento-San Joaquin Delta, has been a steadfast opponent of both the twin tunnels project and the process by which the Bay Delta Conservation Plan has been developed. While recognizing that the Delta cannot be returned to any prior condition, we are convinced that with fair and realistic management of all the state's waters, the Delta can be a healthy, sustainable place for the fisheries, farming, and local and coastal communities that depend on Delta water that is adequate and of decent quality. In our view, BDCP does not represent fair and realistic management.	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. 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. 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 2015 RDEIR/SDEIS or the 2013 DEIR/DEIS.
1504	2	We, Restore the Delta, are signatories to the analyses of the BDCP and its environmental documents that have been submitted by the Environmental Water Caucus. In addition, we submit the following comments about the documents. They focus on - the fallacy of BDCP's underlying assumption that water supply reliability can be guaranteed, resulting in an unattainable purpose and a solution certain to fail; - the reliance on misrepresentations of Delta conditions to justify and promote the tunnel plan and limit consideration of alternatives; - the inadequacy of environmental protections under BDCP; - disregard for the rights of affected communities to understand the impacts of the proposed project and to have meaningful participation in the planning process.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, buta modified proposed project is being considered. 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. Please refer to Master Response 3 for information about the purpose and need for the proposed project. Please also refer to Chapter 28 of the Final EIR/EIS, Environmental Justice, and Master Response 27 for more information about environmental justice. See also Chapter 32, Public Involvement, Master Response 40 for information about public outreach activities, and Master Response 41 regarding transparency and public involvement.
1504	3	THE QUEST FOR WATER SUPPLY RELIABILITY Any visionary plan for California's future must begin with the recognition that the State, through the State Water Resources Control Board, has approved over five acre feet of	Water rights 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

DEIRS Ltr#	Cmt#	Comment	Response
		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 built a $2 trillion 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 will 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] The National Research Council found that "in some basins, the Water Board has over-allocated available supply by more than 800 percent (measuring supply as average annual runoff)." [footnote 3: National Research Council, "Sustainable Water and Environmental Management in the California Bay-Delta," 2012, page 33.] The NRC also noted "[w]ater scarcity has long existed in much of California…. The magnitude or intensity of scarcity has grown over time and it continues to grow." [footnote 4: Id. at page 32.]	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. Please refer to Master Response 32 regarding Water Rights.
1504	4	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 5: 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 leaves 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 exports as well as Delta agriculture and fisheries. No subsequent experience has shown this initial analysis to be unrealistic. In fact, the reverse is true. Rather than redrafting water contracts, officials continued to honor them, relying on water that was supposed to be available for export only when it was surplus to water needs in the Delta itself. [footnote 6: A detailed explanation of the implications of "surplus" with respect to the Delta is covered in Sections 12200-12205 of the California Water Code. Not just the State Water Project but the Central Valley Project have been faced with supply uncertainties as demand has grown. The 2005 contract between the Bureau of Reclamation and Westlands Water District says specifically, in Section 3(b) that "Because the capacity of the Project to deliver [Central Valley] Project water has been constrained in recent years and may be constrained in the future due to many factors including hydrologic conditions and implementation of Federal and State laws, the likelihood of the Contract actually receiving the amount of Project Water set out in subdivision (a) of this Article in any given Year is uncertain."] As exports increased over the past five decades, fish populations plummeted. Among others who have analyzed the long-term effects of various changes in the Delta ecosystem are U. S. Geological Survey researchers Cloern and Jassby, who looked at "Drivers of Change in Estuarine-Coastal	It is recognized in the Draft EIR/EIS that full contract amounts would not be delivered in every year in the Existing Conditions and the No Action Alternative, as well as under the action alternatives, as shown in Figures C13.13 – 1 through C13.13 – 13 in Appendix 5A, Section C, Modeling Results (note: Full Contract Amounts are generally indicated by the highest delivery which occurs towards the upper right portion of the plots). The range of alternatives included in the Draft EIR/EIS included alternatives which result in reductions in SWP and CVP water deliveries south of the Delta as compared to the Existing Conditions and the No Action Alternative. The No Action Alternative and Alternatives 4H1, 4H2, 4H3, 4H4; 5; 6A, 6B, 6C; 7; 8; and 9 would result in less SWP and CVP water deliveries south of the Delta than under Existing Conditions (shown in Tables 5-5 and 5-8). Similarly, Alternatives 6A, 6B, 6C; 7; 8; and 9 would result in less SWP and CVP water deliveries south of the Delta than under the No Action Alternative (shown in Tables 5-6 and 5-9). It is assumed that water users would need to implement separate methods to reduce water demands or provide alternative water supplies in drier years, such as those methods currently used during droughts.

DEIRS Ltr#	Cmt#	Comment	Response
		Ecosystem: Discoveries from Four Decades of Study in San Francisco Bay." They found that [M]odifications of inflow and salinity are contributing factors to population declines of native species in low-salinity habitats of the San Francisco Bay system . . . and to the remarkably successful establishment of nonnative species. . . including species that have restructured food webs and their productivity. . . . Water export from the Sacramento-San Joaquin Delta is a direct source of mortality to fish, including imperiled species such as delta smelt and longfin smelt . . . and export plus within-Delta depletion alters system energetics of an already low-productivity ecosystem by removing phytoplankton biomass equivalent to 30% of Delta primary production. . . . Reduced autumn inflows and associated salinity increases . . . have lowered habitat quantity and quality for species endemic to the upper estuary, such as the endangered delta smelt. [footnote 7: James E. Cloern and Alan D. Jassby, "Drivers of Change in Estuarine-Coastal Ecosystem: Dicoveries from Four Decades of Study in San Francisco Bay." American Geophysical Union, October 24, 2012, 8.] The difference between the 3 to 3.5 million acre feet originally anticipated to be available for export and the 5 million acre feet actually exported on average, to the detriment of fisheries and other non-export uses, has fueled both urban and agricultural expansion in California, creating demands for surface water that cannot be met reliably over the long term in a state that experienced drought 40 percent of the time in the last century.	
1504	5	BDCP's Proposed Action (EIR/EIS Alternative 9) reflects the rigidity of this demand for surface water. The primary Conservation Measure [CM] for BDCP "Conservation Measure 1 Water Facilities and Operation" calls for exports in a range of 4.71 to 5.59 million acre feet per year (Chapter 9, Table 9-3. Take Alternatives Overview, page 9-14). The Executive Summary of the EIR/EIS (page ES-10) includes the following proposed action under BDCP: Restore 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, consistent with the requirements of state and federal law and the terms and conditions of water delivery contracts held by SWP contractors and certain members of San Luis Delta Mendota Water Authority, and other existing applicable agreements. The above Purpose Statement reflects the intent to advance the coequal goals set forth in the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act) of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. It is against the backdrop of over-allocation that we must evaluate the "purpose" of restoring and protecting the ability of the SWP and CVP to reliably deliver up to full contract amounts. The purpose and solution promote water allocations that cannot be sustained in the long term under any likely scenario.	The Proposed Project seeks to stabilize water supplies, and exports could only increase under certain circumstances in which hydrological conditions result in availability of sufficient water and ecological objectives are fully satisfied. It is projected that water deliveries from the federal and state water projects under the Proposed Project would be about the same to the average annual amount of water that would be diverted under the No Action Alternative (i.e. 2025 conditions without the Proposed Project). It is projected that Delta exports from the federal and state water projects would either remain similar or increase in wetter years and decrease in drier years under Alternative 4A as compared to exports under No Action Alternative (ELT) depending on the capability to divert water at the north Delta intakes during winter and spring months. The estimated changes in deliveries for 4A are provided in the RDEIR/SDEIS 4.3.1 and Appendix A Chapter 5 Water Supply. Although exports under the Proposed Project would be similar to the amount water exported in recent history, it would make the deliveries more predictable and reliable, while reducing other stressors on the ecological functions of the Delta. For more information regarding the project's purpose and need please see Master Response 3.
1504	6	Selection of the dual conveyance twin tunnels does not demonstrate compliance with state policies regarding reduced reliance on the Delta, as enunciated in the California Water Code. The Delta Reform Act of 2009 called for reduced reliance on the Delta through investments in improved regional supplies, conservation, and water use efficiency (Water Code Section 85021). Instead, the BDCP state-preferred action would harden demand through construction of twin tunnels that would facilitate and enhance the ability to transfer increased amounts of water from the Delta in the future. As discussed above, Conservation Measure 1 calls for exports in a range of 4.71 to 5.59 million acre	Please refer to Master Response 31, Appendix 3I, and Appendix 3J of the Final EIR/EIS for a discussion of the applicability of the Delta Reform Act to BDCP and Alternative 4A, respectively. The Delta Plan is currently the subject of litigation and which could affect the legal requirements and/or implementation of the Delta Plan. Thus, the status of the Delta Plan and the Council's consistency certification process remains unclear during the pendency of the litigation, including appeals. The proponents of the proposed project intend to fully comply with the Delta Reform Act, to monitor the Delta Plan litigation and future Delta Plan amendments.

DEIRS Ltr#	Cmt#	Comment	Response
		feet/year—over a half million acre-feet more than have actually been exported on average. [footnote 8: "Average Annual South-of-Delta Deliveries by State and Federal Water Projects, 2000-2009." Restore the Delta, accessed 4/11/14. http://restorethedelta.org/wp-content/uploads/2014/03/Restore-the-Delta-Average-Annual-South- of-Delta-Water-Deliveries.pdf]	
1504	7	The BDCP and EIR/EIS fail as informational documents to the extent that they fail adequately to discuss water supply reliability secured from differing sources in the breadth required under state law. In addition to the required reduced reliance on the Delta, the Delta Reform Act says that "[p]roviding a more reliable water supply for the state involves implementation of water use efficiency and conservation projects, wastewater projects, wastewater reclamation projects, desalination, and new and improved infrastructure, including water storage and Delta conveyance facilities". [footnote 9: California Water Code Section 85004(b).] Instead, the BDCP focuses on increased water deliveries from conveyance through or around the Delta to supply "reliable" water for California, discussing water supply reliability only in terms of the "current and projected future inability of the SWP and CVP to deliver water to meet the demands of certain south-of-Delta SWP and CVP water contractors...in all water year types and considering ecosystem and species requirements..." [footnote 10: EIR/EIS ES.2.2.2.2; see also 2.5.2.] These demand amounts are recognizably unattainable, yet BDCP seeks to promote deliveries beyond the system's capacity, claiming "[i]t is the responsibility of the SWP and CVP to meet these beneficial uses regardless of hydrologic conditions." [footnote 11: Ibid.] We will not have water supply reliability in California until the problem of availability is realistically addressed. The effort to achieve reliability by means of the twin tunnels conveyance plan will irreversibly damage the Delta without solving the water supply problems that the plan is intended to solve.	It is important to note that the proposed project 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). Rather, 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. With regards to storage, please see Master Response 37. 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. Please refer to Appendix 1C of the Final EIR/EIS, Water Demand Management, for descriptions of conservation, water use efficiency, and other sources of water supply including desalination. Also refer to Master Response 6 for more information on demand management.
1504	8	Exaggerating the fragility of the Delta The conservation strategy for this HCP/NCCP consists of 22 conservation measures, the largest and most costly of which is twin tunnels under the Delta (Conservation Measure 1 Water Facilities and Operation). This proposal is extremely infrastructure-intensive and therefore extremely costly. The plan says (9.3.4.1.6) that "Funding for the BDCP from the state and federal water contractors is ultimately based on the direct economic benefits of the BDCP Proposed Action to their customers. There is no inducement for water purveyors to participate in a conservation plan where the cost exceeds the benefits in relation to conditions as they would likely exist without the BDCP" (page 9-45).	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. However, please see Master response 5 for more information on project costs and funding.
1504	9	BDCP cannot argue economic benefits based on guaranteeing users more water than they have historically received. It has focused instead on the reliability of deliveries: fresh water delivered without periodic reductions to protect fish and without threat of disruptions due to floods or earthquakes. BDCP's case for delivery disruptions depends upon making a case for earthquake threat and for the fragility of levees in the area of the Delta from which water has historically been exported.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. However, please see Master Response 16 for more information on seismic issues in the Delta. For additional information on the relationship between the proposed project and Flood protection in the Delta, please see Final EIR/EIS Appendix 6A BDCP/California WaterFix Coordination with Flood Management Requirements. Additionally, with regards to potential seismic and climate change risks to SWP/CVP Water Supplies, please see Final EIR/EIS, Appendix 3E.

DEIRS Ltr#	Cmt#	Comment	Response
1504	10	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 "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" (56). [footnote 12: 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. Also see "Appendix E: Clarification of Some Basic Issues with Regard to Delta Levees."] A map used in PowerPoint presentations by DWR itself [footnote 13: BDCP Presentation Jan 27 2014 CC Meeting, Slide 7 of 29, cached under Bay Area Integrated Regional Water Management Plan, accessed March 17, 2014. http://bairwmp.org/search?SearchableText=BDCP] shows that although there have been 45 incidents of Delta islands flooding in the last 75 years, there have been only four since the State's Delta Levee Subventions Program resulted in major levees upgrades following heavy flooding in 1986. Three of those four were associated with flooding in 1997 but were outside the area on which the export pumps rely. [footnote 14: "Chapter IV. January 1997 Floods," Final Report of the Flood Emergency Action Team (Department of Water Resources, 1997). Also see "Table IV-6, San Joaquin River Flood Control System Damage." http://www.water.ca.gov/historicaldocs/irwm/feat-1997/janc1.html] The actual number of levee failures due to unknown causes in the Delta in the last 30 years, following investments in reinforcing and upgrading Delta levees, is one. This was the spectacular Jones Tract levee breach in June 2004, which was likely caused by burrowing animals and triggered by high tides. Flooding was confined to a single island. The breach was repaired in three weeks and the island dewatered five months thereafter. [footnote 15: Michael Mierzwa and Bob Suits, "Chapter 3: Jones Tract 2004 Levee Break DSM2 Simulation," Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh 26th Annual Progress Report (California Department of Water Resources, October 2005), 3-2. http://modeling.water.ca.gov/delta/reports/annrpt/2005/2005Ch3.pdf] In other words, the event most disruptive to water exports in the last 30 years occurred not in conjunction with earthquakes or winter rains but on a sunny day, in a part of the Delta that BDCP proposes to use for average annual water deliveries 51% of the time even after the tunnels are built. And BDCP does not include any investments in Delta levees.	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. The Lead Agencies used the best available science throughout the effects analysis. 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. 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. Data explaining and confirming the risk of earthquake-induced levee failure are further described in detail in Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies. See, specifically, 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. 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 and appendix 6A in the Final EIR/EIS.
1504	11	The westernmost part of the Delta is 30 miles from the nearest active fault, the Hayward Fault. This likely explains why no Delta levee, much less a domino series of levees, has ever collapsed in an earthquake, including the 1906 San Francisco earthquake and the 1989 Loma Prieta earthquake. Earthquake shaking is generally less in areas farther from a fault because earthquake waves diminish in intensity as they travel through the ground. A May 2008 report done for the Metropolitan Transportation Commission, San Francisco Bay Area Regional Transportation Emergency Management Plan, shows a 62% probability for a magnitude 6.7 or greater earthquake on a Bay Area fault between 2003 and 2032, based on USGS analyses. However, the report predicts only very light to light damage in the Delta in connection with a 6.9 earthquake on the Hayward Fault. [footnote 16: "Appendix C-2-11,"	Please see response to Comment 10, above.

DEIRS Ltr#	Cmt#	Comment	Response
		San Francisco Bay Area Regional Transportation Emergency Management Plan, Metropolitan Transportation Commission, May 2008. http://t2030.mtc.ca.gov/planning/emergency/RTEMP_App_C2_Hayward_Fault.pdf] Other active Bay Area faults are even farther west of the Delta.	
1504	12	Using poorly-documented levee fragility as a major criterion for evaluating alternatives led to the dismissal of Alternative F (EIR/EIS Alternative 9 - Through Delta/Separate Corridors), a much less infrastructure-intensive alternative that would convey water through modified Delta channels. The total average annual project deliveries for Alternative F would be just 11 percent less than the bottom of the Proposed Action delivery range for the Preferred Alternative. The total project footprint of Alternative F is 6.2% smaller than that of the tunnels plan. Average annual outflows of fresh water would be up to 28% higher under Alternative F than under the Proposed Action because Alternative F provides all exports from the South Delta, which is better for fish and for water quality for all users. University of the Pacific economist Dr. Jeffrey Michael cited the BDCP's own economic study that found the no-tunnel alternative had a significantly higher benefit-cost ratio than the tunnel plans and some benefits for fish. [footnote 17: Dr. Jeffrey Michael, "A No Tunnel BDCP, Optimizing Through Delta Water Conveyance," on Valley Economy Blog, October 6, 2013. http://valleyecon.blogspot.com/search/label/Delta%20water%20exports. Also see Dr. Jeffrey Michael, "Viewpoints: The Economic Case for a Bay Delta Conservation Plan without the Twin Tunnels," Sacramento Bee, October 6, 2013. http://www.sacbee.com/2013/10/06/5795956/viewpoints-the-economic-case-for.html] The final Public Draft concedes that Alternative F would result in net benefits of $6.8 billion compared to the Proposed Action. The Proposed Action includes 75,000 acres of tidal habitat and seasonal floodplain restoration, whereas Alternative F includes none. Habitat restoration is a major component of the Proposed Action not because there are no existing habitat efforts going forward in the Delta but because BDCP planners hope that new habitat will compensate for reduced flows of fresh water, which will be diverted to the new tunnels for 49% of average annual project deliveries. In terms of BDCP Goals (Table 9-8, page 9-38), habitat protection and restoration in Alternative F is found to be not measurably different from the Proposed Action. Alternative F is found to be consistent with the goal for in-Delta water quality improvement, ecosystem restoration for aquatic species, water supply, and water quality. The one area in which Alternative F is found to be inconsistent with BDCP goals is the area of water supply reliability, which is defined as helping to protect water supplies from floods and seismic events.	See Section 9.5.6.2 in the 2013 public draft BDCP for a summary of the reasons why Take Alternative F failed to meet the goals of BDCP. The primary reason to reject Take Alternative F (and EIR/EIS Alternative 9) was because continuing to convey water exclusively through the Delta fails to meet one of the two co-equal goals of BDCP of ecosystem restoration. Take Alternative F fails to restore any of the more natural east-west flows in the Delta that are critical to improve ecosystem health and restoring some of the natural balance that would favor native aquatic species over non-native invasive species. Take Alternative F was assumed to include the same amount of habitat restoration as BDCP, including 75,000 acres of tidal wetland and floodplain restoration. See also response to comment 2 concerning discontinuation of the BDCP as the preferred alternative. The preferred alternative is now Alternative 4A, which no longer includes habitat restoration beyond what is required to mitigate effects of constructing and operating the project. Alternative 4A would not serve as habitat conservation plans/natural community conservation plans (HCPs/NCCPs) under ESA Section 10 and the NCCPA, but rather would achieve incidental take authorization under ESA Section 7 and CESA Section 2081(b). As a result, the Alternatives to Take analysis presented in the draft BDCP and required by Section 10 of the ESA is not applicable to the new preferred alternative, 4A.
1504	13	BDCP has used bogus levee fragility and exaggerated seismic threat to justify the twin tunnels that exporters are determined to build and to sell the plan to uninformed people around the state. If the condition of Delta levees is such a serious threat, then BDCP should include investments in the levees that protect not just Delta people and property but infrastructure that the exporters themselves plan to use over half the time. Many parts of California's water storage and transfer system, including transfer	Please see Master Response 4 regarding the selection of alternatives analyzed. 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 protection in the Delta, please see EIR/EIS Appendix 6A BDCP/California WaterFix Coordination with Flood Management

DEIRS Ltr#	Cmt#	Comment	Response
		infrastructure that carries State Water Project water over the San Andreas and other major faults into Southern California, are vulnerable to floods and earthquakes. This situation suggests the prudence of investments in local projects to support local water supply reliability and to provide back-up in situations where the interbasin system cannot deliver because of earthquakes, flooding or drought. The Economic Sustainability Plan estimated that for $2-$4 billion, lowland and selected additional levees could be improved to a standard that would address hazards posed by floods, earthquakes, and sea-level rise. [footnote 18: Business Forecasting Center, op. cit., 556-57.] Less expensive solutions for the Delta would leave more resources statewide to be invested in local projects.	Requirements. The California Water Action Plan recognizes 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. 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. The proposed project is one component, among many, of the California Water Plan. 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. With regards to storage, please see Master Response 37.
1504	14	SHORTCHANGING ENVIRONMENTAL PROTECTIONS Water supply reliability hinges on supply, and determining available supply must follow a full public trust balancing in which all beneficial uses - agriculture, municipal and industrial, fish and wildlife, ecosystem services - are considered. The flows of fresh water necessary to protect the public trust resources of the Bay-Delta estuary ecosystem have not yet been determined in a binding manner. In recognition of the importance of water flows for the protection of public trust resources, the 2009 Delta Reform Act required the State Water Resources Control Board to develop flow criteria for the Delta ecosystem (Section 85086 (c)). The State Water Board's findings included the following criteria "to preserve the attributes of a natural variable system to which native fish species are adapted": 75% of unimpaired Delta outflow from January through June; 75% of unimpaired Sacramento River inflow from November through June; and 60% of unimpaired San Joaquin River inflow from February through June. [footnote 19: State Water Resources Control Board. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem Prepared Pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009. August 3, 2010, 5.. http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final _rpt080310.pdf] Section 85086(c)(1) of the Water Code says, "For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, 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	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. Please also see Appendix C of the RDEIR/SDEIS Supplemental Modeling Requested by State Water Resources Control Board Related to Increased Delta Outflows.

DEIRS Ltr#	Cmt#	Comment	Response
		necessary for the Delta ecosystem under different conditions" (emphasis added). Conservation Measure 1 involves a new point of diversion of Sacramento River flows, with three intakes in the north Delta. The flow criteria referenced above are to be determined before the point of diversion is changed. Recognizing that its findings regarding flows did not consider competing beneficial uses of water, the Water Board's report includes a disclaimer that it is also required by law to consider municipal and agricultural water supply and recreational uses. "This report represents only one of many factors that will need to be balanced by the State Water Board as it updates the Bay-Delta Water Quality Control Plan." [footnote 20: Ibid. Note to Readers.] The update of the Bay-Delta Water Quality Control Plan is a multi-year, four-phase process. Phase 2, which deals with issues vital to BDCP, is in the very early stages. [footnote 21: "San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) Program," State Water Resources Control Board, accessed March 15, 2014. http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml] It does provide a framework for the necessary public trust balancing, but the information was not available to inform BDCP planning with regard to flows, and the permitting agencies will not have this information when they evaluate BDCP.	
1504	15	BDCP purports to include a habitat and ecosystem restoration component using adaptive management, but nothing in the governance structure described in the BDCP documents supports that claim. To begin with, there is nothing "adaptive" about a take permit that lasts for half a century. Of eight management decision areas listed under Program Management, six vest final authority in the Authorized Entity Group (AEG) or their selected Program Manager. The remaining two management decision areas list the Permit Oversight Group (POG) as the final authority, but only after review and approval of the AEG. Therefore, the makeup of the AEG is very important in determining whether ecosystem restoration will be accomplished. "The Authorized Entity Group will consist of the Director of DWR, the Regional Director for Reclamation, and a representative of the participating state contractors and a representative of the participating federal contractors." (BDCP 7.1.3). This structure represents the theory that the only interested and affected entities are the agencies that move water and the contractors that buy it. Not considered is the fact that their management decisions will affect Delta families, farms and businesses, the rate of outflows into the San Francisco Bay, the salinity in the Delta, the health of endangered fish species and the fishing industry up the entire coast of California and Oregon as well as demands that will be made on the upstream supplies. Adaptive Management and Monitoring on Table 7-1 references an entity called the Adaptive Management Team (AMT) which will be chaired by the Science Manager (selected by the Program Manager). There are seven voting members of this team: Four votes controlled by the representatives of DWR, Reclamation, and two participating state and federal water contractors (one each representing the SWP and CVP). The other three voting members will represent the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS). However the Plan also states that the AMT will operate by consensus. In the event that consensus is not achieved, the matter will be elevated to the Authorized Entity Group and the Permit Oversight Group for resolution. The Adaptive Management Team . . . will decide when and on what terms to seek	Note that the BDCP and a governance structure that includes a Stakeholder Council is no longer part of the proposed project, Alternative 4A. The EIR/EIS analyzes all alternatives, including Alternative 4A. As described in BDCP Section 7.1.10 Stakeholder Council, the Stakeholder Council provides the principal means by which stakeholders (as opposed to permittees and permitting agencies) would participate in and provide oversight of BDCP. As noted on Page 1 of Chapter 7, the Stakeholder Council "will be created and regularly convened to enable public agencies, nongovernment organizations, interested parties, and the general public to provide ongoing input into the BDCP implementation process." As noted in Table 7-1, the Stakeholder Council provides input on selection of the Program Manager, selection of the Science Manager, oversight of program funding, and indeed almost every aspect of BDCP implementation, including a major role in the adaptive management program. Please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		independent science review to evaluate technical issues for the purpose of supporting adaptive management decision making. These decisions to seek independent science review will be made considering budget and schedule limitations and other factors. . . .Any proposed changes to conservation measures and biological objectives will be elevated to the Authorized Entity Group and the Permit Oversight Group for their concurrence or for their own determination regarding the matter. (BDCP 3.6.2.2) Again, governance devolves back to the same Authorized Entities. Parameters for successful adaptive management are found in the U.S. Department of the Interior's "Technical Guide for Adaptive Management," which says, "Without active stakeholder involvement an adaptive management process is unlikely to be effective."	
1504	16	In an effort to satisfy the requirement for stakeholder involvement, BDCP creates a Stakeholder Council to provide a forum for interested parties to consider, discuss, and provide input on matters related to the implementation of the BDCP. The Stakeholder Council will be convened at a minimum of four times per year, by the Program Manager, who will also serve as a member of the council. (BDCP 7.1.10) This Council cannot be taken seriously as an advisory body. The Stakeholder Council will consist of a minimum of 40 members not including an undesignated number of "other Authorized Entities, other Delta civic organizations and members of the public." It is a Who's Who of everybody who might possibly have an interest in the Delta. This very large group meeting quarterly will have little meaningful opportunity for information dissemination, discussion and decision-making. But it hardly matters, because their input can easily be ignored. For those matters in which the Stakeholder Council has provided input, the position of the council, including any dissenting views, will be conveyed to the Implementation Office in a timely manner. Those position(s) will help inform decisions regarding the specific matter at hand. The objection procedures and dispute resolution process described above provide a means by which issues properly before the Stakeholder Council may be considered by the decision maker with the locus of responsibility for making the final decision with respect to the issue in controversy. This dispute resolution process, however, does not create a legal right nor does it give rise to a right of action with regards to the members of the Stakeholder Council nor may it be used by any member of the council to delay, or otherwise impede, the proper implementation of the BDCP. The Implementation Office, or other parties responsible for developing proposals or rendering decisions regarding implementation actions, will execute their responsibilities notwithstanding a pending unresolved dispute within the Stakeholder Council. (Emphasis added) (BDCP 7.1.10.3) Given the statewide implications of this project, the governance is far too narrow and exclusionary of people and the environment that will be affected by the Plan.	The intent of forming the Stakeholder Council, as described above, is to provide a means to receive input from the wide range of stakeholders in the Delta. The size of the group is indicative of the level of interest in the project and the diverse interests in the Delta. Note that the BDCP and a governance structure that includes a Stakeholder Council is no longer part of the proposed project, Alternative 4A. The EIR/EIS analyzes all alternatives, including Alternative 4A. If the Lead Agencies select an alternative that includes BDCP, they will consider this and other comments on the governance process. Please see Master Response 5.
1504	17	In the absence of checks and balances, and given the disincentives for adaptive management, it is hard to see how BDCP can meet the requirements of a Habitat Conservation Plan: Habitat Conservation Plans (HCPs) under [the Endangered Species Act of 1973] provide for partnerships with non-Federal parties to conserve the ecosystems upon which listed [endangered and threatened] species depend, ultimately contributing to their recovery	Please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		(emphasis added). [footnote 22: "Habitat Conservation Plans Under the Endangered Species Act," U.S. Fish and Wildlife Service, accessed March 12, 2014. http://www.fws.gov/endangered/esa-library/pdf/hcp.pdf] Similarly, the California Fish and Game Code [footnote 23: California Fish and Game Code, Section 2820.] requires that a Natural Communities Conservation Plan (NCCP) "assist in providing for the conservation of covered species and ecosystems within the plan area." Far from contributing to the recovery or conservation of covered species, BDCP will actually hasten their decline. In a letter to the Director of the California Department of Fish and Wildlife, one of the BDCP permitting agencies, the California Advisory Committee on Salmon and Steelhead Trout (CACSST, an advisory committee authorized in Section 6920 of the California Fish and Game Code) advised that "The BDCP does not meet the requirements of Fish and Game Code 2920 for an NCCP and cannot legally be approved . . . ." BDCP does not contribute to recovery and would jeopardize the continued existence of Sacramento River winter-run and spring-run Chinook salmon because smolt survival through the Delta is reduced by the project [footnote 24: California Advisory Committee on Salmon and Steelhead Trout, Letter to Charlton H. Bonham, Director, California Department of Fish and Wildlife, February 26, 2014. http://mavensnotebook.com/wp-content/uploads/2014/02/CACSST-to-Bonham-CDFW-on-BDCP-NCCP_022614.pdf] The CACSST also found that The concept of habitat restoration measures to offset impacts from increased water withdrawals from the Delta (increased "reliability") is not supported by science [footnote 25: Ibid.]	
1504	18	Restoration activities underway in the Delta could be used to test adaptive management strategies. For example, a water quality and habitat enhancement project has been underway since 2011 in the Cache Slough Complex, through a DWR grant to the Solano Resource Conservation District, Dixon Resource Conservation District, Reclamation District 2068, and local landowners. [footnote 26: 26http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Cache_Slough_Co mplex_Habitat_Restoration_Presentation_8-11-11.sflb.ashx] Other restoration activities in Cache Slough will support the Fish Restoration Program Agreement (FRPA) that is already in place as a joint effort between DWR and CDFW to implement habitat restoration in partial mitigation for DWR impacts on sensitive fish species in the Delta. FRPA efforts are being undertaken to satisfy requirements of Biological Opinions for SWP and CVP operations and will go forward independent of BDCP. [footnote 27: Fish Restoration Program Agreement (FRPA). http://www.dfg.ca.gov/water/frpa.html] The projects in the Cache Slough Complex, totaling over 12,000 acres, are just a few of the many habitat projects underway in the Delta on public land and private land, in reserves and refuges and on land managed by conservancies. Tens of thousands of acres in the Delta are already managed for habitat. The Draft Delta Plan Program Environmental Impact Report identified 276,000 acres - 33% of the Delta and Suisun Marsh - as open water and natural	Please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		community areas. [footnote 28: "Section 4, Biological Resources, Table 4-4," Draft Delta Plan Program Environmental Impact Report, page 4-159. http://deltacouncil.ca.gov/sites/default/files/documents/files/Draft_EIR_chapter_04.pdf]28 It is misleading to suggest that habitat restoration in the Delta depends on BDCP. Reclamation in the 19th century indisputably altered habitat in the Delta. However, despite use of the Delta's prime farmland for agriculture, Delta habitat has not changed significantly in the last 100 years. Delta fisheries collapsed after export facilities were constructed. Most restoration efforts in the Delta have inadvertently created habitat for undesirable species, predators, and noxious weeds, and have exacerbated toxic water quality conditions. The one strategy that hasn't been tried for recovery of fish species is reductions of exports and increases of outflows to something like the conditions to which native fish species were adapted. Ample experience suggests that habitat in the Delta will not substitute for flows to recover endangered species.	
1504	19	Disregarding the Public Interest Habitat conservation plans are typically undertaken by people within a region who seek permitting to allow "incidental take" of a listed wildlife species as a result of activities that benefit them. HCPs "describe the anticipated effects of the proposed taking; how those impacts will be minimized or mitigated; and how the HCP is to be funded." [footnote 29: "Habitat Conservation Plans under the Endangered Species Act," op. cit.] In contrast, the BDCP is being undertaken by beneficiaries in regions outside the Delta, while people within the Delta will bear 48 adverse impacts that have been determined to be "significant and unavoidable" even after mitigation. [footnote 30: Bay Delta Conservation Plan Draft EIR/EIS. "Table 31-1. Summary of Significant and Unavoidable Adverse Impacts." Page 31-9 ff.] These include adverse impacts to drinking water quality for people in the Delta region and adverse air quality impacts, including exposure of sensitive receptors to increased cancer risk from exposure to diesel particulate matter and ongoing greenhouse gas emissions from operations of the various conservation measures. Identifying these adverse impacts as "significant and unavoidable" relieves beneficiaries of any responsibility for their mitigation.	This Final EIR/EIS fully discloses the significant environmental effects of the alternatives. As required by CEQA, the Final EIS/EIR identifies mitigation measures to reduce the effects of each significant impact if any potentially feasible measures exist. When it is uncertain if identified mitigation measures will reduce the identified significant impact to a less-than-significant level, this Final EIR/EIS discloses that the impact is considered significant and unavoidable. However, identifying an adverse impact as significant and unavoidable does not relieve the Lead Agency of its responsibility to implement all feasible mitigation measures. Regardless of whether identified mitigation is sufficient to reduce an impact below the threshold of significance, all feasible mitigation measures that reduce significant impacts will be implemented in order to reduce the severity of the identified impacts. With regards to mitigation, please see Master Response 22. With regards to significant and unavoidable impacts, please see Master Response 10.
1504	20	With regard to funding, beneficiaries propose to pay for Conservation Measure 1, the twin tunnels, but they have not yet secured funding from all water contractors. Especially worrisome is the fact that estimates of costs are based on a design that is only ten percent complete. [footnote 31: The estimate of 10% completion for engineering design of the tunnels has been presented in a number of forums. One recent use of this figure was in a presentation by the San Diego County Water Authority in January 2014. The figure used in this presentation was 5-10%. The meeting is summarized here: http://mavensnotebook.com/2014/02/13/the-infrastructure-of-the-bay-delta-conservation-plan- the-san-diego-county-water-authority-begins-a-preliminary-analysis/] Beneficiaries propose to have conservation measures funded through a combination of federal monies and state bond funding, and these sources of funding, too, have not been secured and cannot be guaranteed. Taxpayers will end up responsible for much of this project, either through general obligation bonds or when exporters default on or delay repayment of project costs.	Please see Master Response 5 regarding the project's funding strategy.
1504	21	Throughout the BDCP development process, the Department of Water Resources and the export interests have only grudgingly engaged the people most immediately affected by	Since 2006, the Lead Agencies have sought to include as many voices in the planning process as possible and has demonstrated that commitment with an unprecedented level of public involvement. The documentation

DEIRS Ltr#	Cmt#	Comment	Response
		their plan - the people of the Delta. (Even the Stakeholder Council is designed to be impotent.) The most glaring instance of that grudging inclusion of the public in the process is the BDCP draft and environmental documents themselves. Not only are they staggeringly long and complicated, but they are entirely inaccessible to people who do not use computers and to anyone who does not speak English. On May 28, 2014 Restore the Delta, the Environmental Justice Coalition for Water, Asian Pacific Self-Development and Residential Association, Café Coop, American Friends Service Committee Proyecto Voz, Environmental Water Caucus, California Sportfishing Protection Alliance, California Water Impact Network, and Friends of the River, sent a letter to BDCP, the California Resources Agency, and the Department of Interior requesting a restart and extension of the public comment period due to the agencies' failure to provide for meaningful access and participation of California limited English speakers, including Delta limited English speakers attempting to engage with the draft Bay Delta Conservation Plan and draft EIS/EIR. [footnote 32: "Request for Restarting and Extending Bay Delta Conservation Plan Comment Period Due to Lack of Meaningful Access for Limited English Speakers." Restore the Delta, accessed 7/16/14. http://restorethedelta.org/wp-content/uploads/2014/05/RTD-Letter-Requesting-Comment-Extension-5-28-141.pdf] In particular, we requested that the agencies hold public hearings and provide interpreters; translate vital documents such as, at the very least, the Executive Summary of the draft EIS/EIR; and provide affordable access to documents to allow the thousands of low-income and limited English speakers to have meaningful participation in the process. To date, Restore the Delta has received a response only from a representative at the Bureau of Reclamation on behalf of the Department of the Interior, who conceded that NEPA participation requirements had not been met by BDCP. During this call, on July 9, 2014, we were informed that Interior is trying to assess how to deal with NEPA violations under Equal Justice Executive Order 12898: Federal Executive Order (EO) 12898 (1994), Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. We explained to this representative that while the Executive Summary should be translated (as requested in our May 28, 2014 letter), two other sections should be translated for the limited English speaking community: 1) Chapter 8, Financing; and 2) the Tables of Significant, Adverse, and Unavoidable Impacts in Chapter 31 with their supporting 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; refer to Master Response 41 for information on how the lead agencies have developed the proposed project in an open and transparent manner. More information about the public outreach conducted during the comment review periods for the DEIR/EIS and RDEIR/SDEIS is provided in Master Response 40. 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. In order for the Lead Agencies to effectively communicate with the public, several different types of summary documents and presentations on the BDCP, Draft EIR/EIS, and related documents were made available on the BDCP website. For instance, lay-friendly highlight documents for both the BDCP and the EIR/EIS were published to provide summary information about the documents and to help readers get acquainted with the documents. The BDCP Highlights and the EIR/EIS Highlights were posted online at http://baydeltaconservationplan.com/AboutBDCP/InformationalMaterials.aspx. Short one-page factsheets on the BDCP and EIR/EIS, as well as California Water Fix, were also provided online and by request. In addition, 17 narrated informational webinar episodes were posted to the website for both the BDCP and EIR/EIS. These webinars were developed to provide short, easy to understand summaries of key elements of the BDCP and EIR/EIS. Background documents, additional factsheets, and FAQs continue to be available on-line. For more information, please see Master Response 38 regarding the length and complexity of the documents. The Federal Lead Agencies have fully complied with Executive Order 12898.For more information regarding environmental justice and outreach to non-English speakers, please see Master Response 27.
1504	22	Environmental justice communities throughout California face important impacts of which they are not aware because public outreach during BDCP Open House meetings in early 2014 was inadequate and translated copies of documents have been unavailable. The Delta environmental justice community will be the most impacted by the significant, unavoidable, and adverse impacts referenced above. Furthermore, recent meetings with members of the Los Angeles City Council revealed that Los Angeles area environmental justice communities would be disproportionately impacted by higher water rates without benefitting from additional water. More broadly, efforts by the state and federal water contractors to finance BDCP planning through property tax increases on urban users will result in costs of the tunnel project being borne by unsuspecting property owners, including lower income Californians least equipped to bear them. As noted, the Department of the Interior has been in touch with us regarding participation of environmental justice communities. By contrast, we have received no response from	BDCP and EIR/EIS Fact Sheets were translated into Spanish, Hmong, Cambodian, Tagalog, Chinese (Mandarin), and Vietnamese. Translated fact sheets were posted to the website and hard copies were provided upon request. Additionally, a multilingual toll-free phone line has been established for questions about the BDCP, which includes information in Spanish, Tagalog, Vietnamese and Chinese (Mandarin) in addition to English (based on Census data) as well as Hmong and Cambodian (based on requests). See also response to comment 21 and Master Response 27 for more information about environmental justice.

DEIRS Ltr#	Cmt#	Comment	Response
		the California Resources Agency, the California State Agency responsible for administering the BDCP. We learned only through media stories that the Resources Agency has no intention of providing translated copies of BDCP documents. [footnote 33: Breitler, Alex, "Advocates argue twin tunnels plan lost in translation," The Stockton Record, May 30, 2014. http://www.recordnet.com/apps/pbcs.dll/article?AID=/20140530/A_NEWS/405300329] They claimed it could not be accomplished due to time and budget constraints. Interests that have spent a quarter of a billion dollars on planning have not done any public outreach in languages other than English regarding the BDCP project and comment period other than establishing phone lines where those seeking more details can leave messages. Given the woeful inadequacy of serious outreach to environmental justice communities throughout California over the past seven years, it is not surprising that the Resources Agency has not gotten much response to its recent half-hearted efforts.	
1504	23	The California Environmental Quality Act (CEQA) Guidelines clearly state that public participation is an essential part of the CEQA process. [footnote 34: California CEQA Guidelines section 15201] CEQA Guideline section 15141 recommends that the "text of draft EIRs … for proposals of unusual scope or complexity should normally be less than 300 pages." The CEQA Guidelines also recommend that the opportunity for public review should not normally be longer than 60 days. [footnote 35: CEQA Guideline 15103] Since the bloated BDCP and EIR/EIS documents (over 40,000 pages) are over 100 times the length of the "normal"-size EIR/EIS, one hundred times that normal review time would be 6,000 days. The 182 day review period is inadequate under CEQA standards. Full disclosure and complete public involvement are signature elements of CEQA. The agencies that have created this collection of documents should reissue the BDCP and EIR/EIR as a searchable documents on DVD disc, with hyperlinks, in languages accessible to non-English speakers who will be affected by the project. Paper copies in multiple languages should be made available at libraries throughout the state. And adequate additional time should be granted for public review, so that the public review function, which is essential under CEQA, can be adequately and timely performed.	The issue raised by the commenter addresses the length and adequacy of the 2013 DEIR/EIS. For information pertaining to the size and complexity of the document, please refer to Master Response 38. Please see Master Response 39 regarding the duration of the public review period. Additionally, more information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.
1504	24	Restore the Delta remains convinced, however, that no efforts to make the BDCP and its environmental documents more accessible will address the project's underlying, glaring inadequacies. It appears that a thorough public review would be powerless to give Californians an efficient, sustainable, economically and environmentally prudent water management system for the Delta when the state and federal governments are poised to advance a project designed to benefit some regions and interests of the state at the expense of others. Our hope is that fish and wildlife agencies charged with evaluating this habitat conservation plan will recognize BDCP for the travesty it is and refuse to permit it.	The comment does not raise any specific environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. With regards to the size and complexity of the document, please refer to Master Response 38. Please see Master Response 39 regarding the duration of the public review period. Additionally, more information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41.
1505	1	The City of Antioch ("City") is submitting comments on the Bay-Delta Conservation Plan ("BDCP") and associated Environmental Impact Report/Environmental Impact Statement (EIR/EIS) during the public review period. The City has reviewed the BDCP and the associated EIR/EIS and has found that not only are there significant adverse impacts to the City, but also that these documents are legally, factually, and scientifically flawed as described in detail within the documents attached to this cover letter. Even given the flaws in the document, it is clear that the Proposed Project will result in substantial impacts to the City's water supply, the City's financial condition, and the quality of life of the City's residents. The City does not believe that the EIR/EIS meets the	This comment pertains to Alternative 4 (known also as the BDCP) or analysis contained within the 2013 Public Draft EIR/EIS. 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 4A and two additional sub-alternatives were the subject of the Partially Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS), which was circulated for public review in the summer of 2015. Alternative 4 remains a potentially viable alternative and is being carried forward in this 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. If the Lead Agencies ultimately choose

DEIRS Ltr#	Cmt#	Comment	Response
		fundamental purposes of CEQA or that these concerns can be addressed by responding to comments. Rather, the City asks that the EIR/EIS be withdrawn and reworked substantially.	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. The Lead Agencies disagree that the DEIR/EIS does not meet the fundamental purposes of CEQA. 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.
1505	2	Antioch has pre-1914 appropriative water rights. The City of Antioch, located along the San Joaquin River in the western portion of the Sacramento and San Joaquin River Delta ("Delta"), is one of the oldest towns in California. Since the 1860s, Antioch has obtained all or part of its freshwater supply directly from its intake on the San Joaquin River (and from the tributary flow of the Sacramento River) pursuant to a pre-1914 appropriative water right with a priority of 1867. [Footnote 1: Antioch has vested pre-1914 water rights to water from the San Joaquin River as well as to the tributary flow of the Sacramento River via Georgiana and Three Mile Sloughs. This was determined as a matter of law by the California Supreme Court. Note also that information presented in Appendix D [ATT 4] demonstrates conclusively that waters at Antioch prior to about 1918 were historically fresh, not saline.]	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Please see also Master Response 26 for a discussion of effect on existing upstream water rights and Master Response 32 for a general description of the water rights allocated by the SWRCB to DWR for the operations of the SWP and to Reclamation)for the operations of the CVP.
1505	3	BDCP will decrease the City's [Antioch's] ability to use water at the City's intake. The BDCP project is expected to result in substantial impacts to the City, and no mitigation measures are proposed to address these impacts. The EIR/EIS indicates significant adverse impacts to the City's beneficial use of water and the City's ability to provide a reliable water supply to its citizens. As shown in Appendices A [ATT 1] and C [ATT 3], DWR's model runs describing the proposed project show significant increases in salinity at the City's drinking water intake, and DWR's modeling shows conclusively that most salinity impacts are due to the BDCP project and not to sea level rise or other factors. For example, modeling of Alternative 4 Scenario H1 shows that the number of days Antioch will be able to use its intake during September is expected to decrease by 85%.	The preferred alternative, Alternative 4A, would have less than significant impacts on salinity-related parameters bromide and chloride at Delta assessment locations, and less than significant impacts on electrical conductivity (EC) concentrations after mitigation. Please refer to Master Response 14 and Chapter 8, Water Quality, and associated appendices of the Final EIR/ES for additional discussion of water quality and the analysis of salinity effects. Please see also Master Response 5 for further information on the BDCP effects analysis.
1505	4	BDCP will cause significant impacts to recreation and the City's [Antioch's] economy. As presently proposed, the BDCP will result in increased salinity in the western Delta, including at Antioch. Antioch's unique historic and cultural legacy within the Delta has been as a freshwater location for well over 100 years. Antioch is known as the gateway to the western Delta providing freshwater boating, recreation, and fishing. The BDCP has a detrimental effect on this sector of Antioch's economy. While the EIR/EIS recognizes the potential (primarily upstream) short-term impacts of construction on recreation, the EIR/EIS fails to adequately address the long-term impacts of the BDCP on recreation and fishing at Antioch. Further, the EIR/EIS fails to address any impacts that will be caused by higher salinity to public trust resources at Antioch, such as impacts to aesthetics, aquatic plant and wildlife, and navigation. See Appendix [ATT 2] B for further details.	The preferred alternative, Alternative 4A, would not contain significant impacts for EC related to objective exceedance in the Sacramento River at Emmaton, would not contain substantial degradation in the western Delta due to increased chloride concentrations, and would have less water quality effects in the western Delta related to EC and fewer exceedances of the fish and wildlife EC objective between Prisoners Point and Jersey Point. After introduction of mitigation measures, Alternative 4A, would result in less than significant impacts for EC and chloride. Please also refer to Final EIR/EIS Chapter 8, Water Quality, regarding salinity or electrical conductivity impacts near Antioch, and Master Response 14 regarding water quality and salinity. Therefore, Alternative, 4A, would be anticipated to result in less than significant effects on fish and water quality related to salinity, which would result in less than significant effects on fishing from a recreation perspective. Please see also Master Response 5 for further information on the BDCP effects analysis. Please see Appendix 5F regarding submerged aquatic vegetation and fish populations. Please see Master Response 17 regarding effects on fish and wildlife. Please see also Chapter 16 of the Final EIR/EIS and RDEIR/SDEIS Appendix A (Socioeconomics) for discussion of potential effects on Delta communities. Please see also Chapter 15 and Appendix 15B for discussion of

DEIRS Ltr#	Cmt#	Comment	Response
			impacts to recreation and Master Response 24 for information on the Delta as a Place. Antioch is approximately 8 miles away from the nearest project alignment (western alignment Alternatives 1C, 2C, and 6C) and project feature associated with Alternative 9-the proposed operable barrier across Three Mile Slough at Brannan Island State Recreation Area. Therefore, there would be no project features that would directly affect visual resources associated with Antioch and, as such, Antioch is out of the affected area for visual resources. Similarly, Antioch is out of the affected area for indirect aesthetic impacts because there would be no indirect impacts associated with proposed project due to effects upon visual resources. Increases in salinity would not result in visual changes to the appearance of water at Antioch (i.e., the water associated with the San Joaquin River would look the same). Also, increases in salinity might affect recreation associated with the area; however, it would not alter the appearance of recreational resources and recreational areas and amenities would look the same. Boating and fishing would still occur in the same fashion, but recreational fishing would likely shift from freshwater fish to fish that prefer higher salinities. However, as discussed above, it is anticipated that there would be less than significant effects on fish and water quality related to salinity. Overall, there would be no direct or indirect impacts to aesthetic resources at Antioch that could result from changes to water quality associated with the proposed project.
1505	5	The BDCP analysis is technically deficient. As noted in Appendix A [ATT 1], the EIR/EIS analysis has several significant flaws and cannot be used to assess the significance of the impacts that will be caused by the project. The EIR/EIS uses a baseline model run that is not representative of existing conditions and that results in underestimating the impacts of the project. The "decision tree" that will be used to determine project operations (to select the appropriate operational scenario) has not yet been established. As a result, the City [of Antioch] anticipates that impacts due to BDCP will be even worse than the impacts described as "significant and unavoidable" in the EIR/EIS.	The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. The comment does not include evidence or specifics on how the baseline model is not representative of existing conditions in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS; therefore, a specific response cannot be provided. Please see Master Response 1 for discussion of the environmental baselines used in the analysis. Please note that only Alternative 4 takes a decision tree approach. Alternative 4A operations will be guided by the H3+ operational scenario rather than a decision tree. Please see Master Response 44 for additional detail about the decision tree approach and Section 4 of the RDEIR/EIS and Chapter 3 of this Final EIR/EIS regarding Alternative 4A.
1505	6	No mitigation is detailed to address significant impacts at Antioch. The proposed mitigation strategy to address increased salinity in the western Delta consist entirely of additional study. Study is not a mitigation measure but there are mitigation measures that should be part of the BDCP. The EIR/EIS states that the impact to salinity in the western Delta "is considered to remain significant and unavoidable" (EIR/EIS at p. 8-429).	The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. As stated in Response to Comment 1505-3, Alternative 4A would have less than significant impacts related to bromide and chloride levels at Delta assessment locations and, with mitigation, a less than significant impact on EC concentrations. Please refer to Master Response 14 and Final EIR/EIS Chapter 8, Water Quality, and associated appendices for additional discussion of water quality and the analysis of salinity effects.
1505	7	The Proposed Project will result in unacceptable impacts to the City [of Antioch]. In summary, our review of the BDCP, the EIR/EIS, and the model results describing the Proposed Project indicate that the Project will result in unacceptable impacts to the City and its 106,000 residents. "Significant and unavoidable" impacts are predicted for the City's water supply and water quality, and no mitigation is envisioned to address these impacts. As a result, the changes induced by the Proposed Project are expected to result in serious detrimental impacts to the City's water supply, financial condition, and quality and way of life. The City appreciates the opportunity to provide comments and requests that the EIR/EIS be withdrawn and reworked substantially. The City looks forward to working with all parties and agencies responsible for the preparation of the BDCP and the EIR/EIS as our comments are addressed.	Please see responses to comments 1505-1 through 1505-6.
1505	8	[ATT 1: Appendix A - Technical Comments on the BDCP and Associated EIR/EIS Letter. Prepared by Flow Science Incorporated for the City of Antioch. July 17, 2014.]	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

DEIRS Ltr#	Cmt#	Comment	Response
			already addressed in comment referencing the attachment or the final EIR/EIS.
1505	9	[From ATT 1:] The baseline condition used to evaluate the BDCP Proposed Project is flawed and inappropriate. A modeling study was used to delineate the potential effects of the proposed BDCP project on salinity at locations throughout the Delta, including at Antioch's drinking water intake in the western Delta. Our review of the impacts to water quality (Chapter 8 of the EIR/EIS) indicates that two different baseline scenarios were used -- the "Existing Conditions" scenario was used to represent baseline for the CEQA evaluation, and the "No Action Alternative" (NAA) was used to represent baseline for the NEPA evaluation. The main differences between these two scenarios appear to be (a) whether Delta outflows are managed to achieve the Fall X2 provision (hereafter referred to as "Fall X2") of the 2008 US Fish and Wildlife Service Biological Opinion (the "2008 BiOp"); and (b) whether the impacts of sea level rise are included. The Existing Conditions scenario does not include Fall X2 or sea level rise, while the No Action Alternative includes both. As detailed below, failing to include Fall X2 in the Existing Conditions scenario makes the baseline condition appear to be more saline than it actually is, so that the potential impacts of the BDCP appear to be significantly smaller than they would with an appropriate baseline.	The comment pertains to the Alternative 4/BDCP and the baselines used for the BDCP environmental analysis. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Regarding the environmental baselines assumed for the NEPA and CEQA analyses, including modeling assumptions about implementation of the Fall X2 salinity standard, please see Master Response 1. Alternative 4A operations would be consistent with the objectives of the Fall X2 provision of the 2008 USFWS Biological Opinion, as discussed in RDEIR/EIS Section 4, subsection 4.3.4.
1505	10	[From ATT 1:] As noted in prior comments submitted by the City [of Antioch] and its consultants to the BDCP and to the State Water Resources Control Board (SWRCB) [Footnote A-5: See Appendix D [ATT 4] to the City's comment letter.], the western Delta historically exhibited freshwater conditions. In 1928, "Carquinez Strait marked approximately the boundary between salt and fresh water under natural conditions," and "[p]rior to diversions for irrigation, Suisun Bay was brackish in the late summer and salt water may have penetrated as far as Antioch, but only for a few days at a time in years of lowest. [Footnote A-6: Means, Thomas. "Salt Water Problem: San Francisco Bay and Delta of Sacramento and San Joaquin Rivers. San Francisco, CA: Thos. H. Means, Consulting Engineer - 1928. p. 57. See also CCWD, 2010, Historical Fresh Water and Salinity Conditions in the Western Sacramento-San Joaquin Delta and Suisun Bay: A summary of historical reviews, reports, analyses and measurements; Technical Report WR10-001, available at http://www.ccwater.com/salinity/HistoricalSalinityReport-2010Feb.pdf] Such conditions no longer exist, as saline water is now common at Antioch. However, historic salinity conditions should be considered when assessing the impacts of proposed actions on the fish and wildlife that live in the Delta and that were historically adapted to fresher conditions.	This comment addresses Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Please see Master Response 1 which explains why the baselines assumed for the NEPA and CEQA analyses are appropriate. Regarding the salinity effects analysis, please see Master Response 14.
1505	11	[From ATT 1:] The City [of Antioch] asserts that Fall X2 should be included in both baseline conditions, including the Existing Conditions. Legally, the 2008 BiOp represents the requirement to operate to achieve Fall X2, and predates the Notice of Preparation for the BDCP. Technically, and as discussed further below and in Appendix C [ATT 3] to the City's comments, simulated water quality is more representative of measured (historic) data with the inclusion of Fall X2.	Please see Master Response 1 regarding the environmental baselines assumed for the NEPA and CEQA analyses, including modeling assumptions about implementation of the Fall X2 salinity standard. Please also see Final EIR/EIS Chapter 4, Approach to the Environmental Analysis, for a detailed discussion of the CEQA and NEPA baselines used in the EIR/EIS.
1505	12	[From ATT 1:] Antioch and its consultants have received from DWR modeling results [Footnote A-7: Flow Science Incorporated received modeling results from DWR via mailed hard-drives in January 2012, April 2013, and May 2013.] obtained from the Delta Simulation Model II (DSM2) model, which was used to simulate hydrodynamics and water quality throughout the Delta for a range of model scenarios. These model runs included two scenarios that were representative of "existing conditions." The "existing biological conditions 1" (EBC1) scenario included current sea levels but not Fall X2, while the "existing biological conditions 2" (EBC2) scenario included current sea levels and Fall X2. The March	The model runs referred to in this comment were presented in the Draft BDCP in 2013, and not in the Draft EIR/EIS. The only differences between the EBC1 and EBC2 scenarios are related to inclusion of Fall X2 assumptions and increased water demands in the Delta watershed (primarily in the American and Bear rivers watersheds). As discussed in Master Response 1, although the Fall X2 salinity standard was to have been implemented starting in Year 2009, due to hydrologic conditions, Fall X2 actions had not been as of spring 2011, when computer model runs were being undertaken in support of the Draft EIR/EIS. Therefore, historical water quality data would not reflect Fall X2 operations. Please see Master Response 1 for additional detail on this topic and the consistency of the environmental baselines used for the impact

DEIRS Ltr#	Cmt#	Comment	Response
		2013 Revised Administrative Draft made use of both EBC1 and EBC2, while the current BDCP EIR/EIS utilizes only EBC1, which is renamed as the "Existing Conditions" scenario. Model results for the EBC2 scenario agree well with salinity measurements made near Antioch (see Figure 1, Appendix C [ATT 3: att 2]), while the EBC1 scenario showed poor agreement, particularly in the fall of 1974, 1975, 1978, 1980, 1984, and 1986, or 6 out of the 17 years modeled. The plots of EBC1 shown in Appendix C [ATT 3] are consistent with Figures 5C.A-104 through 5C.A-107 of Attachment 5C.A to Appendix 5C of the Draft BDCP (confirming that EBC1 is the "Existing Conditions" scenario defined in the EIR/EIS), which show substantial increases in salinity in the western Delta in the fall of 1978, 1980, 1984, and 1986. These periods of higher salinity are not consistent with field measurements, further confirming that the omission of Fall X2 from the Existing Conditions scenario is not technically appropriate to represent the existing water quality in the Delta.	analysis with CEQA and NEPA requirements.
1505	13	[From ATT 1:] The data contained in Appendix 80 of the EIR/EIS show a significant difference in chloride concentrations in the San Joaquin River at Antioch between the Existing Conditions and the No Action Alternative (NAA) scenarios. Specifically, the average chloride concentrations are higher under the Existing Conditions, particularly in the late summer and fall. Table C1-1 shows that the mean chloride concentration is higher under the Existing Conditions scenario than under the NAA scenario by 447 mg/1 and 382 mg/l in October and November, respectively. Because there are two significant differences between these scenarios -- i.e., Fall X2 and sea level rise -- the data do not indicate which of these factors is responsible for the differences in simulated salinity levels.	The commenter is correct that the data does not indicate which of these different assumptions in the No Action Alternative and the Existing Conditions scenarios is responsible for the differences shown in simulated chloride concentrations.
1505	14	[From ATT 1:] Generally, the impact of a project is determined by comparing the Proposed Project scenario and the Existing Conditions scenario, and the impacts of non-project factors are determined by comparing the No Action Alternative (NAA) scenario and the Existing Condition scenario. Here, we cannot make the latter comparison, as the Existing Conditions and No Action Alternative scenarios are not on common ground regarding Fall X2. In order to determine the impacts of sea level rise alone, the NAA scenario must be compared to the EBC2 scenario, since both the NAA scenario and the Existing Biological Conditions (EBC2) scenario include operations to meet Fall X2. Once the impact of sea level rise has been determined, the impacts of BDCP could be more accurately delineated.	Please see Master Response 1 regarding the reasons the Fall X2 salinity standard of the delta smelt BIOp was not assumed for the CEQA baseline and the different assumptions, including implementation of the Fall X2 standard, used for the NEPA baseline. The Fall X2 action was included in the NEPA baseline and considered in the CEQA analysis of alternatives and project impacts. See Appendix 3D in the Final EIR/EIS for more information on this topic. By comparing the project alternatives against the NAA (all of which include climate change, sea level rise, and Fall X2 assumptions in the future), as was done in the NEPA analyses, the combined effects of the climate change and sea level rise are effectively teased out. This apple-to- apples comparison would then reveal the potential effects from implementing the project alternatives. For additional information regarding baselines, please refer to Master Response 1 and for climate change, Master Response 19.
1505	15	[From ATT 1:] While the Existing Biological Conditions (EBC2) scenario was not provided in the December 9, 2013 DRAFT BDCP and EIR/EIS, it was previously provided to Flow Science by DWR. Figure 3 of Appendix C [ATT 3: att 6] shows that, from September through November of above normal, below normal, and wet years, the availability of usable water at Antioch is higher under the EBC2 scenario than under the Existing Conditions (EBC1) and No Action Alternative (NAA) scenarios; this is expected, as EBC2 includes Fall X2. These same plots also show that usability is greater under the NAA than under Existing Conditions (EBC1). Thus, the exclusion of Fall X2 (Existing Conditions) decreases usability more than sea level rise (captured in the NAA) during the fall of above normal, below normal, and wet years. This comparison highlights the importance of Fall X2, and further supports that it should be included in the CEQA baseline scenario.	As described in the Response to Comment 1505-12, the model runs referred to in this comment were presented in the Draft BDCP in 2013, and not in the Draft EIR/EIS. Regarding the difference between EBC1 and EBC2 and the reason the Fall X2 salinity standard was not assumed for the CEQA baseline, please see Response to Comment 1505-12 and Master Response 1, respectively. This comment pertains to the Alternative 4/BDCP. As explained above in Response to Comment 1505-1, the proposed project and preferred alternative is now Alternative 4A/California WaterFix, which was developed following publication of the 2013 DEIR/EIS in response to public and agency input. Regarding salinity impacts of Alternative 4a at Delta assessment locations, please see Response to Comment 1505-6.
1505	16	[From ATT 1:] As the City [of Antioch] has noted in prior comments on the BDCP process and in testimony to the State Water Resources Control Board (SWRCB), salinity levels in the western Delta, including at Antioch's intake, will be substantially higher if Fall X2 is not included in the Existing Conditions model runs. (See Appendix D to the City's comments [ATT	The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Please see Master Response 1 which explains why the baselines assumed for the NEPA and CEQA analyses are appropriate. Regarding the salinity-related impacts of Alternative 4A at Delta assessment locations, please see Response

DEIRS Ltr#	Cmt#	Comment	Response
		4].) The exclusion of Fall X2 from the Existing Conditions will increase the salinity simulated under this condition and thus downplay the impacts of the BDCP Proposed Project on salinity in the western Delta; in fact Table C1-28 in Appendix 8G of the EIR/EIS shows that annual mean chloride concentrations decrease relative to Existing Conditions (i.e., EBC1) for all Operational Scenarios, which is misleading -- relative to EBC2, mean annual usability decreases at Antioch for all year types under Scenarios Alt4-H1 and Alt4-H2. Ultimately, the use of the Existing Conditions scenario without Fall X2 would be neither legally nor technically appropriate, and misrepresents the anticipated impacts of the BDCP project.	to Comment 1505-3 and Master Response 14.
1505	17	[From ATT 1:] Flow Science's analysis shows that the "Existing Conditions" scenario used to represent baseline conditions in the EIR/EIS does not accurately represent current conditions because it does not include Fall X2. Even though model scenario EBC2, which does include Fall X2, was used in prior drafts of the EIR/EIS and was made available to Flow Science and others as early as 2012, it was not used in the CEQA analysis. Because the incorrect existing conditions baseline scenario was used in the CEQA analysis, impacts to the City of Antioch have been underestimated significantly. Thus, Antioch requests that Fall X2 be included in all modeling scenarios used to describe baseline conditions. Please note that, because the City asserts that the Existing Conditions scenario is an inappropriate baseline, the impacts of BDCP in this comment letter will be assessed compared to the EBC2 and the No Action Alternative scenarios.	The model runs referred to in this comment were presented in the Draft BDCP in 2013, not in the Draft EIR/EIS. The EBC2 model runs were never used in the public Draft EIR/EIS analyses. Please see Master Response 1 regarding the reasons the Fall X2 salinity standard of the delta smelt BIOp was not assumed for the CEQA baseline. This comment pertains to Alternative 4/BDCP and the analyses prepared for it (including some preliminary BDCP analyses). As explained above in Response to Comment 1505-1, the proposed project and preferred alternative is now Alternative 4A/California WaterFix. As noted above (in Response to Comment 1505-9), Alternative 4A includes operational criteria to protect Delta Smelt in a manner that would be consistent with the objectives of the Fall X2 salinity standard in the 2008 USFWS Biological Opinion.
1505	18	[From ATT 1:] The BDCP will cause salinity at Antioch to increase and will reduce the City's ability to use its intake significantly. Appendix 8G of the EIR/EIS shows the predicted impact to chloride concentrations in the San Joaquin River at Antioch, both in terms of the monthly and daily mean concentration and in terms of compliance with the Bay-Delta Water Quality Objective (250 mg/l as a daily average). However, these metrics do not describe Antioch's ability to use the water [Footnote A-8: The 1968 Agreement defines "usable river water" as occurring when the "chloride ion content in the surface zone at slack current after daily higher high tide (HHT) is 250 parts per million [ppm] or less." Throughout these comments, "usable water" is the term applied to water with a chloride content of 250 ppm or less.], as its ability depends only on the instantaneous chloride concentration and not on daily or monthly averages. Thus, the potential impacts described in Appendix 8G significantly underestimate the impacts to Antioch.	Regarding the salinity impacts of Alternative 4A at Delta assessment locations, please see Response to Comment 1505-6. Please refer to Master Response 14 regarding averaging periods used to estimate chloride impacts.
1505	19	[From ATT 1:] To determine the actual impacts to the City's municipal water supply, Antioch and its consultants evaluated salinity impacts using DSM2 model results obtained from DWR. Specifically, Flow Science assessed the instantaneous salinity concentration (i.e., model results at 15-minute intervals) to determine how the BDCP Proposed Project is predicted to impact the usability of water at the City's intake. Flow Science compared the percent of time that water can be diverted under the worst-case project conditions (Scenario Alt4-H1) to the EBC2 scenario and to the No Action Alternative. (As noted above, the Existing Biological Condition (EBC2) scenario is most representative of existing conditions and should be used as the baseline for CEQA analysis of the BDCP project.)	Please refer to Master Response 14 for information about the effects on drinking water intakes. Please see Master Response 1 regarding the CEQA and NEPA baselines used for the analyses.
1505	20	[From ATT 1:] The increased salinity in the western Delta that is predicted to occur due to the BDCP Proposed Project will significantly impact Antioch's ability to use water. However, the severity of this impact is concealed in the EIR/EIS because model results are presented	Please refer to Master Response 14 for a discussion of effects on drinking water and averaging periods used to estimate chloride impacts.

DEIRS Ltr#	Cmt#	Comment	Response
		in the form of annual, monthly and daily averages. For example, Table C1-28 of the EIR/EIS shows that, under worst-case operations and evaluated as a long-term average, compliance with the chloride objective will decrease by only 2% (the difference between Scenario Alt4-H1 and the No Action Alternative). However, as demonstrated below and in Appendix C [ATT 3] to the City's comments, the decrease in usable water will be far more severe. On an annual basis, the impacts to usability at Antioch are significant. Over the 17 years modeled, the availability of usable water decreased by 6%, or 9.2 days per year on average as a result of BDCP Proposed Project Scenario Alt4-H1. The availability of usable water is expected to decrease even more during wet years; in these years, usability could decrease by 12%, or over 28 days per year. Importantly, and as detailed in Appendix C, these changes result from the BDCP Proposed Project alone, not from sea level rise.	
1505	21	[From ATT 1:] The BDCP Proposed Project is simulated to have the most significant impacts during the fall months, where on average the availability of usable water at Antioch may decrease by up to 64% (Appendix C [ATT 3]) with Operational Scenario Alt4-H1 relative to the No Action Alternative (i.e., without the impacts of non-project factors such as sea level rise). Evaluating results by month indicates potentially even greater effects. Under all year types, usability during September is simulated to decrease from 5.3 days to 0.8 days, an 85% decrease. The largest loss of usable days is predicted to occur in October, and totals 6.6 days on average. Breaking the results down by year type also shows significant impacts during the fall months. For example, excluding wet years, the availability of usable water under Operational Scenario H1 from September through November is predicted to decrease from 13.1 to 1.7 days [Footnote A-9: These numbers are the arithmetic averages of the non-wet years (i.e., critical, dry, above and below normal years) from Table 4, Appendix C [ATT 3: att 7].], a loss of 11.4 days relative to the NAA; in non-wet years, there are only 0.3 to 3 days of usability in the fall under Proposed Operational Scenario Alt4-H1. The percent difference is most significant during critical and dry years, at 97% and 93% of usable days lost, respectively, in the September through November time period (Table 4, Appendix C [ATT 3: att 7]). The most significant losses are simulated to occur during dry and wet years, when 23.0 and 22.7 days of usable water, respectively, are anticipated to be lost over this three-month period. Thus, the impacts of the BDCP Proposed Project to the City of Antioch, especially during the fall, are much greater than in the EIR/EIS.	Average values are presented in Chapter 8, Water Quality, of the Draft BDCP EIR/EIS. The values included in this comment are from the Draft BDCP EIR/EIS, as presented in Appendix 5A, Section C, Modeling Results. Therefore, the impacts of the BDCP presented in Chapter 8 of the Draft BDCP EIR/EIS are consistent with this comment. As discussed in Master Response 14, the impacts of Alternative 4A on water quality would be less than significant for all parameters assessed except for mercury and EC, and the EC-related impacts would be reduced to less than significant with implementation of the identified mitigation. Please see Chapter 8, Water Quality, and Appendix 5A of this Final EIR/EIS for additional detail on the water quality effects of Alternative 4A, Alternative 4/BDCP, and the other alternatives considered in this analysis.
1505	22	[From ATT 1:] The modeling performed to assess the water quality impacts of BDCP assumes full implementation of restoration measures-that is, 65,000 acres of tidal marsh restoration. This amount of tidal restoration is expected to occur in year 2060 and beyond, if at all. None of the model results characterizes the potential impacts of restoration on salinity in the years prior to 2060. Because the tidal marsh restoration will be phased, there will be several intermediate conditions during which the hydrodynamics may differ significantly from both the current conditions and the conditions under full tidal marsh restoration. Depending on the design and location of restoration efforts, and the sequence in which restoration is conducted, the volume of water that "sloshes" into and out of the Delta on every tidal cycle may be increased, thus increasing salinity in the western Delta.	Unlike the BDCP, Alternative 4A would not serve as habitat conservation plan/natural community conservation plan (HCP/NCCP), although it would mitigate for impacts and restore habitat for fish and wildlife listed in Section 4.3.7 and 4.3.8 of the RDEIR/SDEIS. Regarding the Draft EIR/EIS analysis of the BDCP, Appendix 5A, Section D.6, Evaluation of Tidal Marsh Restoration using the RMA Bay-Delta Model, in the Draft BDCP EIR/EIS provides an assessment of tidal marsh restoration effects on flows, stage, velocity and EC for areas throughout the Delta at Near-term (NT) with 14,000 acres of restoration, Early Long-term (ELT) with 25,000 acres of restoration and Late Long-term (LLT). The Draft EIR/EIS also includes a set of sensitivity analyses that indicate changes in Delta salinity related to locations of wetlands restoration sites in Appendix 5A, Section D, Attachment 5, Tidal Marsh Restoration Sensitivity Analysis. Please refer to Final EIR/EIS Appendix 5A and Master Response 30 for additional information regarding modeling conducted for the RDEIR/SDEIS and Final EIR/EIS WaterFix alternatives.
1505	23	[From ATT 1:] Although the City's primary concern is with salinity at its intake, the City [of	This comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now

DEIRS Ltr#	Cmt#	Comment	Response
		Antioch] would like to incorporate by reference the comments of others that suggest that concentrations of other water quality constituents (e.g., bromide, mercury) may increase as a result of implementation of the Proposed Project. The City is concerned with any degradation of water quality at its intake. In addition, changes in water quality may affect the treatment options available to the City.	Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Alternative 4A would result in substantially reduced impacts for many water quality parameters, including bromide and mercury, compared to Alternative 4/BDCP. Alternative 4A would still have significant impacts related to EC concentrations and mercury; however, implementation of feasible mitigation measures would reduce the EC impacts to less than significant levels and the magnitude of impacts related to mercury, although significant, would be less than those of the BDCP. Please see Master Response 14 and Final EIR/EIS Chapter 8, Water Quality, for additional information on the water quality impacts of the proposed project and project alternatives. For responses to comments contained within specific letters on the 2013 Draft EIR/EIS, please refer to the table of comments and responses within the Final EIR/EIS.
1505	24	[From ATT 1:] The BDCP Proposed Project assumes a change in water quality standards that has not yet happened and that would require State Water Board action. One aspect of the Proposed Project (represented by Scenarios H1 through H4) is the proposed change of "water quality requirements criteria" in the Delta. The Draft BDCP document states that the BDCP operations "include water operations in accordance with State Water Board D-1641 related to north Delta and western Delta agricultural and municipal and industrial requirements, except that the Sacramento River compliance point for the agreement with the North Delta Water Agency would be moved from Emmaton to Threemile Slough" (p. 3-188, emphasis added). Moving the compliance point landward by about 2.5 miles (the approximate distance from Emmaton to Threemile Slough), as proposed, would allow salinity in the western Delta to increase and thus would further impair Antioch's ability to use the water for municipal purposes. Further, the 2008 BiOps include requirements to meet Fall X2 under certain conditions, as described above, and two of the operational scenarios (Scenarios Alt4-H1 and Alt4-H2) eliminate the Fall X2 requirement; eliminating the Fall X2 requirement would also allow salinity to increase still farther in the western Delta.	Alternative 4A, and Alternatives 2D and 5A – the other new alternatives introduced and evaluated in the 2015 RDEIR/EIS – all used Emmaton as the water quality compliance location for State Water Resources Control Board Decision 1641; Emmaton is the same location assumed for Existing Conditions and the No Action Alternative. The action alternatives presented in the Draft EIR/EIS included, as part of the description of those alternatives, a proposal to change the compliance location from Emmaton to Three Mile Slough. However, in response to comments on this proposed change in the compliance location included in the Draft EIR/EIS, the compliance location was maintained at Emmaton for the proposed project (Alternative 4A) and Alternatives 2D and 5A. With respect to Fall X2, Alternatives 4H1 and 4H2 do not include Fall X2 criteria in order to provide a range of alternatives with a range of Delta outflow. Under NEPA, not all alternatives considered in an EIS are required to be consistent with all regulatory requirements. If such an alternative were selected as the proposed project, Reclamation would be required to request reconsultation under the USFWS and NMFS biological opinions; and the USFWS and NMFS would need to find that the proposed project would not result in jeopardy to the continued existence of a special status species, or avoid destruction or adverse effects to their critical habitat.
1505	25	[From ATT 1:] Given the fact that historical, natural salinity in the western Delta has been far lower than current levels, and given the serious impacts that may occur to Antioch's water supply and to the ecosystem if salinity is allowed to increase further, Antioch asserts that such a change in water quality standards would be inappropriate. For this reason, the BDCP EIR/EIS should be amended to include scenarios that do not involve changes in water quality standards.	As noted in Response to Comment 24, the compliance location for Decision 1641 requirements remains at Emmaton for the three new alternatives that were identified and evaluated in the RDEIR/EIS, including the current proposed project and preferred alternative, Alternative 4A. For more information on water quality, please see Master Response 14.
1505	26	[From ATT 1:] Because project operations have not been clearly defined, it is not possible to determine the impacts of the Proposed Project. Under the Proposed Project as described in the Plan and EIR/EIS, Delta outflow requirements in the spring and fall would be determined using a decision tree. There are four possible combinations of spring and fall outflow criteria, which define four operational scenarios (H1 through H4). Model runs were performed for each of these scenarios, as any of the four may be used each year. However, the decision tree that describes Operational Scenario H -- specifically, what "triggers" each operational scenario -- has not been defined in the Draft BDCP nor in the EIR/EIS and is "subject to a new determination by the fish and wildlife agencies" (p 3-207). Regarding spring outflows, the EIR/EIS states that "uncertainty exists regarding the mechanism through which higher Delta outflow improves the production and survival of early life stages of longfin smelt. Results of [future] investigations, including those directly related to the decision-tree process, will continue to be revealed and considered in the coming years" (p	This comment pertains to the Alternative 4/BDCP. As explained above in Response to Comment 1505-1, the proposed project and preferred alternative is now Alternative 4A/California WaterFix. The Draft EIR/EIS includes an evaluation of conditions under Alternatives 4H1 through 4H4 as compared to the Existing Conditions and the No Action Alternative to provide a range of possible changes that could occur under various outcomes under the decision tree approach. Further analysis is provided in the 2015 RDEIR/EIS and this Final EIR/EIS. Alternative 4A does not include the decision tree or large-scale habitat restoration. Instead, operations will be guided by the H3+ operational scenario, which includes Fall X2 requirements consistent with the 2008 USFWS BiOP and spring outflow criteria to minimize and avoid project-related impacts to longfin smelt. For more information on the new alternatives see Section 4 of the RDEIR/EIS and Chapter 3 of this Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		3-208). However, neither the future studies nor their potential outcomes are discussed. Regarding fall outflows, the EIR/EIS presents two hypotheses: first, that the fall habitat objective will be accomplished by providing flows necessary to position X2 in or near Suisun Bay in wet years; alternatively, that the new shallow-water habitat areas created through restoration of tidal communities (CM4) could accomplish this objective with lower outflows during the fall. Additional "scientific research to test each of these hypotheses will be conducted before initial operations of the north Delta facility" (p 3- 208). Ultimately, neither the spring nor the fall portions of the outflow decision tree have been determined for the proposed BDCP project; thus, the potential impacts of the project cannot be determined with confidence.	
1505	27	[From ATT 1:] Mitigation for water impacts is not provided. Chapter 8 of the EIR/EIS proposes mitigation measures for each foreseeable impact. For chloride (a surrogate for salinity), however, the proposed mitigation strategy consists entirely of additional study, with actions to be taken if identified. Because salinity in the western Delta originates primarily from the ocean, with salty water brought into the estuary by tidal action, Antioch and its consultants know of no such actions that would directly mitigate the impacts of the project on salinity in the western Delta, and none are identified in the EIR/EIS. In fact, the EIR/EIS states that, "because the effectiveness of [Mitigation Measure WQ-7] to result in feasible measures for reducing water quality effects is uncertain, this impact is considered to remain significant and unavoidable" (p, 8-429, emphasis added).	Regarding the water quality impacts of Alternative 4A, please see Response to Comment 1505-23.
1505	28	[From ATT 1:] At the same time, and contrary to assertions that impacts are significant and unavoidable, the EIR/EIS expresses BDCP proponents' commitment to "assisting in-Delta municipal, industrial, and agricultural water purveyors that will be subject to significant water quality effects ... The assistance provided by the BDCP proponents is intended to fully offset any increased treatment or delivery costs attributable to CM1" (p. 3B-42, emphasis added). For municipal users, the proposed assistance includes providing funding assistance to acquire alternative in-basin water supplies, storage, conjunctive uses, or develop water transfers; develop water supply connections to SWP facilities or BDCP intertie; or develop demand management and/or conservation/recycling projects to extend available water supplies.	Regarding impacts and identified mitigation for Alternative 4A, please see Response to Comment 1505-23. Please also see Master Response 10, Significant and Unavoidable Impacts, and Master Response 22, Mitigation.
1505	29	[From ATT 1:] The methods to "fully offset" any water quality impacts as a result of CM1 may require changes to contracts already in place between DWR and municipal agencies. For example, California Department of Water Resources (DWR) has agreement contract with the City [of Antioch] in which it has agreed to reimburse the City for only one-third of the cost it incurs to import water when water quality at its diversion point is unusable, as specified by formulae contained in the agreement. The EIR/EIS does not reference this contract, nor how it will distinguish BDCP CM1 impacts to water quality (for which the City should be fully compensated) from other instances of water quality degradation (for which the City should be reimbursed one-third, per the Antioch-DWR contract). Antioch requests that BDCP proponents specify how they intend to identify and to fully offset the impacts of BDCP CM1 in a manner that is fair and just to all parties.	DWR's existing contract with Antioch, including the amendment executed on October 29, 2013, describes how DWR will mitigate any water quality impacts to the City of Antioch.
1505	30	[ATT 2: Appendix B - Legal Comments Letter. Prepared by Matthew Emrick for the City of Antioch. July 14, 2014.]	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.

DEIRS Ltr#	Cmt#	Comment	Response
1505	31	[From ATT 2:] The BDCP Fails to Adequately Address and Analyze Impacts to Downstream Water Rights Holders Such As Antioch: As discussed in more detail in Antioch's Appendix A [ATT 1]] of its BDCP Comments, the BDCP will adversely impact the City's water rights and water supply by reducing Delta outflow and increasing salinity to the point that the City's ability to divert water at all will be critically limited. Antioch's water rights are senior in priority to those to be diverted pursuant to the BDCP. And yet, the EIR/EIS fails to adequately analyze the BDCPs impacts to the City's water rights or to propose any mitigation.	The City of Antioch water right is discussed in Draft EIR/EIS Chapter 5, Water Supply, Section 5.1.2.6, and Tables B-8, B-9, and B-18 of Appendix 5A, Section B, CALSIM II and DSM2 Modeling Simulation and Assumptions. The CALSIM II model assumption provides for diversion of the water right water by the City of Antioch in periods of time when salinity is low, as described in Section 5.1.2.6 of Chapter 5, Water Supply of the Draft EIR/EIS. The range of alternatives included in the Draft EIR/EIS would result in a wide range of changes in Delta outflows as compared to the Existing Conditions and the No Action Alternative. The No Action Alternative and Alternatives 2A, 2B, 2C; 4H2, 4H3, 4H4; 5; 6A, 6B, 6C; 7; 8; and 9 would result in greater average annual Delta outflow than under Existing Conditions (shown in Tables 5-5 and 5-8 and Figure 5-4). Similarly, Alternatives 6A, 6B, 6C; 7; 8; and 9 would result in greater average annual Delta outflow than under the No Action Alternative (shown in Tables 5-6 and 5-9 and Figure 5-4). Please see also Master Response 26 for a discussion of effect on existing water rights and Master Response 32 for a general description of the water rights allocated by the SWRCB to DWR for the operations of the SWP and to Reclamation) for the operations of the CVP.
1505	32	[From ATT 2:] As noted in Antioch's Appendix A [ATT 1] of its BDCP Comments, the EIR/EIS states that Antioch only infrequently uses its water rights, which is an absolutely false statement. As noted above, the City pumps potable water from the Delta every day when it is not too saline to do so, which has been approximately 208 to 225 days a year since the 1930s. [Footnote B-2: Prior to the early 1930s and the advent of significant upstream diversions on both the Sacramento and San Joaquin Rivers, the City could pump potable water year around every year except in the most severe drought years.] The EIR/EIS also fails to properly recognize that the source of Antioch's water supply includes the tributary flow of the Sacramento River via Georgiana and Three Mile Sloughs. Without acknowledging the correct facts and without understanding the nature and scope of the City's water rights, it is simply not possible for the EIR/EIS to have adequately analyzed the impacts of BDCP operations on the City's water rights and water supply.	The CALSIM II model assumption provides for diversion of the water right water by the City of Antioch in periods of time when salinity is low, as described in Section 5.1.2.6 of Chapter 5, Water Supply of the Draft EIR/EIS. The CALSIM II model delivers water to water rights holders prior to delivery of water to SWP and CVP water contractors. Please see also Master Response 26 for a discussion of effect on existing upstream water rights and Master Response 32 for a general description of the water rights allocated by the SWRCB to DWR for the operations of the SWP and to Reclamation)for the operations of the CVP.
1505	33	[From ATT 2:] CEQA (e.g. San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App. 4th 655) and Water Code Section 1702 (as well as the law of water right priority) require that the BDCP properly analyze project impacts (flow, water quality) on water and water rights downstream of the proposed new diversions. Further, the law of water rights priority (City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224) and section 1702 specifically require that any adverse impacts on senior water rights be mitigated. [Footnote B-3: Diverting water out of the Delta for junior water rights used primarily for agricultural purposes in a manner that will adversely impact senior domestic water rights and public trust purposes is unreasonable.] The EIR/EIS fails to meet these requirements.	This comment pertains to the Alternative 4/BDCP and the analysis of BDCP impacts in the Draft EIR/EIS. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. The proposed project does not increase the amount of water to which DWR holds water rights or for use as 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. The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. DWR holds water rights approved by the State Water Resources Control Board but does not have the power or authority to issue water rights to others. Additionally, 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. Importantly, all water exported by the SWP and CVP is the subject of 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

DEIRS Ltr#	Cmt#	Comment	Response
			reduce the protections for other water right holders. Please refer to Final EIR/EIS Appendix 5A and Master Response 30 for additional information regarding modeling conducted for the RDEIR/SDEIS and Final EIR/EIS WaterFix alternatives. For more information regarding water quality impacts and its associated mitigation measures please see Chapter 8 of the FEIR/EIS and Master Response 14.
1505	34	[From ATT 2:] Although EIR affects analysis indicates increased salinity and lower outflow downstream of the project, the EIR fails to adequately recognize Antioch's water rights, fails to adequately analyze the impacts to such rights, and as noted above, incorrectly concludes that the City only infrequently uses its rights. Despite potential significant adverse impacts to water quality, the EIR/EIS fails to provide any mitigation measures to protect Antioch's water rights which supply water to over a 100,000 people.	Regarding water rights, please see Response to Comment 1505-33.
1505	35	[From ATT 2:] Neither the BDCP or the BDCP Implementing Agreement ("IA") provide any provisions to ensure that the BDCP and its operations will not adversely impact senior downstream water rights such as Antioch's. The Decision Tree process only requires outflow criteria to satisfy certain biological objectives. While the City acknowledges that a goal of the BDCP and the IA is to protect covered species, this goal does not excuse or immunize the BDCP and its participants and beneficiaries from complying with other provisions of law. As noted, the EIR/EIS needs to properly analyze impacts to in-Delta water rights and propose full mitigation of such impacts. The IA should describe the funding and operational requirements to implement such mitigation. In sum, the EIR/EIS contains incorrect information and fails to properly analyze and mitigate the adverse project impacts to Antioch's senior water rights as required by law.	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). Implementing agreements are a requirement under the California Natural Community Conservation Planning Act (NCCPA), and are routinely executed under the ESA Section 10 (HCP) permitting process. As explained above in Response to Comment 1505-1, the proposed project and preferred alternative is now Alternative 4A/California WaterFix. Since the current proposed project (Alternative 4A) is no longer a NCCP or HCP, an implementing agreement was not released with the 2015 RDEIR/SDEIS or this Final EIR/EIS. Only Alternative 4 takes a decision tree approach. Alternative 4A operations will be guided by the H3+ operational scenario rather than a decision tree. Please see Master Response 44 for additional detail about the decision tree approach and Section 4 of the RDEIR/EIS and Chapter 3 of this Final EIR/EIS regarding Alternative 4A.
1505	36	[From ATT 2:] The BDCP Fails to Meet the Requirements of Delta Protection Act of 1959 and Water Code Section 85320: The EIR/EIS fails to explain how the project meets the requirements of the Delta Protection Act of 1959. In fact, the EIR/EIS indicates that the BDCP will not meet the objectives and requirements of the Act as discussed under the City's [Antioch's] Technical Comments. As shown in Appendices A and C [ATT 1 and ATT 3] to the City's BDCP comment letter, the Proposed BDCP Project will increase salinity levels at Antioch's intake so significantly that the City's water rights and ability to divert its water supply will be substantially impacted -- all without any proposed mitigation in the EIR/EIS, BDCP or in the Implementing Agreement.	This comment, which pertains to the Alternative 4/BDCP, addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). Regarding the implementing agreement, please see Response to Comment 1505-35. Please see Response to Comment 1505-3, Master Response 14, and Chapter 8, Water Quality, of this Final EIR/ES regarding the proposed project's salinity-related impacts.
1505	37	[From ATT 2:] Water Code sections 12200 et seq. (the Delta Protection Act) were intended in part to ensure that water exports from the Delta do not deprive in-Delta users of water necessary for their beneficial uses and for salinity control. A similar water availability requirement for the BDCP is provided under Water Code section 85320(b)(2)(A). The EIR/EIS as presently proposed, however, fails to adequately analyze the amount water available for export that would not result in adverse impacts to in-Delta uses -- especially to in-Delta water rights with higher priority than the State Water Project (SWP) and Central Valley Project (CVP) export projects.	The Draft EIR/EIS recognizes water rights in the Delta watershed and the Delta and delivers water to those water rights holders to the extent water is available to the SWP and CVP based upon hydrologic conditions. Water rights flows are provided the highest priority in the CALSIM II model assumptions. Water is not delivered to SWP and CVP water contractors in the monthly-based CALSIM II model until water rights flows and regulatory flows (including environmental flow and diversion requirements) are met. However, the CALSIM II monthly model does not fully represent real-time operational conditions 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. Please refer to Final EIR/EIS Appendix 5A and Master Response 30 for additional information regarding modeling conducted for the RDEIR/SDEIS and Final EIR/EIS WaterFix alternatives.
1505	38	[From ATT 2:] Although Antioch and Department of Water Resources (DWR) have an agreement for impacts to its water quantity and quality from the existing State Water	The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. For detailed

DEIRS Ltr#	Cmt#	Comment	Response
		Project, that Agreement has a remaining term of less than 15 years and is not based on the projected additional adverse impacts from the BDCP. Further, the projected impacts from the BDCP will continue for a minimum of 50 years. In addition, the Agreement between Antioch and DWR does not mitigate whatsoever for impacts from CVP operations.	responses on the primary issues being raised with regard to the BDCP/Alternative 4, please see Master Response 5.
1505	39	[From ATT 2:] Both the BDCP and the IA fail to provide any specific provisions as to how operation of the BDCP will be conducted to comply with the requirements of the Delta Protection Act (or Water Code section 85320(b)(2)(A)). In fact, the IA appears to authorize BDCP operations to violate the provisions of the Delta Protection Act and to immunize BDCP participants from any future regulatory liability by limiting the amount of water required for future mitigation or compliance with the Act. The EIR/EIS should identify all impacted downstream beneficial uses of water and analyze the impacts on such uses and provide specific mitigations. The IA should describe how the mitigation measures will be properly funded and implemented. [Footnote B-4: It is significant to note that earlier versions of the BDCP had mitigation built into the project in the form of relocating impacted downstream diversions at sole cost to the BDCP.]	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). As noted above in Response to Comment 1505-35, implementing agreements are a requirement under the California Natural Community Conservation Planning Act (NCCPA), and are routinely executed under the ESA Section 10 (HCP) permitting process. As explained above in Response to Comment 1505-1, the proposed project and preferred alternative is now Alternative 4A/California WaterFix. Since Alternative 4A is not an NCCP or HCP, an implementing agreement was not released with the 2015 RDEIR/SDEIS or this Final EIR/EIS.
1505	40	[From ATT 2:] The EIR/EIS Fails to Adequately Address Impacts to Recreation and Public Trust Resources at Antioch: As presently proposed, the BDCP will result in years of construction impacts that will adversely affect in-Delta recreation including preventing and limiting recreational access to certain areas within the Delta. Further, the BDCP will permanently increase salinity (and other water quality related constituents) and reduce outflow in the western Delta and specifically at Antioch.	As stated in Draft EIR/EIS Chapter 15, Recreation, Section 15.3.3, CALSIM modeling results indicate that effects, if any, to river flows are so minor as to have no effect and are therefore not discussed further in the chapter. Please refer to subsection 4.3.4, Water Quality, in Section 4 of the RDEIR/SDEIS and Master Response 14 regarding salinity or electrical conductivity impacts in the project area.
1505	41	[From ATT 2:] Antioch's unique historic and cultural legacy within the Delta has been as a freshwater location for well over 150 years. Antioch is known as the gateway to the western Delta for its freshwater location and recreational opportunities. A portion of Antioch's economy is dependent on freshwater boating, recreation, and fishing. The City's operates a municipal marina that is related to certain commercial uses and activities in the City. Many people have chosen to buy or rent homes in Antioch specifically because of the proximity to these freshwater boating, recreation and fishing activities or to simply to enjoy a lifestyle near a freshwater river environment.	Regarding potential effects of the proposed project on the fresh water fishery, please see Response to Comment 1505-4, Final EIR/EIS Chapter 8, Water Quality regarding salinity and electrical conductivity impacts near Antioch, and Master Response 14 regarding salinity. Please see 4.3.11 in Section 4 of the RDEIR/SDEIS for updated recreational impacts of the proposed project and associated mitigation measures.
1505	42	[From ATT 2:] While the EIR/EIS recognizes certain potential short-term impacts of construction on recreation and attempts to mitigate such impacts, the EIR/EIS fails to adequately address the long-term impacts of the BDCP on recreation, boating, and fishing at Antioch and provides no mitigation for such long-term impacts. In fact, the EIR/EIS indicates that impacts to recreational boating could be non-existent in the long-term. Given that the effects analysis indicates higher salinity and lower outflow in the western Delta, however, such a conclusion would appear contrary to the BDCP's own effects analysis. Increased salinity will impact fish species and fishing opportunities; boating preferences; and recreation (e.g. waterskiing, wakeboarding). Further, the EIR/EIS fails to address any impacts to public trust resources at Antioch from higher salinity such as impacts to aesthetics (from freshwater river to tidal marsh), aquatic plants and wildlife (Tule islands), and navigation (decreased outflow, increased salinity). Without acknowledging such potential impacts, it is not possible to adequately analyze and potentially mitigate any impacts.	Regarding the BDCP, as stated in Draft EIR/EIS Chapter 15, Recreation, Section 15.3.3, CALSIM modeling results indicate that effects, if any, to river flows are so minor as to have no effect and are therefore not discussed further in the chapter. Regarding Alternative 4A, please see Response to Comment 1505-4. Regarding the Public Trust Doctrine, please see Master Response 13.
1505	43	[From ATT 2:] The IA fails to provide any operating procedures or obligations to specifically	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and

DEIRS Ltr#	Cmt#	Comment	Response
		protect or mitigate in-Delta recreational and cultural resources or non-covered public trust uses (e.g. navigation, fishing, boating) from projected operational impacts -- either short term or long term. Since the IA is the primary operational document, it appears that the BDCP does not intend to mitigate either the long-term adverse impacts to in-Delta recreation and non-BDCP-covered public trust resources.	responsibilities of the various agencies under the BDCP (Alternative 4). Please see Response to Comment 1505-35.
1505	44	[From ATT 2:] The EIR/EIS and its associated effects analysis indicate increased salinity levels at Antioch, and yet any analysis of the physical impacts of this condition on recreation and public trust resources within the EIR/EIS are inadequate.	As noted above in Response to Comment 1505-3, salinity-related impacts of Alternative 4A at Delta assessment locations would be less than significant with implementation of identified mitigation for potential EC-related impacts. Please refer to Final EIR/EIS Chapter 8, Water Quality, regarding salinity and electrical conductivity impacts near Antioch and Master Response 14 regarding salinity. Please see Master Response 13 regarding the Public Trust Doctrine. Please see 4.3.11 in Section 4 of the RDEIR/SDEIS for updated recreational impacts of the preferred alternative and associated mitigation measures.
1505	45	[From ATT 2:] The EIR/EIS Fails to Adequately Analyze and Mitigate Potential Urban Decay Impacts: As discussed above, the BDCP will cause significant changes to the physical environment at Antioch -- a City of over 100,000 people and the major City downstream of the proposed project in the western Delta. The EIR/EIS acknowledges certain potential impacts to in-Delta communities including but not limited to declining property values, declining economic stability in communities relying on recreation, and potential abandonment of structures and buildings (especially those near proposed construction). As noted above, the EIR/EIS also acknowledges potential short-term impacts to in-Delta recreation. And yet, there is almost no analysis within the EIR/EIS of any potential urban decay impacts within specified in-Delta communities and none with respect to Antioch.	Antioch is included in the Plan Area, which is described as a whole in each impact. Decay and blight are discussed in Draft EIR/EIS Chapter 16, Socioeconomics, Impact ECON-3 and ECON-15. The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Please refer to RDEIR/EIS Appendix A, Revisions to the Draft EIR/EIS - Chapter 16 – Socioeconomics, and to Chapter 16 of this Final EIR/EIS for more information on the potential socioeconomic effects of Alternative 4A. See also response to comment 1505-4.
1505	46	[From ATT 2:] When there is evidence that adverse effects caused by a project could result in a reasonably foreseeable indirect environmental impacts such as urban decay or deterioration (as here), then the CEQA lead agency is obligated to analyze these indirect environmental impacts. (Anderson First Coalition v. City of Anderson (2005) 130 Cal.App.4th 1173, 1182). In the present case, the EIR/EIS indicates potential significant changes in the environment within the western Delta, significant changes to the City's water supply, and acknowledges further potential physical impacts to local communities as noted above. The EIR/EIS, however, fails to analyze the potential for urban decay impacts within Delta communities including Antioch. And since protection and preservation of in-Delta cultural resources is a requirement of the Delta Reform Act, the BDCP is legally required to mitigate potential adverse impacts.	Please see Master Response 20, Cultural Resources Assessment. Also see Master Response 22, Mitigation. With regard to concerns that the project could cause urban decay, please see Response to Comment 1505-45; please also see the analysis in Chapter 16, Socioeconomics, Chapter 13, Land Use; Chapter 20, Public Services, and Chapter 30, Growth inducement and Other Indirect Effects, of this Final EIR/EIS.
1505	47	[From ATT 2:] The BDCP Fails to Comply with the Co-Equal Goals of the Delta Reform Act of 2009: Public Resource Code section 29702 sets forth the dual/co-equal goals of providing a more reliable water supply and "protecting, restoring, and enhancing the Delta ecosystem." Section 29702 provides further that achieving the co-equal goals shall include protecting and enhancing the "unique cultural, recreational, natural resource" values of the Delta. The BDCP fails to meet the co-equal goals as the requirements of section 29702 are applied to Antioch and the western Delta. As Antioch's comments indicate throughout this letter, the physical environment, the reliability of Antioch's water supply, and the unique cultural heritage of Antioch will all be adversely impacted by the BDCP. The Delta Reform Act's co-equal goals are legal requirements on the BDCP that, put simply, require the BDCP to improve water quality and supply reliability within the Delta -- or at a minimum to not	Alternative 4A no longer includes an HCP. Compliance with the Delta Reform Act's co-equal goals, including compliance with water rights flows, was considered in development and evaluation of the alternatives as compared to conditions under the Existing Conditions and the No Action Alternative, as described in Section 3I.4 of Appendix 3I, BDCP Compliance with the 2009 Delta Reform Act, in the Final EIR/EIS. For more information regarding the proposed project's compliance with the Delta Reform Act please see Master Response 31. See also Appendix 3J for discussion of Alternative 4A compliance with the Delta Reform Act.

DEIRS Ltr#	Cmt#	Comment	Response
		further degrade water quality and the physical environment at Antioch.	
1505	48	[From ATT 2:] The EIR/EIS fails to provide any adequate mitigation measures to ensure the co-equal goals will be met at Antioch or the western Delta other than vague allusions and references to future undefined mitigation at some future underdetermined time. Without full mitigation, the BDCP does not meet the specific requirements of the Delta Reform Act and is therefore invalid.	Alternative 4A has been revised to reduce Delta water quality effects and an additional/revised mitigation measure, (Mitigation Measure WQ-11) has been included to reduce electrical conductivity concentrations to a less-than-significant level. Please see Response to Comment 1505-4. Please also see Master Response 14, regarding water quality, and Master Response 31 and Final EIR/EIS Appendix 3J, regarding compliance with the Delta Reform Act.
1505	49	[From ATT 2:] The IA fails to provide any operational provisions or obligations to ensure that the co-equal goals are met during the course of the 50 year BDCP project term. In fact, the IA appears to assume that the co-equal goals will be met via the operation and implementation of the BDCP alone providing no assurances for in-Delta water supply reliability. However, the Delta Reform Act does not limit water supply reliability to the BDCP alone and protection of in-Delta water supply reliability is a critical component of complying with the co-equal goals. As noted throughout the City's [Antioch's] comments, the BDCP effects analysis shows adverse impacts on downstream water supply reliability including Antioch's.	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). Please see Response to Comment 1505-35.
1505	50	[From ATT 2:] The EIR/EIS Fails to Adequately Address Mitigation of Impacts to Water Quality: As discussed above and throughout the accompanying documents, the BDCP is subject to certain legal requirements regarding the adverse impacts of water quality in the Delta. An EIR is inadequate if '[t]he success or failure of mitigation efforts ... May largely depend upon management plans that have not yet been formulated, and have not been subject to analysis and review within the EIR.' (San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App. 4th 645, 670.) 'A study conducted after approval of a project will inevitably have a diminished influence on decision making. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA.' (Communities for a Better Environment v. City of Richmond (2010) 184 Cal.App.4th 70.) In the present case, the BDCP is compelled to meet specific requirements of law, including but not limited to the Delta Reform Act, the Delta Protection Act, and Water Code section 1702. Because these are legal requirements, the BDCP must meet their requirements and this requires mitigation in cases where the project cannot comply with such legal requirements. The BDCP and the EIR/EIS fail to mitigate certain adverse impacts that result in the BDCP violating applicable law. As noted, the EIR/EIS instead attempts to propose future mitigation via consultation with impacted parties without setting forth any specifics, any standards, any time frame, any commitment of funds, or any performance criteria. This violates CEQA, and because the BDCP cannot override legal requirements, the failure to fully mitigate the adverse impacts to Antioch renders the entire project and the EIR/EIS invalid.	Please see Response to Comment 1505-3, regarding the proposed project's salinity-related impacts and Master Response 14 regarding project impacts on water quality. Please see Master Response 10 regarding the project's significant and unavoidable impacts. Regarding compliance with the Delta Reform Act, please see Master Response 31. With regard to allegations that the project cannot override legal requirements, it does not. Comments regarding project mitigation are specifically addressed in Master Response 22.
1505	51	[From ATT 2:] The EIR/EIS should analyze how water quality for downstream beneficial uses (including superior water rights such as Antioch's) will be protected and how the BDCP operating criteria will be able to meet both the water quality requirements for covered species and the legal requirements of downstream beneficial uses.	The Draft EIR/EIS and RDEIR/SDEIS, and Final EIR/EIS fully assess the potential water quality changes at a number of locations in the Delta including those near Antioch and presents mitigation measures to reduce those potential effects, identify adverse changes/significant impacts, and introduce mitigation for those impacts. Please refer to Chapter 8 of the FEIR/EIS for updated analyses of water quality impacts. Please see Response to Comment 1505-3 regarding the salinity related impacts of Alternative 4A. Please also see Master Response 14.
1505	52	[From ATT 2:] The IA should describe how water quality requirements will be met by project operations and provide specific funding and operational criteria to adequately mitigate	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). Please see Response to Comment

DEIRS Ltr#	Cmt#	Comment	Response
		impacts to downstream beneficial uses. As presently written, the IA fails to do this and provides operational constrictions that could in fact potentially prevent or hinder any future mitigation after project approval (e.g. regulatory assurances; limitations on operational modifications; restrictions on dedication of future water for outflow; lack of input to governance structure from adversely impact non-BDCP parties, etc.).	1505-35.
1505	53	[ATT 3: APPENDIX C - Analysis of Water Quality Impacts to Antioch -- Evaluation of DSM2 modeling performed in support of the BDCP Proposed Project. Prepared by Flow Science for the City of Antioch. July 17, 2014.]	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 RDIER/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
1505	54	[From ATT 3:] DSM2 model results were provided by DWR to Flow Science via hard drive in January 2012, April 2013, and May 2013. Flow Science analyzed these model results in order to assess the effects of the proposed BDCP project on salinity and usability of water at Antioch. The following analyses indicate that a technically inappropriate simulation was used for the baseline condition in the ADEIR, and that the proposed BDCP project is simulated to have significant impacts on the ability of Antioch to draw and use water from the San Joaquin River. DATA SOURCES The DSM2 simulation results used in the analyses are listed in Table 1 [ATT 3: att 1]. Each simulation used hydrology from WY1975-WY1991. Results for electrical conductivity (EC) at Antioch (RSAN007) were extracted on a 15-minute basis and used for Flow Science's evaluation. In addition to the model results, measured conductivity data [Footnote C-1: http://www.water.ca.gov/iep/products/data/dssnotice.cfm (accessed 3/7/2012)] were obtained for RSAN008, located approximately one mile from the Antioch intake.	The Existing Conditions model runs with Fall X2 were never used in the EIR/EIS analyses. Use of Fall X2 would not comply with the definition of Existing Conditions under CEQA. Please see Responses to Comments 1505-12 and 1505-17. Please see Master Response 1 for additional detail on this topic and the consistency of the environmental baselines used for the impact analysis with CEQA and NEPA requirements. Regarding the salinity-related impacts of Alternative 4A, please see response to comment 1505-3, and Master Response 14.
1505	55	[ATT 3: att 1: Table 1. DSM2 simulation results for WY1975-WY1991 received from DWR.]	This comment describes a table relating to Comment 1505-54. Please see Response to Comment 1505-54.
1505	56	[From ATT 3:] ANALYSES Baseline in EIR/EIS should incorporate Fall X2 provisions. The December 2013 EIR/EIS uses the "Existing Conditions" simulation for baseline purposes. As indicated in Table 1 [ATT 3: att 1], the "Existing Conditions" simulation does not include Fall X2 provisions. By contrast, the "EBC2" simulation (a simulation used in the March 2013 Draft BDCP document, and received by Flow Science from DWR in January 2012) does include Fall X2. The DSM2 modeling performed to evaluate water quality impacts of the proposed project simulated electrical conductivity (EC), which is a measure of salinity. Figure 1 [ATT 3: att 2] presents daily average simulated EC at Antioch for both Existing Conditions (Ex. Cond./EBC1) and EBC2, along with historical measured EC data. Simulation results were compared with historical measured EC. As shown in Figure 1, the exclusion of Fall X2 (i.e., the Ex. Cond./EBC1 simulation) results in EC at Antioch that is not representative of historical conditions. Specifically, salinity in the fall of 1974, 1975, 1978, 1980, 1984, and 1986 is substantially overestimated in simulation EBC1, when Fall X2 is excluded. By contrast, the EBC2 simulation shows good agreement with measured EC at Antioch,	Regarding inclusion of Fall X2 in the Existing Conditions modeling, please see Response to Comments 1505-12. Regarding the environmental baselines assumed for the NEPA and CEQA analyses, including modeling assumptions about implementation of the Fall X2 salinity standard, please see Master Response 1. It must be noted that comparison of modeling results for Existing Conditions to historical water quality monitoring data is not an appropriate means of model validation. SWP/CVP operations have changed several times in the past as a result of various legal and regulatory determinations, and also vary as a result of changing land uses and water demands over time. Historical water quality data in general can represent times when the SWP/CVP system was operated differently than under the simulated Existing Conditions model run, which represents operation of the SWP and CVP at the time the Notice of Preparation was issued. The modeled Existing Conditions overlays this operational scheme on a period of varied historical hydrology. Therefore, it is not expected that the modeled Existing Conditions will approximate historical water quality data at a given location or time.

DEIRS Ltr#	Cmt#	Comment	Response
		indicating that the inclusion of Fall X2 into any baseline scenario is necessary in order to accurately represent current (pre-project) conditions at Antioch. In summary, the EBC2 scenario is the appropriate baseline model simulation for CEQA purposes, and EBC1 does not accurately represent current conditions and should not be used as the CEQA baseline for the BDCP project.	
1505	57	[ATT 3: att 2: Figure 1. Graphs of measured and simulated daily average electrical conductivity (EC) at Antioch. Measured data are from station RSAN-008, located approximately one mile upstream from Antioch's intake. DSM2 simulations (EBC1 and EBC2) were provided by DWR.]	This comment describes a figure related to Comment 1505-56. Please see Response to Comment 1505-56.
1505	58	[From ATT 3:] BDCP Salinity Impacts at Antioch In the December 2013 EIR/EIS, the preferred project is represented by the four Alt4 simulation scenarios listed in Table 1 [ATT 3: att 1], with each scenario representing different operating regimes as determined by a "decision-tree" process that has yet to be explicitly defined. The H1 and H2 scenarios do not include Fall X2, whereas the H3 and H4 scenarios do include Fall X2 (Table 1). To evaluate the anticipated impacts of the Proposed Project on salinity at Antioch, Flow Science plotted model results for salinity at Antioch using the Existing Biological Conditions (EBC2) scenario, the No Action Alternative (NAA) scenario, and the four Alternative 4 (Alt4) scenarios that represent the BDCP Proposed Project. Flow Science's evaluation focused on the EBC2 scenario (the most accurate representation of current conditions because it includes Fall X2), the NAA scenario (which includes both Fall X2 and anticipated sea level rise), and the Alt4 scenarios. The NAA scenario can be compared to the EBC2 scenario to examine the impact of sea level rise (SLR) alone on salinity at Antioch (i.e., without the BDCP Proposed Project). The BDCP Alt4 scenarios can then be compared to the NAA scenario to tease out the difference between increased salinity due to SLR and increased salinity due to the BDCP Proposed Project.	Please see response to Comment 1505-12 and Master Response 1 regarding modeling assumptions for Existing Conditions.
1505	59	[From ATT 3:] As shown below, the inclusion or exclusion of Fall X2 in the operating rules to be followed by the Proposed Project will have a substantial impact on the salinity at Antioch. DWR's model results indicate that the BDCP project may result m a substantially lower usability of water at Antioch, particularly in the fall months. Figure 2 [ATT 3: att 4] plots the percent of time that the salinity at Antioch is less than the usable threshold [Footnote C-2: Consistent with Antioch's agreement with DWR (first signed in 1968 and extended on October 29, 2013), the usable threshold is 250 ppm as chloride (Cl-), which corresponds to an EC of 976 µS/cm. This conversion was made using the relationship between chloride concentration and EC for "normal" years in Guivetchi (1986)] in each month as computed from the DSM2 simulations for the simulation period 1975-1991. [Footnote C-3: Computed using the 15-minute DSM2 output at Antioch (RSAN007)] Since the Ex. Cond. (EBC1) simulation is not an appropriate baseline (see above), the effect of sea level rise (SLR) was assessed by comparing the EBC2 and NAA simulations, and the effect of the proposed BDCP project (independent of SLR) was assessed by comparing the NAA and the four Alt4 scenario simulations. Impact of Sea Level Rise (SLR). Comparison of the EBC2 simulation to the NAA simulation	Please refer to Response to Comment 1505-12 and Master Response 1 regarding baselines used for the CEQA and NEPA analyses. Please note that the BDCP is no longer the preferred alternative. As explained in Response to Comment 1505-1, the preferred alternative is now Alternative 4A. Refer to Response to Comment 1505-3 and to Master Response 14 regarding the salinity-related impacts of Alternative 4A. See also Chapter 8 of the FEIR/EIS, which provides an updated analyses of water quality impacts.

DEIRS Ltr#	Cmt#	Comment	Response
		indicates that a SLR of 45 cm results in decreased usability in all months except July and October, when the usability under the NAA scenario is slightly higher than under the EBC2 scenario. As a long-term average over the simulation period, a SLR of 45 cm is predicted to result in a 15-day-per-year decrease in usability (i.e., Antioch will be able to use their intakes 15 days less on average each year, see Table 2 [ATT 3: att 3]); as Figure 2 [ATT 3: att 4] shows, the decrease in usability is spread relatively uniformly over the year. The impact of sea level rise is most significant during dry years, when it accounts for over 26 days of usability lost, or a 19% decrease in usability.	
1505	60	[ATT 3: att 3: Table 2. Annual usability at Antioch under EBC2 and the No Action Alternative for the entire simulation period and for different year types within the simulation period.]	This comment describes a table relating to Comment 1505-59. See response to comment 1505-59.
1505	61	[From ATT 3:] Impact of BDCP. Figure 2 [ATT 3: att 4] also shows that, relative to both Existing Biological Conditions (EBC2) and No Action Alternative (NAA), BDCP Scenario Alt4-H1 is predicted to result in a significant decrease in usability, particularly during the fall months. The average decrease in usability during the fall months, relative to the NAA, for the entire 17-year simulation period is presented in Table 3. [ATT 3: att 5] On average during the September-November timeframe, simulation results anticipate that usability will decrease by 15.3 days. Simulated usability is almost completely lost during September, which corresponds to an 85% decrease. The largest predicted number of days lost (6.6 days) in one month occurs in October. Note that these impacts of the proposed BDCP project are due entirely to the project, as the effect of sea level rise (SLR) has been accounted for by comparing results from Scenario Alt4-H1 to the NAA scenario, which incorporates SLR.	The results of the analysis included in this comment are similar to the results of the monthly analysis presented in Chapter 8, Water Quality, of the Draft BDCP EIR/EIS which concluded that changes in chlorides and electric conductivity in the Delta under BDCP Alternatives 1 through 9 as compared to the No Action Alternative would be adverse. The Draft BDCP EIR/EIS also indicated that measures to reduce these impacts would need to be developed as conditions related to climate change, sea level rise, and wetlands restoration become more defined. As noted above in Response to Comment 1505-3, salinity-related impacts of Alternative 4A at Delta assessment locations would be less than significant with implementation of identified mitigation for potential EC-related impacts. Please also see Chapter 8 of the FEIR/EIS, which provides an updated analyses of water quality impacts.
1505	62	[ATT 3: att 4: Figure 2. Graph of percent of time water at Antioch's intake can be used for supply (i.e., when the simulated salinity is less than usable threshold at Antioch) by month as computed from DSM2 model results for the simulation period 1975-1991. SLR is zero for Ex. Cond. (EBC1) and EBC2, and 45 cm for all other simulations. Note that Fall X2 provisions are included in EBC2, NAA, Alt4-H3, and Alt4-H4.]	This comment describes a Figure relating to Comment 1505-59. See response to comment 1505-59.
1505	63	[ATT 3: att 5: Table 3. Decrease in usability at Antioch during the fall months simulated to occur as a result of implementation of the BDCP project (Scenario Alt4-H1).]	This comment describes a table relating to Comment 1505-61. See response to comment 1505-61.
1505	64	[From ATT 3:] Breaking the results down by year type (instead of presenting results in aggregated fashion) reveals that usability is almost completely lost during fall months of all year types except wet years. Also, the predicted salinity impacts, as expressed in terms of the number of days lost, are greatest during dry and wet years. These results are presented graphically in Figure 3 [ATT 3: att 6] and numerically in Table 4 [ATT 3: att 7]. Figure 3 shows that usability under scenarios Alt4-H1 and Alt4-H2 during September through November is always less than 10%, and generally less than 5%, for all year types except for wet years. The number of usable days during the September-November simulation period (excluding wet years) ranges from 0.3 to 3 under Scenario Alt4-H1 . Figure 3 shows that the number of usable days during the fall months decreases significantly under Scenario Alt4-H1 compared the NAA, especially in dry and wet years. During dry and wet years, simulated usability decreases by 23 and 22.7 days in the fall, respectively. The largest percent decrease in usability occurs in critical and dry years, when usability decreases by 97% and 93%, respectively. These model results indicate that, in wet and dry year types, the City of Antioch would need to find alternative water supplies (because water at its intake would be unusable) for an additional 23 days in the fall months of each year,	Please refer to Master Response 14 for a discussion of effects on drinking water.

DEIRS Ltr#	Cmt#	Comment	Response
		likely at significant cost.	
1505	65	[ATT 3: att 6: Figure 3. Graphs of percent of time water at Antioch's intake can be used for supply (i.e., when the simulated salinity is less than usable threshold at Antioch) by month and by year type as computed from DSM2 model results. SLR is zero for Ex. Cond. (EBC1) and EBC2, and 45 cm for all other simulations.]	This comment describes a figure relating to Comment 1505-64. See response to comment 1505-64.
1505	66	[ATT 3: att 7: Table 4. Decrease in usability at Antioch in the Fall (September-November) predicted to occur as a result of the BDCP project scenario Alt4-H1 by year type.]	This comment describes a figure relating to Comment 1505-64. See response to comment 1505-64.
1505	67	[From ATT 3:] The model results were used to compute the number of days of usable water over the entire simulation period, as an annual average. As Table 5 [ATT 3: att 8] indicates, model results show that the BDCP Proposed Project is simulated to cause a significant decrease in annual usability -- 9.2 days per year -- over all years. The loss is most significant during wet years, when more than 28 days of usability are lost; the highest percent decrease also occurs during wet years.	The comment pertains to the Alternative 4/BDCP. The proposed project and preferred alternative is now Alternative 4A/California WaterFix, as explained above in Response to Comment 1505-1. Please refer to Master Response 14 for a discussion of effects on drinking water. The Final EIR/EIS analyzes all alternatives, including Alternative 4A.
1505	68	[ATT 3: att 8: Table 5. Annual usability at Antioch under EBC2, No Action Alternative, and BDCP project scenario Alt4-H1 by year type.]	This comment describes a table relating to Comment 1505-67. See response to comment 1505-67.
1505	69	[ATT 4: APPENDIX D - Supplemental Information -- historical reports, prior submittals, etc. (for the current record)]	This comment describes attachments to the comment letter. The attachment does not raise any environmental issues related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
1505	70	[ATT 5: Attachment A. Results from the BDCP Effects Analysis, BDCP Steering Committee Meeting. October 21, 2010.]	This comment describes an attachment to the comment letter. The attachment does not raise any environmental issues related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
1505	71	[ATT 6: Attachment B. BDCP Modeling Results, BDCP Steering Committee Meeting. June 17, 2010.]	This comment describes an attachment to the comment letter. The attachment does not raise any environmental issues related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS. Regarding modeling, please refer to Master Response 30.
1505	72	[ATT 7: Attachment C. City of Antioch's Testimony to the State Water Resources Control Board. March 22, 2010.]	This comment describes an attachment to the comment letter. The attachment does not raise any environmental issues related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS that are not already addressed in comment referencing the attachment or the Final EIR/EIS.
1506	1	Alternative #4 Best Achieves the Coequal Goals: We at the Building Industry Legal Defense Foundation believe this alternative best achieves the coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem." Cal. Pub. Res. Code [Section] 29702(a) (Delta Reform Act). The BDCP balances the coequal goals by proposing to improve 145,000 acres of Delta habitat and permitting new conveyance facilities, as outlined in Alternative #4 that will improve the water supply reliability in the Delta as well as other parts of California. Implementation of the new conveyance facilities proposed in Alternative #4 will protect California's water supply from tidal influences, improve water quality and allow for more predictable pumping operations. Furthermore, the proposed operating rules allow for a big gulp, little sip approach that increases water exports when excess water is available and lowers exports when the environment is strained under below-average flow conditions. Maintaining the adaptive management framework discussed as part of Alternative #4 ensures ecosystem protection	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. This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the 2013 Draft EIR/EIS. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) and Alternatives 2D and 5A are being considered to provide modified conveyance facilities for the SWP and CVP and do not include large-scale habitat restoration. Please see Master Response 5 related to the status of the BDCP and Master Response 8 related to analysis of Alternative 4A. The action alternatives evaluated in the EIR/EIS either do not change or decrease monthly total exports of

DEIRS Ltr#	Cmt#	Comment	Response
		as conveyance facilities are improved. Several aspects of Alternative #4 will lead to reduced conflicts between fish and pumping, such as reducing reverse flows at the South Delta pumps and isolating conveyance facilities through the tunnel system both of which will reduce fish entrainment.	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 winter months when the river flows are high. Overall, the average annual Delta exports are less in Alternatives 2, 2D, 4 (H2, H3, H4), 4A (Proposed Project), 5, 5A, 7, 8, and 9 than under Existing Conditions, as shown in Appendix 5A, Section C, of the EIR/EIS.
1506	2	We at the Building Industry Legal Defense Foundation would point out that the approval of Alternative #4 will not, as some critics would believe, allow for greater exports of water from the Delta. To the contrary, the BDCP estimates that average water supplies available for export will be 4.7 million acre-fee to 5.6 million acre-fee per year—the same average currently permitted for export through the Delta.	Overall, the average annual Delta exports are less in Alternatives 2, 4 (H2, H3, H4), and 5 through 9 than under Existing Conditions, as shown in Figure 5-17 of Chapter 5, Water Supply, of the EIR/EIS.
1506	3	The improvement of water supply reliability through the new conveyance facilities will protect supplies from earthquake, levy-failure, and seawater intrusion risk. To illustrate, a large earthquake occurring in the region with resulting levee failure and seawater intrusion (which has a 63 percent chance of occurring by 2036 according to the U.S. Geological Survey) would lead to an interruption of deliveries of water for 3.5 to 4.5 years (EIR/EIS, Ch. 5, at 5-62) a completely unacceptable result for the millions of people who depend on the Delta for their water supply. Through implementation of Alternative 4 and the construction of the three intakes in the north would allow for deliveries to be secured even if the levees within the Delta fail due to a major earthquake. Furthermore, location of the intake structures in the north as opposed to their current location will allow water to be taken outside the tidal influence zone; thereby reducing the risk to conveyance facilities from salt water intrusion in the event of sea level rise. Thus, while some alternatives discussed in the EIR/EIS would allow for either greater exports of water or greater environmental benefits, implementation of Alternative #4 best achieves the coequal goals of securing water supplies and improving environmental conditions.	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.
1506	4	The No Action Alternative discussed in the EIR/EIS should not be pursued, as implementation of such an alternative would lead to increased environmental damage and reduce water supply reliability, contrary to the balance struck by the implementation of proposed Alternative #4. Under the No Action Alternative, existing conveyance facilities would continue to degrade due to sea level rise and climate change impacts requiring greater Delta outflows to curb salinity increases. EIR/EIS, Ch. 5, at 5-57. Furthermore, implementation of the Fall X2 RPA action as would be required by the No Action Alternative would increase Delta outflows by five percent compared to existing conditions. EIR/EIS, Ch. 5, at 5-57 -5-60. Levee failure under the No Action Alternative would also increase. EIR/EIS, Ch.5, at 5-62. Impacts due to sea level rise, climate change, and increased salinity would also negatively impact Delta species, resulting in additional take of species, under the No Action Alternative. EIR/EIS, Ch. 5, at 5-64. Delta exports under the No Action Alternative would also fall by fourteen percent. EIR/EIS Ch. 5, at 5-64. Thus, given all these considerations, the No Action Alternative should be rejected in favor of Alternative #4.	The commenter states their opposition to the No Action Alternative included in the Draft EIR/EIS. 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.
1506	5	The economy of California depends upon a secure and reliable water supply. Just the construction of the facilities integral in Alternative #4 would lead to the creation of 177,000 jobs, $11 billion in employee compensation, and $29 billion in increased revenues for California businesses. BDCP Economic Impacts Fact Sheet, available at http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Statewide_Eco	The commenter states that the project will have a positive economic impact. 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.

DEIRS Ltr#	Cmt#	Comment	Response
		no mic_Impacts_Report_-_Fact_Sheet.sflb.ashx. Alternative #4 will keep the engine of the California economy running while, at the same time, better securing the environment in the Delta compared with current conditions. BILD urges the state and federal agencies to finalize as quickly as possible the BDCP and the EIR/EIS, so that uncertainty in both the Delta's ecosystem and California's water supply reliability can end through the implementation of Preferred Alternative #4.	
1507	1	A general comment pertains to how the North Bay Aqueduct Alternate Intake Project (AI) is referenced in the Draft BDCP. The AI project is independent of BDCP, but must be referenced in the BDCP documents because, if implemented, it will become part of the State Water Project and is in the same geographical area of BDCP. The AI project has its own EIR and separate permitting process. Where there is overlap with BDCP is in the operations of the Al project. Since the intake locations of the AI project and BDCP are in the same part of the Delta, the AI project will be operated in coordination with BDCP tunnels. In other words, whatever the limitations on pumping for the BDCP tunnels are, the AI project will be included in that limitation. Additionally, the BDCP documents should not take any credit for any environment al benefits of the AI project since the AI project is not a conservation measure in BDCP and we have not yet determined if we are going to fund the AI project, so its implementation is uncertain.	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. Please note that operation and maintenance of the proposed North Bay Aqueduct Alternate Intake Project would not be included as a part of Alternatives 4A. 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. The EIR/EIS analyzes all alternatives, including Alternative 4A. Please see Chapter 3 of the Final EIR/EIS for an explanation of the various alternatives and what they incorporate. The North Bay Aqueduct Alternative Intake was included in the no project alternative and the cumulative impacts analysis, but was not included as part of the existing conditions; please see Appendix 3D of the Final EIR/EIS. Please also see Chapter 8 of the Final EIR/EIS, Water Quality, for more information related to the North Bay Aqueduct and BDCP.
1507	2	A general comment pertains to how the Solano HCP relates to BDCP. We at the Solano County Water Agency see no major conflicts between the two Plans (assuming Alternative 4). However, close coordination during implementation of both Plans will be necessary to ensure there are no future conflicts and to maximize environmental benefits of both Plans. We also suggest that BDCP use the most up to date environmental data that is included in the Solano HCP for the Delta area, especially our detailed vernal pool data.	For information regarding the effect of BDCP on other HCPs, including the Solano HCP, please see section 12.3.3.18 of the 2013 Draft EIR/EIS. Please also see Master Response 5 for issues raised regarding the BDCP, including the current status of the BDCP Effects Analysis.
1507	3	A major concern is Conservation Measure 21 -Non-project Diversions. This CM needs to be revised such that any non-project diverter, such as Solano County Delta irrigators, is granted incidental take authority upon request by the irrigator. Any costs for infrastructure, such as fish screens or consolidation of intakes, including operations, maintenance and replacement, must be an expense of BDCP, not the irrigators. The BDCP financial plan must include adequate funding for the revised CM.	This comment was considered, but was not included in the project. Related to HCP alternatives, however, CM21 anticipates providing funding to in-Delta diverters for fish screens. Please see Master Response 22 and Appendix 3B for information about mitigation and environmental commitments, including funding.
1507	4	A major concern is Conservation Measure 19 -Urban Stormwater Treatment. This CM needs to be revised and broadened to include agricultural runoff and discharges. The CM should specify that if point or non-point water quality standards are increased for the protection of BDCP covered species in the Delta or Suisun Marsh, entities contributing to urban and agricultural runoff to the Delta and Suisun Marsh need to be held harmless for the regulation and costs associated with the increment of the standard caused by BDCP programs that enhance the populations of such species. The BDCP financial plan must include adequate funding for the revised CM.	Please see the Mitigation Monitoring and Reporting Plan, which will be released simultaneously with the Final EIR/EIS, for more information regarding stormwater management plans. Please also see Master Response 22 and Appendix 3B for information about mitigation and environmental commitments, including funding.

DEIRS Ltr#	Cmt#	Comment	Response
1507	5	We at the Solano County Water Agency feel it is critical that local governments are adequately represented on decision-making bodies of BDCP. The current proposed structure limits Delta local government to a relatively distant advisory role.	This comment addresses Alternative 4 (known also as the BDCP, the previous preferred project) or analysis contained within the draft BDCP Effects Analysis. For detailed responses on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Responses 5 and 44.
1507	6	Chapter 1 Introduction Pg 1-31 Table 1-4 -take "County'' out of title Fig 1-2 take "County" out to correct Solano HCP name. Appendix 1A -Take "County" out of name of Solano HCP in various places	This comment was considered. Please note that numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1507	7	Chapter 2 - Existing Ecological Conditions Pg 2-11 Explain why Solano HCP vernal pool database not used	This comment was considered. Please see the response to Comment 6.
1507	8	Chapter 2 - Existing Ecological Conditions 2-26 line 11: change "Water District' to "of the State Water Project"	This comment was considered. Please see response to Comment 6.
1507	9	Chapter 2 - Existing Ecological Conditions Fig 2-11 Yolo Bypass (incomplete figure)	This comment was considered. Please see response to Comment 6.
1507	10	Chapter 2 - Existing Ecological Conditions Fig 2-12 North Bay Aqueduct Alternate Intake - incorrectly implies it is an existing facility.	This comment was considered. Please see response to Comment 6. The North Bay Aqueduct Alternative Intake was included in the no project alternative and the cumulative impacts analysis, but was not included as part of the existing conditions; please see Appendix 3D of the Final EIR/EIS.
1507	11	Chapter 2 - Existing Ecological Conditions Appendix 2B - use Solano County Water Agency vernal pool data	This comment was considered. Please see response to Comment 6. Please also see response to Comment 7.
1507	12	Chapter 3 - Conservation Strategy 3-vi - Take word "County'' out for Solano HCP	This comment was considered. Please see response to Comment 6.
1507	13	Chapter 3 - Conservation Strategy Pg. 3.2-13 Table 3.2.1 Reasonable and Prudent Measure 2 says North Bay Aqueduct Alternate Intake Project will minimize impacts to covered fish - should not take credit for a project that is not part of a conservation measure and is uncertain.	It is unclear what this comment means regarding credit. Please see Appendix 3D of the Final EIR/EIS for information on how the North Bay Aqueduct Alternative Intake was addressed in the environmental analysis. Please also see response to Comment 6.

DEIRS Ltr#	Cmt#	Comment	Response
1507	14	Chapter 3 - Conservation Strategy Pg. 3.2-21 Line 11 - Take word "County" out for Solano HCP.	This comment was considered. Please see response to Comment 6.
1507	15	Chapter 3 - Conservation Strategy 3.3.7.1 & 2 Include current existing Endangered Species Act and California Endangered Species Act restrictions on North Bay Aqueduct: longfin smelt 2081 restriction and ESA Biological Opinion delta smelt restriction	This comment was considered. Please see response to Comment 6.
1507	16	Chapter 3 - Conservation Strategy Pg 3.3-129 Need to characterize Solano HCP as "in progress"- all notations Pg 3.3-147 remove word "County" in reference to Solano HCP Pg 3.3-297 Solano HCP remove "County" Pg 3.3-369 Solano HCP reference old -there is a later version available on SCWA web page. Pg 3.4-6 North Bay Aqueduct issues (i.e. existing Endangered Species Act and California Endangered Species Act restrictions on NBA pumping) not in Problem Statement	This comment was considered. Please see response to Comment 6.
1507	17	Conservation Measure 1 Pg 3.4-11 - 3.4.1.4; line 42 North Bay Aqueduct Alternative Intake listed a Proposed Water Facility, but not included on next page. line 42, typo: "...intakes, [delete] an alternative North Bay Aqueduct intake [delete], and..." CM2 Page 3.4-42, line 44, typo: "...and the proposed Barker Slough Pumping Plant facilities..."Nothing is proposed at BSPP. Pg 3.4-52 - Lower Putah Creek Improvements. Should be updated to include work being done under a Department of Fish and Wildlife grant to Yolo Basin Foundation. CM3 Pg 3.4-72 overlap with local HCP's. South Sac and San Joaquin mentioned, no Solano CM18 3.4-324 - says conservation hatchery expected in Rio Vista - chapter 8/9 says at UCD - clarify	CM2 has been revised to correct the cited text on page 3.4-42 to refer to the NBA Alternative Intake. Descriptions of CM2 component projects, including the lower Putah Creek improvements, have been updated to reflect consistency with Reclamation, DWR, fish and wildlife agency, and Yolo County plans for restoration in the Bypass. Yolo Bypass improvements contemplated in the 2013 Public Draft (under CM2) would not be implemented as part of Alternative 4A; instead, they would be assumed to occur as part of the No Action Alternative because they are required by the existing BiOps. The Solano County HCP is still in development and thus is not yet an HCP. The HCPs addressed in CM3 are all permitted HCPs. See Chapter 1 for discussion of HCPs in development that overlap with the Plan Area. Please also see Section 12.3.6.1, Effects on Other Conservation Plans, in the Final EIR/EIS for a detailed analysis of how the alternatives affect surrounding habitat conservation plans and natural community conservation plans. Additionally, please see Master Response 22 for further information related to environmental commitments. CM18 has been revised to clarify the locations of the delta and longfin smelt conservation hatcheries.
1507	18	Chapter 4 - covered actions Pg. 4-24 4.2.1.2.4 Barker Slough Pumping Plant - seeks Section 10 and Natural Community Conservation Planning Act Section 2835 permits when Delta Habitat Conservation and Conveyance Program becomes operational. Permits are needed for current operations so they should be issued at approval of take permits.	This comment was considered. Please see the response to Comment 6.
1507	19	Chapter 4 - covered actions Pg 4-29 4.2.1.4 "Alternate" not "Alternative"	This comment was considered. Please see the response to Comment 6.

DEIRS Ltr#	Cmt#	Comment	Response
		Fig 4-1- Putah South Canal of the Solano Project is not part of Central Valley Project	
1507	20	Chapter 5 Effects Analysis Pg. 5.2-10 U.S. Fish and Wildlife Service Reasonable and Prudent Measure 2 North Bay Aqueduct Comment says Solano County Water Agency is constructing NBA Alternate Intake - should be Department of Water Resources	This comment was considered. Please see the response to Comment 6.
1507	21	Chapter 5 Effects Analysis Pg 5.5.1- 29 Baker Slough Pumping Plant wrong about screens protecting delta smelt. Clarify status of North Bay Aqueduct Alternate Intake.	This comment was considered. Please see response to Comment 6. Also, the North Bay Aqueduct Alternative Intake was included in the no project alternative and the cumulative impacts analysis, but was not included as part of the existing conditions; please see Appendix 3D of the Final EIR/EIS.
1507	22	Chapter 5 Effects Analysis Pg 5.5.1 - 35 Net effects of North Bay Aqueduct Alternate Intake Project wrongly assumed.	This comment was considered. Please see response to Comment 6. Also, please see Appendix 3D of the Final EIR/EIS for information on how the North Bay Aqueduct Alternative Intake was addressed in the environmental analysis.
1507	23	Chapter 5 Effects Analysis Page 5.5.1-26, line 9, clarify: change ‘implementation’ to 'operation' Page 5.5.1-29, line 41, clarify: change ‘implementation’ to 'operation' Page 5.5.1-29, line 41, clarify by adding ‘during periods of concern’: "...instead of Barker Slough intake during periods of concern, under BDCP ..." Page 5.5.1-35, line 17, clarify: change ‘implementation’ to 'operation' Page 5.5.2-21, line 19, clarify: change ‘implementation’ to 'operation' Page 5.5.2-24, line 21, clarify by deleting ‘the’: "...reduced by operation of an alternate intake..." Page 5.5.7-9, line 34, clarify by deleting ‘construction’: "...and the operation of an alternate..."	This comment was considered. Please see response to Comment 6.
1507	24	5B-xiii -Dual conveyance of North Bay Aqueduct with Alternate Intake reduces entrainment -do not assume benefits of AI project	This comment was considered. Please see response to Comment 6. Also, please see Appendix 3D of the Final EIR/EIS for information on how the North Bay Aqueduct Alternative Intake was addressed in the environmental analysis.
1507	25	The assumed flow regimes shown in Table 5.B.4-1 are unrepresentative of existing Baker Slough Pumping Plant operations.	This comment was considered. Please see response to Comment 6.
1507	26	5.B-9 North Bay Aqueduct and Alternate Intake -incorrectly implies AI will get implemented.	This comment was considered. Please see response to Comment 6. Please also see Appendix 3D of the Final EIR/EIS for information on how the North Bay Aqueduct Alternative Intake was addressed in the environmental analysis.
1507	27	Page 5.B-xiii, line 1, clarify: change ‘implementation' to 'operation' Page 5.B-xiii, line 3, clarify: change 'implementation' to 'operation' Page 5.B-xiii, line 10, clarify: change ‘implementation’ to 'operation'	This comment was considered. Please see response to Comment 6.

DEIRS Ltr#	Cmt#	Comment	Response
		Page 5.B-324, line 33-34, clarify by deleting 'removing most of the' and adding 'reducing': "...Barker Slough, which would allow entrainment of delta smelt larvae to be limited by removing most of the reducing export pumping from the Barker Slough facility to the new Sacramento River facility at times when entrainment risk is greatest. Therefore the difference between EBC and ESO scenarios probably would be greater than modeled here." Page 5.B-331, line 34, clarify by deleting 'removing most of the' and adding 'reducing': "... by removing most of the reducing export..." Page 5.B-388, line 1, clarify: change 'implementation' to 'operation' Page 5.B-388, line 3, clarify: change 'implementation' to 'operation' Page 5.B-388, line 10, clarify: change 'implementation' to 'operation'	
1509	1	As one of the oldest and largest Delta communities, the City of Brentwood relies on the Delta for its high quality of life, recreation and economy. In addition, the City has a diverse water portfolio that utilizes both treated and untreated water from the Delta, groundwater and tertiary-treated recycled water. The City has reviewed the BDCP and associated EIR/EIS and has found significant legal and scientific flaws in the documents that cannot be corrected by responses to comments. The BDCP Draft EIR/EIS needs to be withdrawn, reworked and recirculated to address fundamental deficiencies.	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)). Additionally, the documentation does not require recirculation (please see Master Response 46 (Recirculation/Scoping)). Since 2006, the BDCP and subsequently the California WaterFix Project have 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. Please refer to Chapter 32 (Public Involvement, Consultation, and Coordination) in the Draft EIR/EIS and Master Response 40 (Public Outreach Adequacy). Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred Alternative (see Section 4 of the RDEIR/SDEIS). Alternative 4A is also the NEPA Preferred Alternative, a designation that was not attached to any of the alternatives presented in the Draft EIR/EIS. Alternative 4 (BDCP) remains a potentially feasible alternative and has been carried forward in the RDEIR/SDEIS and Final EIR/EIS because it represents the original HCP/NCCP alternative approach, and is an important reference point from which the Alternative 4A, 2D, and 5A descriptions and analyses were developed (see Section 3 of the RDEIR/SDEIS). 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 Draft EIR/EIS may be utilized by other programs for implementation of the long-term conservation efforts. 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 and EPA). For more information please on the CEQA and NEPA process, see 1.1.5 of Section 1 Introduction of the RDEIR/SDEIS.
1509	2	The BDCP Draft EIR/EIS does not meet the fundamental requirements of CEQA or NEPA for defining a project, thoroughly analyzing the project impacts, and providing adequate mitigation for those impacts.	The proposed project is a joint EIR/EIS prepared in compliance with the requirements of CEQA and NEPA. Please refer to the following Master Responses 3 (Purpose and Need), 5 (BDCP), and 22 (Mitigation). Before the selection and approval of an alternative considered, the Lead Agencies must comply with the necessary state and federal environmental review requirements. This document, along with its previous draft 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 public agency permit

DEIRS Ltr#	Cmt#	Comment	Response
			approvals and other discretionary decisions.
1509	3	The technical analysis, specifically, the modeling used in the documents is fundamentally flawed and underestimates the impacts of the project.	The models described in the "Methods for Analysis" section in chapters 5-30 of the Final EIR/EIS documentation represent the best available resources at the time these analyses began, with consensus from the lead agencies' expert staff and consultants at the times the methods were chosen. In addition, please refer to Master Response 30 (Modeling) for further details on the adequacy of the models used in the various analyses.
1509	4	The BDCP Draft EIR/EIS identifies significant impacts to the City of Brentwood's drinking water supply, quality and cost of service that negatively impacts our economy, recreational opportunities, and quality of life for our residents and businesses, yet fails to provide adequate mitigation for these impacts.	The Existing Conditions, No Action Alternative, and other alternatives assume that non-SWP and non-CVP water rights would not change; and water would continue to be delivered to East Contra Costa Irrigation District. However, in accordance with the CVP service contract between Reclamation and Contra Costa Water District, CVP water deliveries can be reduced due to hydrologic and permit requirements, including environmental and water quality permits issued by federal and state agencies. This would occur with or without the implementation of any of the BDCP alternatives. Refer also to Master Response 24 on how the EIR/EIS addresses impacts mentioned by the commenter with respect to the Delta as a place. Mitigation measures are proposed for significant water quality impacts identified in the DEIR/EIS. Despite introduction of these mitigation measures, certain impacts remained significant and unavoidable. In the RDEIR/SEIS, additional alternatives were evaluated (i.e., Alternatives 2D, 4A, 5A) that proposed new mitigation measures. All impacts to drinking water quality were less than significant with mitigation. For more information, please refer to Section 2.2 and Section 4.2.7 of the RDEIR/SDEIS. Please also refer to Master Response 14 (Water Quality) and Master Response 22 for the adequacy of mitigation measures.
1509	5	The BDCP Draft EIR/EIS does not provide mitigation for significant impacts identified at Brentwood.	Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP/NCCP. Alternative 4A has been developed in response to public and agency input. Also, please refer to the response to Comment No. 4 in this letter (LTR#1509). It is not clear which impacts are being referred to. Regardless, under CEQA, feasible mitigation measures are required that could substantially lessen or minimize significant impacts. Mitigation measures are not required for effects which are not determined to be significant. For significant environmental effects that cannot be avoided, the EIR/EIS describes these. Under CEQA, an agency may not approve a project with significant environmental impacts if there are feasible mitigation measures available which would substantially lessen those impacts. (Pub. Resources Code, § 21081, subd. (a); CEQA Guidelines, § 15092, subd. (b); see Santa Clarita Organization for Planning the Environment v. City of Santa Clarita (2011) 197 Cal.App.4th 1042, 1052-1053.) Thus, for every significant impact identified in an EIR, the agency must adopt all feasible mitigation measures that would substantially reduce the impact. Even with all feasible mitigation, however, the level of some impacts may still be higher than the threshold of significance identified in the EIR/EIS. In CEQA parlance, these types of impacts are called "significant and unavoidable." Finding an impact significant and unavoidable triggers additional CEQA requirements at the time of project approval. See Master Response 10 for a discussion of significant and unavoidable impacts. For more information regarding Environmental Commitments please see Appendix 3B of the FEIR/EIS. Please also review Master Response 22 describing Mitigation and Environmental Commitments.
1509	6	The City of Brentwood purchases and uses Delta water from both Contra Costa Water District ('CCWD') and East Contra Costa Irrigation District ("ECCID') . ECCID is party to a contract with the State of California (acting by and through the Department of Water Resources) dated January 7, 1981 (the "Contract') . Section 6 (a) (ii) of that existing Contract provides : The State recognizes a pre-1914 appropriative right of the District to divert from the Delta at Indian Slough for use within the District. The State shall furnish such water as may be	Chapter 8 of the FEIR/EIS describes whether concentrations of various water quality constituents are expected to increase or decrease with the project, relative to existing conditions and the No Action Alternative. To the extent that concentrations of various water quality constituents are expected to increase, Chapter 8 describes whether these increases are expected to result in impacts to beneficial uses of water in the Delta. For constituents where adverse impacts were expected, mitigation and other commitments, such as additional evaluation and modeling and consultation with water purveyors to identify additional measures to avoid and minimize or offset these impacts, were proposed to address those impacts. Under

DEIRS Ltr#	Cmt#	Comment	Response
		required within the District, up to 50,000 acre-feet per year at a rate of 200 cubic feet per second, to the extent not otherwise available under the water rights of the District. The existing Contract, as amended April 11, 1991 and February 7, 2000, between the State and ECCID defines the minimum water quality that the State must provide at ECCID's Point of Diversion. The BDCP Draft EIR/EIS fails to provide a detailed analysis of the impacts and associated mitigations to water quality and quantity as they relate to impacts to ECCID, CCWD and the City at all intake diversion locations . In addition, the BDCP Draft EIR/EIS should provide an explanation and plan on how Department of Water Resources will guarantee the minimum water quality and quantity at all intake diversion locations, especially during periods of low flow with diminished Delta water quality.	the preferred alternative (Alternative 4A), the only significant and unavoidable impact to water quality is methyl mercury that may be increased by certain habitat mitigation measures. See Master Response 14 (Water Quality) for more discussion. The proposed project does not seek any new water rights or include any regulatory actions that would affect water rights holders other than DWR, Reclamation, and SWP and CVP contractors. The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. Importantly, all water exported by the SWP and CVP is the subject of the existing water rights of DWR and the U.S. Bureau of Reclamation. Exports do not occur at the expense of other water rights holders. The proposed project and its alternatives analyzed in the EIR/EIS documentation only include the use of water from existing SWP and CVP water rights or voluntary water transfers from other appropriative water rights holders. The proposed project and its alternatives do not alter the protections in D-1641 designed to protect other beneficial uses of water in the Delta. For further discussion of water rights, please see Master Responses 26 (Area of Origin), 32 (Water Rights), and 34 (Beneficial Uses of Water). In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701 The State Water Resources Control Board may issue the order granting the change petition on a showing, among others, "that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) On September 24, 2015, DWR filed an application for water quality certification under section 401 of the federal Clean Water Act with the State Water Resources Control Board for the Clean Water Act section 404 permit for placement of dredge or fill material into waters of the United States associated with the California WaterFix (Alternative 4A). Under section 401 and associated regulations, the State Water Resources Control Board must certify that all activities associated with Alternative 4A will comply with applicable state water quality standards, and may impose conditions to ensure the permitted activities comply. For more discussion of other permitting processes, please see Master Response 45 (Permitting). Moreover, adding intakes in the North Delta will allow for operational flexibility that can improve natural flow in the Delta and avoid impacts to migratory fish based on real time data and operations. The proposed project aims 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.
1509	7	The City of Brentwood utilizes multiple diversion locations for both potable and non-potable water. The operations that govern which diversion or combination of diversion points of water the City uses is highly dependent on a variety of factors, including Delta water supply, Delta water quality, and associated water treatment costs. The BDCP Draft EIR/EIS does not adequately analyze nor provide adequate mitigation for these operational and associated economic impacts to the City's Water Treatment Plant as well as the City's use of untreated Delta water based on anticipated periods of detrimental changes to the Delta water supply and quality.	Except where economic impacts cause adverse impacts to the physical environment, they are not required topics of analysis in the EIR/EIS. The comment does not identify any physical impacts that may result if the City's cost to operate its Water Treatment Plant were to increase as a result of implementing any of the project alternatives, including BDCP (Alternative 4). Alternative 4A has been developed in response to extensive public and agency input over several years, and reduces many of the impacts associated with the BDCP (Alternative 4). . See Master Response 14 (Water Quality) for more discussion of water quality impacts. The EIR/EIS analyzes all alternatives, including Alternative 4A. The Existing Conditions, No Action Alternative, and other alternatives assume that non-SWP and non-CVP water rights would not change; and water rights water would continue to be delivered to East Contra Costa Irrigation District. Please see response to comment 4 in this letter (#1509) for an explanation why the preferred alternative cannot proceed until the State Water Resources Control Board finds that adding three new points of diversion to the existing water rights permits held by DWR and the U.S. Bureau of Reclamation will not injure any legal user of the water

DEIRS Ltr#	Cmt#	Comment	Response
			involved. Please see Master Response 30 (Modeling) and 22 (Mitigation, Environmental Commitments, Avoidance and Minimization Measures and Alternative-Specific Environmental Commitments) for more discussion of impact modeling and mitigation for water quality effects.
1509	8	The City of Brentwood's Wastewater Treatment Plant ("WWTP') discharges tertiary treated wastewater into Marsh Creek under the California Regional Water Quality Control Board ("CRWQCB '), Central Valley Region National Pollutant Discharge Elimination System Permit CA0082660 ("NPDES Permit'), Order R5-2013-0106 (see the following link of the NPDES Permit included as part of our comments: http://www .swrcb. ca.govlrwqcb5/board decisions/adopted orders/contra costalr5-2013 - 0106.pdf) . The NPDES Permit imposes stringent effluent limitations necessary to meet applicable water quality standards. Failure to meet the limitations and other provisions in the Order may subject the City to administrative or civil liabilities and/or other enforcement remedies to ensure compliance. The chloride effluent limitation in the NPDES Permit is 344 mg/L effective January 1, 2018, with an interim limit of 517 mg/L. One source of the wastewater chloride comes from our Delta drinking water supplies from CCWD's intake locations at Rock Slough and Old River. The BDCP Draft EIR/EIS modeling indicates increase in chloride during certain months of the year. The WWTP discharge currently exceeds the 344 mg/L limit, so ANY increase in chloride levels in any month in our drinking water sources imposes a significant and detrimental impact to the City and its ability to meet the state-mandated chloride effluent limitations. The City is currently exploring alternatives to achieve the chloride limits, but has yet to identify any feasible means of mitigating increases to the chloride levels due to the BDCP. In addition to effluent chloride limits, the NPDES Permit also imposes stringent limits on temperature, copper, dibromochloromethane, mercury, and other factors/constituents that detrimentally increase as the Delta water quality decreases. The BDCP Draft EIR/EIS fails to adequately analyze or identify any feasible mitigation for the potential impacts from increases in these constituent levels and the associated impacts on the City's WWTP state-mandated effluent limitations.	Please refer to both Master Response 15 (NPDES Permit Holders) regarding identification of, and mitigation for, potentially significant water quality impacts due to increases in salinity-related parameters, including chloride, and to Master Response 14 (Water Quality). Except where economic impacts cause adverse impacts to the physical environment, they are not required topics of analysis in the EIR/EIS. The comment does not identify any physical impacts that may result if the City's cost to operate its Wastewater Water Treatment Plant were to increase as a result of implementing any of the project alternatives, including BDCP (Alternative 4) or the preferred alternative (Alternative 4A).
1509	9	The City of Brentwood provides recycled water for use under the California Regional Water Quality Control Board, Central Valley Region Master Reclamation Permit ("MRP'}, Order R5-2004-0132 (see the following link of the MRP included as part of our comments: http://www.waterboards.ca.qov/centralvallev/board_decisions/adopted_orders/contra_costa/r5-2004-0132.pdf). Like the National Pollutant Discharge Elimination System Permit, the MRP also imposes stringent requirements and limitations necessary to meet applicable required water quality standards, and also includes provisions for administrative or civil liabilities and/or other enforcement remedies for failure to comply with these requirements. These requirements include limits to total dissolved solids, boron, chloride and sodium. A significant source of these constituents comes from the City's surface drinking water supply from the Delta. The BDCP Draft EIRIEIS fails to adequately analyze or identify feasible mitigation for the potential impacts from increases in these constituent levels and the associated impacts on the City's use of recycled water, including potential impact to groundwater and irrigated landscaping.	See the response to comments 1509-6 and 1508-8 regarding the water quality impacts of BDCP (Alternative 4) and the preferred alternative (Alternative 4A) and regulatory requirements for water quality standards. With respect to groundwater issues, please see response to comment 1509-11.
1509	10	The City of Brentwood is permitted for storm water discharges under the California Regional Water Quality Control Board, Central Valley Region National Pollutant Discharge Elimination	The Draft EIR/EIS evaluated potential impacts of the alternatives to dissolved oxygen (in Chapter 8), turbidity (in Chapter 8), and pH (via the screening analysis in Appendix 8C) and determined that the alternatives

DEIRS Ltr#	Cmt#	Comment	Response
		System Permit CAS083313 ("Storm Permit'), Order R5-2010-0102 (see the following link of the Storm Permit included as part of our comments: http://www.waterboards.ca.qov/centralvalley/board_decisions/adopted_orders/contra_costa/r5-2010-0102_npdes.pdf). The Storm Permit imposes receiving water limitations for Delta waterways for dissolved oxygen, turbidity, pH, degradation of aquatic communities and population, and other applicable water quality standards. The BDCP Draft EIR/EIS fails to adequately analyze or identify feasible mitigation for the potential impacts on the City's ability to meet these water standards within the Delta waterways as they relate to the requirements in the Storm Permit.	would have a less than significant impact to these parameters. For water quality constituents that would have a significant impact, mitigation to reduce those impacts have been identified. Please refer to Master Response 15 addressing NPDES discharger concerns regarding changes in the quality of receiving waters, and Master Response 14 (Water Quality) for water quality issues in general.
1509	11	In addition to treated surface water supplies from the Delta, the City of Brentwood also relies on groundwater for our potable water supply. The BDCP Draft EIR/EIS concludes that many of the alternatives will not alter regional patterns of groundwater flow or quality during construction or operation of BDCP conveyance facilities. The BDCP Draft EIR/EIS does not provide adequate justification for this conclusion nor does it provide any analysis of or identify any feasible mitigation for the detrimental localized effects, such as in our City, to groundwater flow or quality. In addition, the Draft EIR/EIS fails to adequately analyze or identify any feasible mitigation for the anticipated seasonal effects to groundwater flow or quality.	As described in Section 7.3.3.2 of Chapter 7, Groundwater, of the EIR/EIS, groundwater impacts are primarily related to dewatering that would occur at the construction sites for the intakes, forebays, pipelines (not the tunnels), and tunnel shafts. Dewatering would not occur within the City of Brentwood under the alternatives. In addition, as demonstrated in the EIR/EIS documentation, the use of cut-off walls will avoid any significant adverse impacts to groundwater from dewatering associated with construction of the preferred alternative.
1509	12	The BDCP Draft EIR/EIS does not adequately consider alternatives or hybrid alternatives with significantly reduced environmental impacts such as increase in recycled water storage and supply. Recycled water is a reasonable and more sustainable, environmentally sound, economical, drought-proof, usable water source whose use is consistent with State policy and does not rely on nor depend on uncertain hydrologic conditions or effects of long-term climate change.	Please note that the BDCP is no longer the preferred alternative. The preferred alternative is now Alternative 4A and no longer includes an HCP/NCCP. Alternative 4A has been developed in response to public and agency input. Please see Master Response 4. 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. Appendix 3A 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. Refer as well to Appendix 1C (Demand Management Measures) in the Final EIR/EIS. Please see Master Response 4 for discussion of the scope of the proposed project and potential alternatives (such as desalination or water storage) that were not carried forward for analysis in the EIR/EIS because they required actions beyond the scope of the proposed project. 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. For more information regarding purpose and need please see Master Response 3.
1509	13	The current drought conditions and actions by the State are reminders that current rules and regulations can be amended in an emergency condition. The BDCP Draft EIR/EIS fails to analyze or identify feasible mitigation for the potential impacts from future drought conditions, or discuss or analyze how future rule changes to undertaken to address drought conditions may impact the City of Brentwood's water supply and quality.	The water supply analysis in the EIR/EIS was conducted using numerical modeling analyses that calculates annual SWP and CVP water allocations for the 82-years of hydrology analyzed in the model simulation. This hydrologic period includes extreme dry periods including 1927 through 1934, 1976 and 1977, and 1987 through 1992. The analysis projects changes in SWP and CVP water allocations. The analysis does not specifically address the availability of other water supplies which would not be affected by the action alternatives. For further clarification, please see Master Response 47 regarding drought and the modeling efforts undertaken in the EIR/EIS documentation.
1510	1	The City of Tracy (Tracy) appreciates the opportunity to comment on the subject document. Tracy is a city with a population of 83,000 and is located within the boundaries of the Delta.	This comment pertains to Alternative 4 (also known as the BDCP). Alternative 4A, also known as California WaterFix, has been developed in response to public and agency input and is the new CEQA Preferred

DEIRS Ltr#	Cmt#	Comment	Response
		Tracy is concerned about the impacts of the Bay Delta Conservation Plan (BDCP) on the city's ability to discharge treated wastewater effluent into Old River and the mitigation of any impacts. Tracy's wastewater is regulated through the National Pollutant Discharge Elimination System (NPDES) permit. Tracy provides tertiary level of treatment to its wastewater effluent and the treated wastewater meets the numeric standards for drinking water when it is discharged into the Delta. The proposed project, with its physical changes in pumping location within the Delta, will change river flow patterns within the Delta. The Draft EIR/EIS does not contain detailed analysis to determine the impacts on Tracy regarding: * Changes in flow in Old River * Changes in water temperature in Old River * Changes in salinity in Old River	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. Effects of the alternatives on salinity levels are described in Chapter 8, Water Quality, and Appendix 8H, Electrical Conductivity, of the 2013 Draft EIR/EIS and Appendix A of the RDEIR/SDEIS. Chapter 8 and in Appendix 8H of presented modeling results characterizing changes in the salinity related parameter electrical conductivity (EC) for the Old River near Middle River and Tracy Bridge. 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). Please refer also to Master Response 15 which addresses the effects of changing Delta water quality (including flow, salinity and temperature) on compliance with discharge requirements in NPDES permits.
1510	2	Changes in flow in Old River - The flow in Old River is extremely important to the City of Tracy as many regulated constituents in the National Pollutant Discharge Elimination System permit allow for dilution. Changes in the flow equate to changes in the concentration of regulated constituents. Based upon the information provided in the Draft EIR/EIS, it is not possible for Tracy to determine the change in flow in Old River and the effects on Tracy's regulated NPDES constituents in its wastewater discharge.	Changes in monthly Old and Middle River (OMR) flows over a wide range of hydrologic conditions under the 2013 EIR/EIS alternatives as compared to the Existing Conditions and No Action Alternative are shown in Tables C-9-1 through C-9-25 in Appendix 5A, Section C, CALSIM II and DSM2 Model Results, of the Final EIR/EIS. For information regarding the effects on NPDES dischargers from water quality changes (including flow), please see Master Response 15.
1510	3	Changes in water temperature in Old River - The changes in flow patterns within the Delta will affect the water temperature in Old River. With decreased flows in the southern Delta water temperatures would likely tend to increase. The City of Tracy is regulated in its National Pollutant Discharge Elimination System permit regarding temperature. The Draft EIR/EIS does not contain information for Tracy to determine the change in water temperatures in Old River and the effects on Tracy's wastewater discharge.	For information regarding the effects on NPDES dischargers from water quality changes (including temperature), please see Master Response 15.
1510	4	Changes in salinity in Old River - The change in the diversion point for the California Department of Resources and the US Bureau of Reclamation pumping plants from the southern Delta to more northerly locations as proposed by the BDCP has unknown effects on salinity in the southern Delta. The City of Tracy is regulated in its National Pollutant Discharge Elimination System permit regarding salinity. The Draft EIR/EIS does not contain information for Tracy to determine the changes in salinity in Old River and the effects on Tracy's wastewater discharge.	This comment pertains to Alternative 4 (also known as the BDCP). Regarding the BDCP, The EC assessment (Impact WQ-11) in Chapter 8, Water Quality, of the 2013 Public Draft EIR/EIS included two Old River locations, one at Middle River the other at Tracy Bridge. For information regarding the effects on NPDES dischargers from water quality changes (including salinity) please see Master Response 15.
1510	5	Stormwater Management - The City of Tracy's stormwater discharges are also regulated under the National Pollutant Discharge Elimination System Phase II Municipal Separate Storm Sewer System (MS4) permit. The proposed project targets urban runoff through Conservation Measure 19 (urban stormwater treatment) which would have significant impacts on our municipal stormwater program. We believe that CM19 has inaccuracies	This comment addresses Alternative 4 (known also as the BDCP). As indicated in Response 1510-1, Alternative 4A is now the Preferred Alternative under CEQA and NEPA. Please note that under Alternative 4A, Conservation Measure 19 (CM19) would not be implemented. Regarding the adequacy of CM19 for the BDCP, numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A

DEIRS Ltr#	Cmt#	Comment	Response
		regarding urban runoff contaminants and water quality regulations, all without any demonstrated benefit to the covered species. This section intends to decrease urban runoff contaminant discharges to help other beneficial uses however there is no technical analysis to demonstrate that potential benefit. While we agree that continued efforts to reduce urban runoff contamination are important, we believe it is not realistic to assume that reduction of just one source could make measurable differences in downstream water quality.	(e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1510	6	The National Pollutant Discharge Elimination System Phase II Municipal Separate Storm Sewer System permit recommends using a regional approach to implement cost effective strategies to reduce contaminants in the Delta. This project does not address other stakeholder discharges nor does it align with said permit requirements. As described in the BDCP, CM19 would be costly to an already over-burdened municipal budget and would require monitoring and assessments for effectiveness of only one source to impacts on water quality. Further, the BDCPs evaluation of water quality impacts in its Effects Analysis is insufficient and lacks clear methods and summaries of effects. Justification for CM19 through evaluation has not been sufficiently provided in the BDCP.	This comment addresses Alternative 4 (known also as the BDCP). As indicated in Response 1510-1, Alternative 4A is now the Preferred Alternative under CEQA and NEPA. For information regarding the effects on NPDES dischargers from water quality changes please see Master Response 15. For information regarding the requirements of and funding for CM19 (which would not be implemented under Alternative 4A), please see Master Response 5. For information on the adequacy of the water quality analysis, please see Master Response 14.
1510	7	The impacts on the City of Tracy from the BDCP need to be evaluated and mitigated. The BDCP should wholly mitigate impacts to affected local agencies caused by the BDCP, including providing funding for the mitigations. The project should not be allowed to proceed with unmitigated impacts on Delta communities. Further, Tracy requests that CM19 be removed because it has not been sufficiently justified and contains inaccuracies which without extensive analysis and inclusion of other contributors cannot fully impact the water quality in the Delta as laid out in the BDCP.	As indicated in previous responses to comments this letter, Alternative 4A is now the Preferred Alternative under CEQA and NEPA, and CM 19 is not included in Alternative 4A. The effects of the alternatives are analyzed in the 2013 Draft EIR/EIS and (for Alternatives 4A, 2D, and 5A) in the RDEIR/SDEIS. For information regarding impacts to the Delta as a place, please see Master Response 24. Regarding funding for mitigation for the BDCP, the water contractors benefitting from the proposed project and their constituents will bear all costs associated with constructing new conveyance facilities and mitigating for the impacts of those facilities. 2013 Draft EIR/EIS Chapter 8, which deals with cost issues, and cost-benefit analysis information are available on the BDCP website. The 2013 DEIR/EIS included funding to Reclamation Districts and other local jurisdictions to replace revenue lost from land acquisition by BDCP for mitigation or conservation purposes. This revenue replacement, called "Property Tax and Assessment Revenue Replacement" is described in the 2013 DEIR/EIS in Section 8.2.3.23 on pages 8-51 and 8-52. This funding was intended to replace all tax revenue to Reclamation Districts that would otherwise be lost when private land is acquired in fee title by a public agency. Although the proposed action (Alternative 4A) no longer includes the BDCP, the property tax and assessment revenue replacement remains a part of the new project. Therefore, any revenue to the City of Tracy from property taxes on land acquired by the project will be replaced. Please see Master Response 5 for more information on project costs and funding. Regarding the statement that the project should not be allowed to proceed with unmitigated impacts, please see Master Response 10. For information regarding the adequacy of CM19 for the BDCP, please see Master Response 5.
1511	1	Our agencies -- collectively the American River Water Agencies ("ARWA") -- supply water to over 1,000,000 people in the American River region. We recognize that significant efforts are necessary to provide reliable water supplies to all of California. Unfortunately, the draft Bay Delta Conservation Plan ("BDCP") presents significant risks to the water supply reliability of our region and contains numerous flaws that undermine its analysis and potential	This comment addresses Alternative 4 (known also as the BDCP) Draft EIR/EIS. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 8. 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

DEIRS Ltr#	Cmt#	Comment	Response
		effectiveness. While the BDCP documents' analysis of climate change is seriously flawed for the reasons set forth below, they highlight the potential for climate change to cause significant disruptions to water supply reliability. In lieu of the piecemeal approach taken by this BDCP proposal, the State should comply with the Delta Reform Act mandate by addressing the effects of climate change on the reliability of water supplies on a statewide basis. This requires a fundamentally broader analysis than provided in the current BDCP documents, including redesigning the operating plans for California's existing water supply infrastructure and reassessing the State's approach to water quality regulations in the face of rapidly rising sea levels and changes in precipitation and runoff.	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. It is recognized that operations in the SWP and CVP reservoirs and other reservoirs probably will be modified in the future in response to climate change and other water resources operations. However, it would be speculative to develop changes in reservoir operations under the No Action Alternative or Cumulative Impact Analysis; and these changes are not consistent with the Project Objectives and Purpose and Need statement for the BDCP Alternatives. Future changes in reservoir operations would require separate engineering environmental analyses under CEQA and NEPA, and revised reservoir operations permits which could affect SWP and CVP operations. For more information on climate change please see Master Response 19. Please see master Response 31 and Appendices 3I and 3J of the Final EIR/EIS regarding the Delta Reform Act.
1511	2	The BDCP's analyses of surface water, groundwater, and socioeconomic impacts to the American River region are inadequate. The BDCP's analysis of impacts to our region is flawed because it assumes that Folsom Reservoir could be operated in a manner that would violate several settlement contracts, as well as water-right permit terms, that apply to the water diverted to storage in the reservoir. The DEIR/EIS's modeling assumes that it would be legally possible for Reclamation to allow Folsom Reservoir to be drained below its water-supply intake -- to "dead pool" as assumed in the BDCP modeling -- in one out of ten years, which would make it impossible for Reclamation to satisfy the settlement contracts and water-right permit terms that protect local communities' water supplies from the reservoir. Because that assumption is invalid, the modeling, and the DEIR/EIS's environmental analysis, is not defensible and does not comply with CEQA and NEPA. The BDCP compounds these errors by also failing to analyze the proposed project's impacts on groundwater and socioeconomics in our region.	There would be no changes to deliveries of non-SWP or non-CVP water rights under the action alternatives as compared to conditions without the alternatives. Changes to deliveries of CVP water service contracts are presented in the "CVP M&I, Sacramento River Hydrologic Region" entries of Appendix 5A, Section C. of the Final EIR/EIS These values include increases in deliveries to the American River watershed to serve projected population growth that would occur by 2030. For more information on water rights please see Master Response 32. Changes in Folsom Lake storage under the action alternatives as compared to the Existing Conditions and No Action Alternative also are presented in of Appendix 5A, Section C of the Final EIR/EIS. The No Action Alternative and all of the action alternatives include climate change and sea level rise assumptions. These changes would result in "dead pool" conditions in SWP and CVP reservoirs upstream of the Delta even without the action alternatives. 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. For more information on modeling please see Master Response 30. Please also see Chapter 16 of the Final EIR/EIS, Socioeconomics.
1511	3	The BDCP improperly assumes that Folsom Reservoir could be operated to preclude water-supply diversions from the reservoir. BDCP's hydrologic modeling is flawed in relation to the American River region for several reasons. It improperly assumes that Reclamation would, and would be allowed, to violate	As already stated in the previous response, there would be no changes to deliveries of non-SWP or non-CVP water rights under the action alternatives as compared to conditions without the alternatives. Changes to deliveries of CVP water service contracts are presented in the "CVP M&I, Sacramento River Hydrologic Region" entries of Tables C-13-1-1 through 13-25-1 in Appendix 5A, Section C. of the Final EIR/EIS These values include increases in deliveries to the American River watershed to serve projected population growth

DEIRS Ltr#	Cmt#	Comment	Response
		numerous contracts and water-right permit terms that protect water supplies in the American River region. That modeling probably underestimates the risks to water supplies from Folsom Reservoir that would occur with BDCP's implementation because it apparently does not account for probable adjustments to CVP operations under the Coordinated Operations Agreement (COA). Finally, contrary to experience in this severely dry year, that modeling assumes that Reclamation, the State Water Resources Control Board (SWRCB) and other agencies would not adjust operations to protect water supplies for municipal purposes. For these reasons, BDCP's hydrologic modeling of Folsom Reservoir operations -- and therefore many of the DEIR/EIS's environmental analyses that are based on that modeling -- is inadequate and inconsistent with CEQA and NEPA. Several of our agencies rely on diversions directly from Folsom Reservoir as their primary water supply. In particular, approximately 500,000 people in the Cities of Folsom and Roseville and San Juan Water District rely on diversions directly from the reservoir through a shared municipal intake. That intake is dry when the elevation of the reservoir drops below approximately 330 feet above mean sea level (msl). That level generally exists when the reservoir has less than 90,000 acre-feet (AF) of water in storage. That intake's capacity is impaired when reservoir levels are well above 330 feet msl. Impairment of the intake's capacity begins when the reservoir's level drops below about 392 feet msl, which is when there is about 328,000 AF of water in storage.	that would occur by 2025. As described in Chapter 5, Water Supply, the Draft EIR/EIS analyses assume continued implementation of the Coordinated Operations Agreement 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 Coordinated Operations Agreement would only occur following detailed analyses, including project-specific CEQA and NEPA analyses. Following adoption of changes to the Coordinated Operations Agreement 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. Please see response to comment 1511-3 regarding climate change. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. For more information on adaptive management please see Master Response 33. Operational criteria are discussed in Master Response 28.
1511	4	Water supplies under many different water rights and contracts depend on the capability of this Folsom Reservoir municipal intake to deliver water. The City of Folsom holds water rights in the American River that date from 1851 and are reflected in CVP settlement contracts with the United States. (Contracts Nos. DA-04-167-eng-330, 14-06-200-4816A, 14-06-200- 5515A.) Under these contracts, the City of Folsom holds rights to 27,000 AF per year (AFY) of water supplies that are not subject to dry-year reductions. San Juan Water District holds water rights in the North Fork of the American River that date from 1852 and are reflected in a CVP settlement contract with the United States. (Contract No. DA-04-167-eng-610.) Under that contract, San Juan holds rights to 33,000 AFY of water supplies that are not subject to dry-year reductions. At the time that Reclamation was applying for its water-right permits for Folsom Reservoir, many local agencies were applying for similar permits that would have had priority over Reclamation's applications under the area-of-origin laws. (Water Code [Section] 11460; State Water Rights Board Decision 893, pp. 5-6 ("D-893").) Those local agencies included the City of Roseville and San Juan's predecessor Fair Oaks Irrigation District. (D-893, p. 5.) Rather than grant those applications and create administrative difficulties with Reclamation, the State Water Rights Board granted Reclamation's applications, but inserted a term in Reclamation's permits requiring that Reclamation satisfy needs in Placer, Sacramento and San Joaquin Counties before exporting American River water appropriated at Folsom Reservoir. (D-893, pp. 51-54.) Specifically, D-893 stated, at page 54: Permits are being issued to the United States to appropriate enough American River water to adequately supply the applicants naturally dependent on that source and availability of water to such applicants is reasonably assured by the terms to be contained in the permits to be issued to the United States restricting exportation of water under those permits insofar as exportation interferes with fulfillment of needs within Placer, Sacramento and San Joaquin Counties. Other applicants in more remote areas must if necessary seek water from other sources.	The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. DWR holds water rights approved by the State Water Resources Control Board but does not have the power or authority to issue water rights to others. Additionally, 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. Importantly, all water exported by the SWP and CVP is the subject of 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. For more information regarding changes in delta exports please see Master Response 44 Also see Master Response 32, Water Rights Issues.

DEIRS Ltr#	Cmt#	Comment	Response
		In its 2006 Delta decision, the Court of Appeal interpreted the relevant water-right permit term -- D-893's Term 14 -- and D-893's discussion of it as follows: [T]he Water Rights Board was explaining that the availability of water to applicants within Placer, Sacramento, and San Joaquin Counties that were naturally dependent on the American River was "reasonably assured" by the permit condition that restricted the export of water appropriated under the American River permits until the needs of those counties were fully met. (State Water Resources Control Board Cases (2006) 136 Cal.App.4th 674, 814.) As adopted in D-893, Term 14 initially set a 1968 deadline for the execution of CVP water-service contracts in the American River region that would receive protection under that term. Reclamation later agreed to extend that deadline to 1975. (See SWRCB Decision 1356, p. 8; Decision Amending And Affirming As Amended, Decision 1356, p. 1.) Five agencies now hold CVP water-service contracts that are intended to provide the water supply reliability mandated by Term 14: (1) the City of Roseville; (2) San Juan Water District; (3) Placer County Water Agency; (4) Sacramento Municipal Utility District ("SMUD"); and (5) Sacramento County Water Agency (via an assignment by SMUD). (See Contract Nos. 14-06-200-3474A (Roseville); 06-07-20-W1373-LTR1 (San Juan); 14-06-200-5082A (PCWA); 14-06-200-5198A (SMUD); 14-06-200-5198B (SCWA).) The City of Roseville and San Juan Water District divert these supplies directly through Folsom Reservoir's municipal intake. Roseville's 32,000-AFY CVP water-service contract is the city's primary water supply.	
1511	5	This history, the pre-1860 water rights that the City of Folsom and San Juan Water District hold, their Central Valley Project settlement contracts that do not allow dry-year reductions and explicit protection for the American River Division CVP water-service contractors that D-893 embedded in Folsom Reservoir's water-right permits require Reclamation to operate the reservoir to protect the American River region's ability to divert water through the reservoir's municipal intake. However, BDCP's hydrologic modeling — and therefore the DEIR/EIS's environmental analysis--is premised on an assumption that Reclamation would be allowed to operate the reservoir so that it would effectively drop below elevation 330' in at least 10% of years and, even more often, would decline to low levels that would impair diversions through the reservoir's municipal intake. The modeling results contained in section C of the DEIR/EIS's Appendix 5A indicate that, in at least a 90% exceedance scenario, the reservoir's storage would be between 90,000 and 92,000 from August through October in the late long term-no action scenario. (DEIR/EIS, Appendix 5A, p. 5A-C94 (Table C-4-1).) This level would be the minimum level for diversion through the municipal intake. The modeling results for the Alternative 4/proposed action scenarios also indicate that Folsom Reservoir's storage would be reduced to extremely low levels at which the municipal intake would be dry or nearly dry for several months during a 90% exceedance scenario. (DEIR/EIS, Appendix 5A, pp. 5A-C110 to 5A-C113.) These results do not indicate how low the reservoir would drop in years drier than a 90% exceedance scenario, as this year has been. These operational scenarios indicate that BDCP assumes that Reclamation would operate, and would be allowed to operate, Folsom Reservoir to eliminate deliveries through the reservoir's municipal intake for at least three months in 10% of years. These scenarios further indicate that BDCP implicitly assumes that Reclamation would operate, and would be allowed to operate, the reservoir so that the approximately 500,000	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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. The Draft EIR/EIS evaluates long-term operations and conditions based upon continued SWP and CVP operations using the monthly-CALSIM II model. It is recognized that different SWP and CVP operations would continue to occur during emergency situations, including flood and drought conditions. Separate project-specific environmental documentation will be completed for those situations. For more information on modeling, please see Master Response 30 and Appendix 5A of the Final EIR/EIS. Please see response to comment 1511-3 regarding project operations. Also see response to comment 1511-4 regarding water rights.

DEIRS Ltr#	Cmt#	Comment	Response
		people that currently rely on the reservoir as their primary water supply would be denied that water supply for those three months in 10% of years. Moreover, because BDCP does not contain any explanation for how Delta flow obligations between the CVP and the State Water Project ("SWP") would be adjusted under the coordinated operations agreement, it also is probable that actual Folsom Reservoir storage levels would be measurably different than as projected in the modeling results. COA currently imposes a greater burden for Delta conditions on the CVP, and NMFS has indicated that Reclamation should prefer releases from Folsom Reservoir to releases from Shasta Reservoir in dry conditions. The 2009 NMFS Biological Opinion on CVP and SWP operations provides that, in years when Shasta Reservoir end of September storage is less than 1.9 million AF (MAF) and operational changes become necessary to meet Delta environmental requirements, the CVP must first increase releases from Folsom Reservoir. (See 2009 NMFS Biological Opinion, pp. 595-596.) Similarly, in years when Shasta Reservoir storage cannot meet both water quality and carryover targets, then spring releases by Reclamation to meet Delta environmental requirements must first come from Folsom Reservoir. (Id. at p. 598.) Therefore, it is distinctly possible that the Alternative 4 proposed project modeling underestimates future demands on Folsom Reservoir to address Delta conditions. That modeling probably underestimates the risk to storage in that reservoir and the risk to communities that rely on the reservoir's municipal intake to provide their primary water supply. Practical experience during this severe drought year indicates that the assumptions embedded in BDCP about how Reclamation would drain Folsom Reservoir to the point that deliveries from its municipal intake would be impossible are incorrect. Beginning in December 2013, Reclamation has sought to manage releases from Folsom Reservoir to at least keep the reservoir's municipal intake wet. In its temporary urgency orders concerning CVP/SWP operations this year, the SWRCB has relaxed Delta outflow standards for, among other reasons, the explicit purpose of allowing Reclamation to maintain more water in upstream reservoirs. (See, e.g., SWRCB, April 18, 2014 Order Modifying An Order That Approved A Temporary Urgency Change In License And Permit Terms And Conditions Requiring Compliance With Delta Water Quality Objectives In Response To Drought Conditions, In the Matter of Specified License and Permits of the Department of Water Resources and U.S. Bureau of Reclamation for the State Water Project and Central Valley Project, p. 9, ¶ 4.) It is likely that the State Water Resources Control Board and Reclamation would take similar actions in future dry years at 90% and higher exceedances in order to maintain the availability of municipal water supplies as long as possible. BDCP's modeling assumes that such adjustments would not occur with climate change and in dry years. BDCP's project description and environmental analysis are fundamentally flawed for these reasons.	
1511	6	The BDCP improperly assumes that Reclamation would not comply with the City of Sacramento's settlement contract. The City of Sacramento relies on Folsom Reservoir for storage and release of American River water that provides a vital water supply for approximately 500,000 residents and other municipal uses in and around the City of Sacramento. Reclamation provides this use of Folsom Reservoir pursuant to an Operating Contract Relating to Folsom and Nimbus Dams and their Related Works and to Diversion of Water by the City of Sacramento, entered into by the City and Reclamation on June 28, 1957, Contract Number 14-06-200-6497	As described in Appendix 5A, Section B, CALSIM II and DSM2 Model Simulations and Assumptions, in the Final EIR/EIS, water deliveries to senior water rights holders in the Delta watershed are completed by the CALSIM II model prior to any SWP and CVP water contract deliveries. The water rights values included in this comment are included in the CALSIM II model assumptions (see Table B-19 in Appendix 5A, Section B). Please see response to comment 1511-4 regarding water rights.

DEIRS Ltr#	Cmt#	Comment	Response
		("Sacramento Settlement Contract"). The Sacramento Settlement Contract is one of the predicates that enabled Reclamation to acquire the water rights necessary to operation of Folsom Reservoir. The Sacramento Settlement Contract was negotiated and approved during the State Water Rights Board's proceeding that resulted in D-893. Along with Reclamation and others, as described above, the City of Sacramento was one of the applicants for American River water in that proceeding. The City filed applications in 1947 and 1954 for rights to divert American River water. Reclamation had its own applications for water for the CVP facilities at Folsom Reservoir. The Sacramento Settlement Contract resolved what the Reclamation Commissioner at the time described as a major operational problem created by the City's and Reclamation's competing claims on the American River. As stated by the Reclamation Commissioner in a June 21, 1957 memorandum recommending approval of the Sacramento Settlement Contract to the Secretary of the Interior: Of primary concern to the United States is the accomplishment of maximum benefits from the operation of Folsom Reservoir. The basic interest of the City is the assurance of a reliable and permanent water supply from the American River to take care of its future requirements. These concepts are embodied in the proposed contract. Also in 1957 (on the same date as the Sacramento Settlement Contract), SMUD assigned to the City of Sacramento SMUD's 1948 applications for consumptive water rights associated with SMUD's planned Upper American River power generation project ("UARP"). In 1958, in D-893, the State Water Rights Board issued four American River water-rights permits to the City of Sacramento, including two permits for the applications filed by SMUD in 1948 and assigned to the City. The State Water Rights Board recognized the importance of the Sacramento Settlement Contract to provide operational certainty that the water under these permits would be available for downstream rediversion by the City of Sacramento after its passage through Reclamation's Folsom and Nimbus facilities. (See D-893, at p. 50.)	
1511	7	Under the Sacramento Settlement Contract, the City of Sacramento agreed to certain rate and volumetric constraints on its diversions of water to which the City is entitled under its water rights, and in exchange, Reclamation agreed to operate both Shasta and Folsom Reservoirs, and their related works, so as to make this water available for diversion by the City. Specifically, Article 9 of the Sacramento Settlement Contract requires Reclamation to (1) make available water from the American River for diversion by the City (up to the quantities specified in Schedule B of the Sacramento Settlement Contract), and (2) operate Shasta Dam and its related works so as not to interfere with the City's diversions on the Sacramento River. With regard to Folsom Reservoir operations, Article 9 goes on to state: The United States will impound and store water in the reservoirs back of Folsom and Nimbus Dams or elsewhere and does hereby agree to discharge and release into the river channel below Nimbus Dam for the use of the City an amount of water which will … aggregate a quantity of water as shown in Schedule B and will so operate Folsom and Nimbus Dams and their related works that water will be discharged and released into the river channel below Nimbus Dam for later downstream diversion by the City at its said American River diversion and filtration facilities at the times and in the quantities shown in Schedule B. The City Settlement Contract is permanent (Article 23), and within the limits of available	Please see response to comment 1511-6. Regarding modeling please see response to comment 1511-5. As described in Appendix 5A, Section B, CALSIM II and DSM2 Model Simulations and Assumptions, in the Draft EIR/EIS, water deliveries to senior water rights holders in the Delta watershed are completed by the CALSIM II model prior to any SWP and CVP water contract deliveries. The water rights values included in this comment are included in the CALSIM II model assumptions (see Table B-19 in Appendix 5A, Section B).

DEIRS Ltr#	Cmt#	Comment	Response
		water supply, the City of Sacramento is not required to accept any pro-rata reduction in Reclamation's deliveries of American River water (Article 27). The Sacramento Settlement Contract requires Reclamation to operate its Folsom Reservoir facilities as necessary to maintain the availability of water for diversion at the City of Sacramento's downstream facilities up to the maximum amounts specified in the contract. However, the BDCP modeling, and the attendant DEIR/EIS analysis, improperly assume that Reclamation will not operate in accordance with the Sacramento Settlement Contract, because this modeling shows Folsom Reservoir declining to "dead pool" levels (90 TAF storage) approximately one out of every ten years. Such operation of Folsom Reservoir would violate Reclamation's obligations under the Sacramento Settlement Contract. Therefore, the BDCP project description and modeling are flawed and the BDCP environmental analysis that relies on that description and modeling is inadequate.	
1511	8	The BDCP's hydrologic modeling is technically flawed and is inadequate to support the DEIR/EIS's NEPA and CEQA conclusions. MBK Engineers has reviewed the BDCP's hydrologic analysis. As discussed in MBK's enclosed technical memorandum (Attachment A), the hydrologic modeling for Folsom Reservoir and the American River Basin contains pervasive errors that render the BDCP's analysis of the proposed project's environmental impacts inadequate. CEQA and NEPA require the DEIR/EIS to support its significance findings with evidence in the record. (See 5 U.S.C.A. [Section] 706(2)(A); Public Resources Code [Section] 21082.2.) Because the BDCP modeling does not adequately or accurately reflect the proposed project's environmental impacts, the DEIR/EIS's NEPA and CEQA conclusions regarding water supply are not supported by the BDCP documents.	The responses to this comment are presented in responses to Comments 1511-9 through 1511-11. For information on modeling and the proposed project please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1511	9	Unreasonable projection of American River conditions under climate change. BDCP assumes that climate change will significantly change inflow into Folsom Reservoir, but that Reclamation and other entities will not change how they operate Folsom Reservoir to adapt. The DEIR/EIS's modeling projects that, in the late-long term, in 10% of years, storage in Folsom Reservoir will be drained to "dead pool" conditions in which most water suppliers who divert water directly from Folsom Reservoir could not divert water through the existing municipal water-supply intake, the lower American River's fisheries would be severely impacted and the City of Sacramento would have serious difficulties diverting water from the Lower American River. These projections are highly improbable, and do not reflect the reasonably likely operation of Folsom Reservoir. As demonstrated by the response to the ongoing drought conditions in 2014, Reclamation, the State Water Resources Control Board, and the fish and wildlife agencies are unlikely to ever permit Folsom Reservoir to be operated in such a manner. Frequent "dead pool" conditions would lead to catastrophic results for both hundreds of thousands of people who rely on Folsom Reservoir and for the aquatic species that rely on summer and fall cold water releases from the reservoir. The BDCP modeling compounds this flaw by ignoring that reservoirs upstream from Folsom are also likely to change their operations in response to climate change, modifying the rate and timing of inflow into Folsom Reservoir. Because BDCP's modeling fails to account for reasonable adaptations in the operation of Folsom Reservoir and other upstream reservoirs in future baseline conditions, the BDCP modeling does not represent the reasonably likely future operation of the CVP and SWP. The significant problems in that modeling ripple through numerous DEIR/EIS chapters that deal with many resource categories because the	Please see response to comment 1511-5 for information on modeling. Please see response to comment 1511-3 for information on operations For more information on climate change please see Master Response 19.

DEIRS Ltr#	Cmt#	Comment	Response
		analysis in those chapters depends on hydrologic modeling	
1511	10	Modeling of the BDCP proposed project scenario that is most likely to be permitted does not account for impacts on the CVP through the Coordinated Operations Agreement. The BDCP documents identify the Alternative 4-H4 "high outflow scenario" as the project alternative most likely to be permitted. The BDCP modeling assumes the SWP would be responsible for the additional Delta outflows required by the high-outflow scenario, but does not then adjust CVP and SWP responsibilities for Delta outflow requirements as required by the COA for the CVP and SWP. The BDCP modeling fails to reflect increases in CVP reservoir releases that probably would be required by COA if demands on SWP supplies were increased as contemplated by the BDCP documents' description of the "high outflow scenario." This error means that the draft DEIR/EIS does not adequately account for the proposed project's impacts on Folsom Reservoir and the many resources in our region that rely on water from that reservoir.	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. As described in Appendix 5A, Section B, of the EIR/EIS flows to meet the Delta outflow criteria based upon the State Water Resources Control Board Decision 1641 and the 2008 USFWS biological opinion are provided by a combination of SWP and CVP reservoir releases and limitations on Delta exports. Under Alternatives 4 H2 and 4 H4, water to support enhanced spring Delta outflow was provided by additional water releases from reductions in Delta exports and releases from Lake Oroville. The enhanced spring Delta outflow was considered to be met outside of the Coordinated Operations Agreement which defines sharing criteria between the SWP and CVP. This would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results. Under Alternative 4A, the enhanced spring Delta outflow was only met by reduction in Delta exports. The preferred alternative does not include a decision tree or associated HOS, but does include a robust collaborative science and adaptive management plan designed to better understand key scientific uncertainties pertaining to Delta fish and operations, and provides a mechanism for adjustments to operations to ensure that the effects of the CVP and SWP are minimized with the new point of diversion. For more information on adaptive management please see Master Response 33. For more information on operational criteria please see Master Response 28. Please also see responses to comments 1511-3 and 1511-4.
1511	11	BDCP obscures project impacts by only analyzing the project with climate change. The Delta Reform Act of 2009 requires BDCP to consider the projected future impacts of climate change and sea level rise. (Water Code [Section] 85320, subd. (b)(2)(C).) However, the BDCP fails to analyze the proposed project's impacts without future climate change as a baseline to allow interested parties and the public to understand how the proposed project's impacts may vary under different climate change scenarios. Future climate change probably will not occur exactly as projected in the BDCP documents, even if these documents' projections represented the best available science, or even a median of it. The result of the BDCP documents' lack of a hydrologic analysis of the proposed project's impacts under existing and near term conditions is to obscure project impacts in the near term, as well as those that could occur in the reasonably likely scenario that climate change does not occur exactly as described in the single climate change scenario assumed in those documents.	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 as compared to the Proposed Project and other action alternatives, the incremental changes appear to be similar under a range of climate change scenarios. Regarding environmental baselines, please see Master Response 1. For more information on climate change please see Master Response 19. Information on modeling can be found in Master Response 30 and Appendix 5A of the Final EIR/EIS. Regarding compliance with the Delta Reform Act please see Master Response 31 and Appendices 3I and 3J.
1511	12	The BDCP modeling contains errors that render modeling for the north Delta diversions inaccurate. The version of CalSim II on which the BDCP modeling relies contains errors that artificially limit, in the modeling, the CVP's and SWP's use of the proposed north Delta diversion. According to MBK Engineers, DWR and Reclamation have fixed these errors in more recent versions of CalSim II, but the corrections are not reflected in the DEIR/EIS's modeling. The DEIR/EIS therefore significantly underestimates the water diverted at the proposed north Delta diversion and overestimates the water diverted from the south Delta	Responses are presented generally in Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when construction of the conveyance facilities is anticipated to be complete. In the EIR/EIS, Alternatives 1 through 5, 7, and 8 included an assumption that provided discretionary operations for the south Delta intakes that would preferentially use those intakes from July through September to improve salinity in the south Delta water. Therefore, the conclusions in the Draft BDCP EIR/EIS

DEIRS Ltr#	Cmt#	Comment	Response
		diversion facilities. This error results in the DEIR/EIS's description of project impacts on various resource categories -- including Delta flows -- being inaccurate and inadequate. Flawed assumptions about American River basin demands. BDCP's modeling contains significant errors concerning late-long term (2060) water demands in the American River Basin. The modeling assumes demands for water from Placer County Water Agency's (PCWA) Middle Fork Project of 64,000 to 81,000 acre-feet per year where PCWA projects future demands by existing contractors at 120,000 acre-feet. The error is significant in relation to the City of Roseville, which projects needing 30,000 acre-feet per year of PCWA water by 2025, but is assumed in the BDCP modeling to only need 5,000 acre-feet per year of that water even by 2060. The modeling also makes the unlikely assumption that water demand in the Basin will increase rapidly between 2010 and 2025, but will then remain unchanged for the next 35 years. Finally, the modeling does not accurately account for how changing release patterns from Folsom Reservoir under the proposed project may affect the City of Sacramento's ability to divert water from the lower American River under the "Hodge Flow" limits contained in its water- right permits. The resulting impacts to the City and its retail and wholesale water users are not described or analyzed.	are as anticipated for these alternatives. In the Final EIR/EIS, the CALSIM II model code was modified to simulate the Proposed Project (Alternative 4A) and Alternatives 2D and 5A 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. The No Action Alternative, Proposed Project, and all other action alternatives were evaluated at 2030 conditions which include population growth projected by existing general plans as compared to the Existing Conditions. The additional population growth would increase water demands, including an increase of water demands in areas North of the Delta (primarily in El Dorado, Placer, and Sacramento counties) of 443,000 acre-feet per year of users of water rights water and CVP water supplies (including increased water demand in the American River watershed upstream of Folsom Lake for senior water rights) as compared to Existing Conditions, as described in Chapter 5, Water Supply, of the EIR/EIS. The increased water demands projected for 2030 under the No Action Alternative, Proposed Project, and all action alternatives are consistent with published urban water management plans and agricultural water management plans for entities that effect the American River watershed flows submitted to DWR by 2012, including approaches for urban water management plans to meet the 20 percent per capita urban water use by 2030 when the conveyance facilities would be operational until 2030. Chapter 30 of the EIR/EIS, describes long-term water demand in the hydrologic regions based on projections from the California Water Plan which includes assumptions that water conservation will be implemented by 2030 in accordance with State law. With respect to the portion of the comment related to "Hodge Flow" limits, the modeling results presented in the Final EIR/EIS indicate that the American River flows below Nimbus Dam under the Alternative 4A are below the Hodge criteria at similar or lower probability than the No Action Alternative under all months except August and September. Even though the flows are below the Hodge criteria for a few additional years under Alternative 4A compared to the No Action Alternative, City of Sacramento deliveries were found to be similar under both scenarios. The frequency at which the American River flows at H street under Alternative 4A are less than 500 cfs is similar in frequency to the conditions under the No Action Alternative. The changes in the Folsom Lake cold water pool and releases under Alternative 4A compared to the No Action Alternative and its fishery effects were analyzed in Chapter 11 of the Final EIR/EIS. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. Please see response to comment 1511-4 regarding water rights.
1511	13	The BDCP improperly assumes that Reclamation could operate the CVP in a manner that would severely impact American River fisheries. Cardno ENTRIX ("Cardno") has reviewed the BDCP's effects analysis for Central Valley steelhead and fall-run Chinook salmon. As discussed in Cardno's enclosed technical memorandum (Attachment B), the DEIR/EIS's effects analysis is flawed and fails to disclose significant adverse impacts on covered species and their habitat in the lower American River. By failing to disclose the BDCP's significant impacts, the DEIR/EIS does not comply with NEPA and CEQA. As discussed in Cardno's enclosed technical memorandum, water temperatures in the lower American River already exceed threshold tolerances for anadromous fish during critical life stages. Because these steelhead and fall-run salmon are already in stressful temperature conditions, small increases in water temperatures will cause significant adverse impacts to these species. The DEIR/EIS projects in the late-long term, water temperatures will regularly exceed threshold temperature criteria for anadromous fish. The DEIR/EIS applies a significance criteria of a < 5% increase in mean monthly water temperature to compare late	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. Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP), responses are presented generally in Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when construction of the conveyance facilities is anticipated to be complete. The increase in water temperatures in the American River are due to low storage elevations in Folsom Lake in drier years, including years during which the CALSIM II model results indicate that Folsom Lake would be at "dead pool" conditions with surface water elevations that would affect releases from Folsom Lake to the American River. 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

DEIRS Ltr#	Cmt#	Comment	Response
		long-term conditions with and without the plan. Applying this criteria, the BDCP concludes the plan will not cause significant adverse temperature impacts to covered species. However, this conclusion is improper and obscures actual conditions for covered species because increased water temperatures will jeopardize the continued existence of these species. The BDCP fails to disclose and mitigate these significant impacts.	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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. The project proponents have been assured by CVP operators that they can operate Folsom Reservoir under the proposed project in a manner consistent with baseline conditions. While we agree that small changes (<5%) in water temperature during already elevated temperatures could have an effect to the species, small differences between baseline and Alternative 4 scenarios in mean temperature model outputs are within the noise of the model. Therefore, we cannot conclude that effects would occur during Plan implementation. Please see response to comment 1511-14 for more information. For more information on adaptive management please see Master Response 33. Operational criteria are discussed in Master Response 28.
1511	14	The conclusions in the DEIR/EIS are invalid because they are based on modeling that is not representative of future conditions. Cardno's technical memorandum explains that under the BDCP, in the late long-term, entire year classes of steelhead are likely to be lost and large fish kills of pre-spawning fall-run salmon are likely to occur. However, the BDCP acknowledges the federal fish agencies are unlikely to allow Reclamation and DWR to operate the CVP and SWP in this manner. Accordingly, the BDCP fails to present a reasonable and accurate representation of future conditions.	For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. Operational criteria are discussed in Master Response 28.
1511	15	The BDCP improperly fails to incorporate the Joint Federal Project at Folsom Reservoir in baseline conditions. NEPA and CEQA require an environmental document to describe prevailing environmental conditions to define a baseline against which predicted effects will be described and quantified. (40 C.F.R. [Section] 1502.15; Cal. Code Regs., tit. 14, [Section] 15125, subd. (a); see Neighbors for Smart Rail v. Metro Line Construction Authority (2013) 57 Cal.4th 439, 447.) The document must employ a realistic baseline that gives the public and decision makers the most accurate picture practically possible, and it may incorporate reasonably expected changes that will take effect before the project would go into operation. (Neighbors for Smart Rail, supra, 57 Cal.4th at pp. 449, 452-453.) Appendix 3D of the DEIR/EIS describes the BDCP's existing, no action alternative, and cumulative impact conditions. One condition affecting the water supply analysis under the no action alternative and cumulative impact conditions is the Folsom Dam Safety and Flood Damage Reduction Project (the "Joint Federal Project"), an ongoing project that Reclamation, U.S. Army Corps of Engineers, Sacramento Area Flood Control Agency, and Central Valley Flood Protection Board are jointly undertaking. Appendix 3D describes the Joint Federal Project: The project includes the Joint Federal Project Auxiliary Spillway, seismic improvements to	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and the Draft BDCP. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. As described in Appendix 3D of the EIR/EIS, the Folsom Dam project referred to in this comment was considered in the cumulative impact analysis because the project had been initiated at the time of the Notice of Preparation and Notice of Intent. The change in operations of Folsom Dam following the construction project is currently undergoing NEPA and CEQA analysis, and was considered to be too speculative to be included in the cumulative impact analysis. Following completion of the Folsom Dam studies, Reclamation will need to consider if additional changes would be required to the operations of CVP, and the potential effects on the proposed project operations. The "dead pool" issue under the No Action Alternative is associated with climate change effects on reservoir operations that were included in the No Action Alternative (ELT at 2025 and LLT at 2060) and were used to compare the action alternatives to No Action Alternative under future conditions. This allowed the effects of each alternative to be discussed under future (assumed) conditions that would occur with or without the Project, including climate change, sea level rise, and population growth. 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

DEIRS Ltr#	Cmt#	Comment	Response
		the Main Concrete Dam and Mormon Island Auxiliary Dam (MIAD), static improvements to earthen structures, security upgrades, replacement of the Main Concrete Dam spillway gates, and a 3.5-foot (ft.) raise to all Folsom Facility structures. Construction on the auxiliary spillway began in 2008 and is expected to be completed in 2015. The modifications to the dam would allow for the release of water sooner than is now possible, with the potential for higher releases should the downstream levees be improved to accommodate the increased flows. These larger, earlier releases from Folsom Reservoir would create and conserve flood storage space based on projected reservoir inflows resulting from a major storm impacting the upper American River watershed. However, the modifications would be operated using existing criteria until the completion of a revised Folsom Water Control manual and supporting supplemental environmental compliance documentation. The manual would be completed one year prior to completion of proposed structural modifications at Folsom Dam and Reservoir, at which time the full potential benefits of the proposed modifications would be realized. (See DEIR\EIS, App. 3D, p. 99.) The DEIR\EIS's discussion of the Joint Federal Project is vague, but it appears that, because the revised Folsom Water Control manual was not complete when the BDCP Notice of Preparation was filed in 2010, BDCP did not consider the Joint Federal Project's reasonably foreseeable changes to Folsom Reservoir operations. Since 1999, however, federal law has required that, upon completion of the Joint Federal Project, the variable space allocated to flood control within Folsom Reservoir will be reduced by 70,000 acre-feet. (See Water Resources Development Act of 1999, Pub. L. No. 106-53 (Aug. 17, 1999) 113 Stat. 273, 274, [Section] 101, subd. (a)(6)(B).) Given that the total water storage capacity in Folsom Reservoir is approximately 966,000 acre-feet, the 70,000 acre-feet that could be made available by the control manual update could affect the operation of the reservoir significantly. For example, that 70,000 acre-feet of additional carryover storage could be very significant in dry years such as this year, during which reservoir storage declined to approximately 162,000 acre-feet, which was only approximately 70,000 acre-feet above the minimum level at which the municipal water-supply intake in the reservoir would be operational. Given that BDCP's hydrologic modeling indicates that Folsom Reservoir may be drained to "dead pool" levels from which municipal and industrial direct deliveries through the municipal intake would not be possible in 10% of years in the future, the additional storage that the Joint Federal Project will make available will be extremely important. Because since 1999 federal law has required a reservoir operations manual update to account for the Joint Federal Project, that update is reasonably foreseeable. Given this, and that the BDCP documents use projected conditions in 2060 as the basis for their environmental analysis, omitting the Joint Federal Project and associated reservoir control manual update from the BDCP modeling and its cumulative effects analysis renders the BDCP documents inadequate to satisfy NEPA and CEQA.	drought operations during the ongoing drought. Instead the model includes average operating criteria for all dry periods, and does not reflect specific changes. Under the Existing Conditions, No Action Alternative, and all action alternatives, Folsom Lake minimum storage was assumed to be 90,000 acre-feet, corresponding to an elevation of 320 feet (to allow for water releases). This condition was simulated to occur in 3 years for the Existing Conditions (CEQA baseline) and was simulated in 6 years for the No Action Alternative (ELT) and in 9 years for the No Action Alternative (LLT). Because the CALSIM model used the same assumed reservoir operations rules for each alternative, the comparison between alternatives and the No Action Alternative result in changes related to the action alternatives implementation only. Increased water demand that occurs under the No Action Alternative and all action alternatives also effect operations of Folsom Lake with or without the Project. The No Action Alternative, Proposed Project, and all other action alternatives were evaluated at 2030 conditions which include population growth projected by existing general plans as compared to the Existing Conditions. The additional population growth would increase water demands, including an increase of water demands in areas North of the Delta (primarily in El Dorado, Placer, and Sacramento counties) of 443,000 acre-feet per year of users of water rights water and CVP water supplies (including increased water demand in the American River watershed upstream of Folsom Lake for senior water rights) as compared to Existing Conditions, as described in Chapter 5, Water Supply, of the EIR/EIS. The increased water demands projected for 2030 under the No Action Alternative, Proposed Project, and all action alternatives are consistent with published urban water management plans and agricultural water management plans for entities that effect the American River watershed flows submitted to DWR by 2012, including approaches for urban water management plans to meet the 20 percent per capita urban water use by 2030 when the conveyance facilities would be operational until 2030. 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 recent 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. For more information on drought please see Master Response 47. For more information regarding modeling results comparison between FEIRS for Alternatives 2D, 4A, and 5A to RDEIR/SDEIS results please see Appendix 5F of the FEIR/EIS. For more information regarding environmental baselines please see Master Response 1. For information on flood management requirements please see Appendix 6A of the Final EIR/EIS. Seismic issues are also discussed in Master Response 16.
1511	16	The DEIR/EIS inappropriately fails to analyze groundwater impacts in this region. The DEIR/EIS treats the entire Sacramento Valley as a single groundwater basin and conducts, at most, a perfunctory analysis of the impacts of the BDCP on that basin. This analysis, however, fails to consider several facts about groundwater conditions within the	The groundwater analysis in the EIR/EIS in the Sacramento Valley is conducted at a regional scale because there are no construction activities or direct involvement by water agencies in implementation of the action alternatives. Small incremental differences between the alternatives and the Existing Conditions and the No Action Alternative of 2 percent over the entire Sacramento Valley would be within the accuracy of the analysis. The referenced sentence in the comment related to "full" groundwater basin conditions is referring

DEIRS Ltr#	Cmt#	Comment	Response
		Sacramento metropolitan region that make this region unique within the Sacramento Valley and therefore subject to potential impacts from BDCP implementation that would be different from the rest of the Valley. The DEIR/EIS's failure to consider the American River region's specific circumstances and the specific impacts that BDCP could cause here makes the DEIR/EIS inadequate. The DEIR/EIS states that there could be "minor decreases" in water supply availability to CVP water users in the Sacramento Valley service area as a result of BDCP's implementation. (See DEIR/EIS, p. 7-32.) This minor change is estimated at approximately 50,000 acre-feet per year, which constitutes approximately 2% of the current annual average groundwater production quantity in the Sacramento Valley. (Ibid.) The DEIR/EIS concludes that, because a "2% increase in groundwater use in the Sacramento Valley to make up for any shortfalls in surface water supply is not anticipated to substantially impact the groundwater resources as long as the additional pumping is not concentrated in a particular area of the valley," it did not include a groundwater analysis of the Sacramento Valley Groundwater Basin. (Id., p. 7-32.) The DEIR/EIS's omission of any analysis of BDCP's impacts on the Sacramento metropolitan region's unique groundwater resources is improper, and the scant information that is provided contains several inaccuracies that result in a misleading and incomplete analysis of BDCP's impacts to groundwater resources. (DEIR/EIS, pp. 7-2, 7-12 to 7-15, 7-31 to 7-32.) Several grounds support this conclusion.	to the overall condition of the entire Sacramento Valley groundwater basin, as described in Chapter 7 of the EIR/EIS). Because CVP municipal and industrial water contract deliveries in the American River watershed over the long-term (including during drier years) were similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change and sea level rise), no changes in groundwater conditions were assumed under these alternatives as compared to the No Action Alternative. For more information on groundwater and potential impacts please see Chapter 7 of the Final EIR/EIS.
1511	17	The DEIR/EIS does not recognize how this region is different from much of the rest of the Sacramento Valley. While much of the Sacramento Valley has long relied almost entirely on surface water sources, this region historically has relied extensively on groundwater, resulting in some drawdown of aquifers and increasing this region's sensitivity to reduced surface-water deliveries now. Groundwater in this region — specifically, the North and South American Sub- basins as defined in DWR's Bulletin 118 — historically has been overdrawn to serve intensive municipal and industrial uses that do not exist in other parts of the Sacramento Valley. Since at least the 1950s, groundwater extraction was concentrated in the central part of the North Area basin, which constitutes the southern one-third of the North American Sub-basin ("North Area Basin"). (Sacramento Groundwater Authority (SGA) Basin Management Report, at p. 4 (2013), available at http://www.sgah2o. org/sga/files/pub-bmreport-2013.pdf.) This has resulted in a cone of depression. (Ibid.) No such impacts to the groundwater basin have been observed, however, in the western part of the North Area Basin, which historically has relied almost exclusively on surface water for supply. (SGA Water Accounting Framework -- Phase III Effort,at p. 5 (2010), available at http://www.sgah2o.org/sga/files/WAF-PhaseIII-Final-9-28-10.pdf.) A similar condition exists in the South American Sub-basin ("Central Area Basin") where a cone of depression has developed and is centered proximate to the City of Elk Grove. (Sacramento Central Groundwater Authority (SCGA) Basin Management Report, at pp. 14-16 (2010), availableat http://www.scgah2o.org/documents/2009-2010%20Basin%20Management%20Report%20v2.pdf)	Deliveries of senior water rights in the American River watershed would be the same under the No Action Alternative and all action alternatives, and greater than under the Existing Conditions due to projected population growth that would occur with or without the Project. In additions deliveries of CVP water contract water in the American River watershed over the long-term (including during drier years) would be similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change, sea level rise, or population growth). Therefore, no changes in groundwater conditions were assumed to occur under the action alternatives as compared to the No Action Alternative. Reductions in deliveries of CVP water contract water in the American River watershed under the No Action Alternative are projected to occur as compared to Existing Conditions due to climate change, sea level rise, and population projections. These reductions also would occur under the action alternatives as compared to the Existing Conditions. Reduced CVP water deliveries would result in changes in groundwater conditions, including reduced groundwater elevations. However, changes associated with increased potential for groundwater withdrawals under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project. See response to Comment 1511--16 above.
1511	18	There are significant contaminant plumes in this region's groundwater aquifers that could be mobilized by any significant increase in groundwater pumping. These plumes, which are present from source areas at the former McClellan Air Force Base, the former Mather Air Force Base, Aerojet, the Union Pacific Railroad site in the City of Sacramento, and a number of military and industrial sites located in north and central Sacramento County, are not present in other parts of the Valley. (See SGA Basin Management Report, p. 25 and SCGA Basin Management Report, p. 29.) The DEIR/EIS appears to assume that any impacts from a	Deliveries of senior water rights in the American River watershed would be the same under the No Action Alternative and all action alternatives, and greater than under the Existing Conditions due to projected population growth that would occur with or without the Project. In additions deliveries of CVP water contract water in the American River watershed over the long-term (including during drier years) would be similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change, sea level rise, or population growth). Therefore, no changes in groundwater conditions, including groundwater quality, were assumed to occur

DEIRS Ltr#	Cmt#	Comment	Response
		2% increase in groundwater pumping will be felt uniformly throughout the Valley and can be avoided simply by ensuring that pumping "is not concentrated in a particular area." (DEIR/EIS, p. 7-32.) This is simply not the case given that this region is unique within the Sacramento Valley.	under the action alternatives as compared to the No Action Alternative. Reductions in deliveries of CVP water contract water in the American River watershed under the No Action Alternative are projected to occur as compared to Existing Conditions due to climate change, sea level rise, and population projections. These reductions also would occur under the action alternatives as compared to the Existing Conditions. Reduced CVP water deliveries would result in changes in groundwater conditions (including groundwater quality), including reduced groundwater elevations. However, changes associated with increased potential for groundwater withdrawals under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project. The portion of the comment related to overall conditions in the Sacramento Valley is related to the groundwater analysis in the EIR/EIS for the Sacramento Valley that was conducted at a regional scale because there are no construction activities or direct involvement by water agencies in implementation of the action alternatives. Small incremental differences between the alternatives and the Existing Conditions and the No Action Alternative of 2 percent over the entire Sacramento Valley would be within the accuracy of the analysis. The referenced sentence in the comment related to "full" groundwater basin conditions is referring to the overall condition of the entire Sacramento Valley groundwater basin, as described in Chapter 7 of the EIR/EIS). Please see response to comment 1511-16.
1511	19	The DEIR/EIS misstates the existing conditions in this region. The draft EIR/EIS states several times that northern Sacramento County shows "early signs of persistent drawdown." (DEIR/EIS, pp. 7-13, 7-31.) While this region's groundwater was drawn down historically, the DEIR/EIS's statement about current conditions is not accurate and has not been true for more than a decade. The SGA, a joint powers authority formed in 1998 to manage the Sacramento region's groundwater basin north of the American River, has observed that since the mid-1990s, groundwater levels have stabilized and, in some cases, have slightly increased. (SGA Basin Management Report, p. 18.) SGA's 2013 management report states that groundwater pumping from the North American Sub-Basin was lower than any year since 1983. (SGA Basin Management Report, at p. 11.) While some of the reduced demand can be attributed to wetter than normal hydrologic conditions, much of the improved conditions can be explained by increased intentional groundwater management, including expanded conjunctive use facilities and operations in the basin. (SGA Water Accounting Framework White Paper, p. 3 (2006), available at http://www.sgah2o.org/sga/files/WAF_White_Paper_final_6-31-06_ reduced.pdf.) Local agency actions aimed at managing contaminant plumes that migrated north of the American River also have contributed to the long-term sustainability of the groundwater basin. (See SGA White Paper, p. 4.) While the draft EIR/EIS does not comment on groundwater conditions in central Sacramento County it should be noted that the Sacramento Central Groundwater Authority (SCGA), a joint powers authority formed in 2006 to manage the Sacramento region's groundwater basin between the American and Cosumnes rivers, has made similar observations of improved conditions related to hydrologic year type and expanded conjunctive use facilities and operations within their basin. Both local and regulatory agency actions aimed at managing contaminant plumes within the basin have also resulted in long-term sustainability of the groundwater basin. A number of municipal signatories to this letter rely on groundwater from the Cental Basin. The DEIR/EIS does not, but needs to, address impacts on the Central Basin	As noted in Chapter 7 of the Final EIR/EIS, early signs of persistent drawdown are currently noted under the historic conditions and Existing Conditions discussions. Deliveries of senior water rights in the American River watershed would be the same under the No Action Alternative and all action alternatives, and greater than under the Existing Conditions due to projected population growth that would occur with or without the Project. In additions deliveries of CVP water contract water in the American River watershed over the long-term (including during drier years) would be similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change, sea level rise, or population growth). Therefore, no changes in groundwater conditions, including groundwater quality, were assumed to occur under the action alternatives as compared to the No Action Alternative. Reductions in deliveries of CVP water contract water in the American River watershed under the No Action Alternative are projected to occur as compared to Existing Conditions due to climate change, sea level rise, and population projections. These reductions also would occur under the action alternatives as compared to the Existing Conditions. Reduced CVP water deliveries would result in changes in groundwater conditions (including groundwater quality), including reduced groundwater elevations. However, changes associated with increased potential groundwater withdrawals under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project.

DEIRS Ltr#	Cmt#	Comment	Response
1511	20	The DEIR/EIS does not account for the importance of surface-water deliveries from Folsom Reservoir to this region and the consequent impacts on this region's groundwater if that reservoir were to be drained as frequently and as low as projected in the DEIR/EIS. The DEIR/EIS projects that Folsom Reservoir would be drained to a level too low to support municipal and industrial deliveries from the reservoir's water-supply intake. As discussed elsewhere in these comments, operating the reservoir in this manner would be illegal and inappropriate. Operating the reservoir in this way also would cause indirect impacts on this region's groundwater that the DEIR/EIS does not discuss. As discussed in SGA's 2013 management report, increased conjunctive use of surface water from the reservoir and from water released from the reservoir to the lower American River has enabled water agencies to reduce groundwater pumping and helped to stabilize the basin's groundwater. For example, Sacramento Suburban Water District has been able to reduce its prior 100% reliance on pumped groundwater by purchasing and using surface water diverted directly from Folsom Reservoir (under Placer County Water Agency's water rights and a Warren Act contract) and from the lower American River (under a contract with the City of Sacramento). Dramatic reductions in the amount of water stored in Folsom Reservoir would increase demands for, and use of, groundwater in this region. The DEIR/EIS fails to account for this fact in describing the no action alternative conditions and the conditions that would result from the implementation of action alternative. The DEIR/EIS's failure to analyze these issues is a glaring omission in that document's analysis, given its dramatic projection of Folsom Reservoir's future condition.	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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the action alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. Deliveries of senior water rights in the American River watershed would be the same under the No Action Alternative and all action alternatives, and greater than under the Existing Conditions due to projected population growth that would occur with or without the Project. In additions deliveries of CVP water contract water in the American River watershed over the long-term (including during drier years) would be similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change, sea level rise, or population growth). Therefore, no changes in groundwater conditions, were assumed to occur under the action alternatives as compared to the No Action Alternative. Reductions in deliveries of CVP water contract water in the American River watershed under the No Action Alternative are projected to occur as compared to Existing Conditions due to climate change, sea level rise, and population projections. These reductions also would occur under the action alternatives as compared to the Existing Conditions. Reduced CVP water deliveries would result in changes in groundwater conditions, including reduced groundwater elevations. However, changes associated with increased potential for groundwater withdrawals under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project. The greatest potential for impacts to groundwater will be during the construction of the intake facilities, pump stations, forebays, and tunnel shafts. It is anticipated that construction of these facilities will require some type of groundwater dewatering immediately adjacent to the construction site while construction activities are underway. For the tunneling work itself, it is anticipated that groundwater presents minimal risk to the project since the tunneling work will be conducted with equipment that is specifically designed to operate under high groundwater conditions. Hence localized dewatering along the tunnel alignment will not be conducted as a regular component of the tunnel mining operation. Localized dewatering along the alignment will be used only in the event of certain maintenance activities, or specialized construction conditions. Geotechnical exploration work is planned in advance of dewatering well installation so that the groundwater regime at each project site can be better understood, which in turn will allow each dewatering system to be uniquely designed and operated in order to limit construction-related effects to the groundwater user adjacent to the construction sites. DWR plans to have a groundwater monitoring and management plan (Plan) in place before construction begins. The Plan will include a process by which baseline groundwater conditions are established along the project corridor, defining groundwater monitoring during and after construction, and establishing mitigation measures to be utilized. The establishment of groundwater baseline information will allow DWR and all relevant parties to develop information on groundwater conditions and consumptive usage patterns. This information will aid in determining if and when any adverse project-related effects to the groundwater during construction activities occur. The baseline monitoring process may include determining variables such as seasonal changes in groundwater level elevations and water quality, the interface of groundwater with surface water and drainage, consumptive usage patterns established by municipal, domestic, and agricultural wells, and crop utilization of the groundwater. The timing, frequency, and duration of the monitoring during and after construction would be determined before construction begins and will be dependent, in part, on the results of the pre-construction monitoring and the documented use of each resource.

DEIRS Ltr#	Cmt#	Comment	Response
			If a construction-related effect is identified to have occurred, the magnitude, significance, and anticipated duration of the effect will be determined and an appropriate mitigation measure will be utilized. Mitigation measures that may be considered could include deepening of existing wells, the installation of new wells, or providing an alternate source of temporary water. The most appropriate mitigation methodology applied will be determined on a case by case basis in conjunction with the impacted party. For more information see Mitigation Measure GW-1 in Appendix A Chapter 7 Groundwater. Please also see response to comment 1511-16 for more information on Folsom Reservoir and operations.
1511	21	The DEIR/EIS fails to account for the effects that reduced Folsom Reservoir storage and BDCP's implementation would have on this region's contaminant plumes. The presence of these plumes is an ongoing concern for both Sacramento Groundwater Authority and Sacramento Central Groundwater Authority and its member water agencies whose service areas encompass the North Area Basin (SGA Basin Management Report, p. 1) and the South Area Basin (SCGA Basin Management Report, p. 4). As discussed above, the reductions in Folsom Reservoir storage projected in the DEIR/EIS probably would result in increased groundwater pumping in this region. That increased pumping could cause migration of this region's contaminant plumes. The DEIR/EIS, however, does not discuss this issue at all. The DEIR/EIS therefore is inadequate.	Deliveries of senior water rights in the American River watershed would be the same under the No Action Alternative and all action alternatives, and greater than under the Existing Conditions due to projected population growth that would occur with or without the Project. In additions deliveries of CVP water contract water in the American River watershed over the long-term (including during drier years) would be similar under the action alternatives as compared to the No Action Alternative (which reflects the effects of the action alternatives without changes due to climate change, sea level rise, or population growth). Therefore, no changes in groundwater conditions, including groundwater quality, were assumed to occur under the action alternatives as compared to the No Action Alternative. Reductions in deliveries of CVP water contract water in the American River watershed under the No Action Alternative are projected to occur as compared to Existing Conditions due to climate change, sea level rise, and population projections. These reductions also would occur under the action alternatives as compared to the Existing Conditions. Reduced CVP water deliveries would result in changes in groundwater conditions (including groundwater quality), including reduced groundwater elevations. However, changes associated with increased potential for groundwater withdrawals under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project. Please see response to comment 1511-20.
1511	22	The DEIR/EIS inappropriately fails to analyze socioeconomic impacts in this region. NEPA requires that an EIS address a project's socioeconomic effects. (40 C.F.R. [Sections] 1502.16; 1508.8; U.S. Bureau of Reclamation, Reclamation's NEPA Handbook (Feb. 2012) pp. 8-15, 8-17.) Similarly, CEQA requires that an EIR address a project's socioeconomic effects that generate environmental consequences. (CEQA Guidelines [Sections] 15064(e), 15131; Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1204-1213.) The DEIR/DEIS fails to properly analyze BDCP's socioeconomic impacts to this region. As the North State Water Alliance letter points out, the DEIR/EIS is based on operations of Folsom Reservoir--specifically, it relies on hydrologic modeling that assumes Reclamation would, and would be authorized to, operate Folsom Reservoir so that it would be incapable of providing water supplies to communities adjacent to the reservoir in approximately 10% of years. Yet the DEIR/EIS neither describes nor analyzes the socioeconomic effects of operating Folsom Reservoir in that manner. Any scenario in which the reservoir would be unable to provide the primary water supply for the 500,000 people who currently rely on reservoir water is likely to have significant socioeconomic impacts. The DEIR/EIS's socioeconomic analysis, however, is limited to the statutory Delta. (DEIR/EIS, pp. 16-1 to 16-29.) It contains no analysis of the socioeconomic effects within the Sacramento region of Folsom Reservoir operations that it assumes Reclamation would implement in implementing BDCP or of the indirect environmental impacts resulting from	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. 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. Therefore, it is anticipated that Reclamation would implement actions during these conditions, such as they implemented during the recent drought emergency, to continue to deliver water from Folsom Lake. However, it also anticipated that during drought emergencies, all water users in California would be required to reduce overall water consumption, including groundwater. 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the action alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial due to the Project. Changes in Folsom Lake storage under the No Action Alternative and action alternatives as compared to Existing Conditions due to climate change, sea level rise, and population growth that would

DEIRS Ltr#	Cmt#	Comment	Response
		those socioeconomic effects. The DEIR/EIS therefore does not comply with NEPA or CEQA.	occur with or without the project are not caused by the action alternatives/Project and are not mitigated under the Project. Please see response to comment 1511-20. Please also see Chapter 16 of the Final EIR/EIS concerning socioeconomics.
1511	23	The BDCP and DEIR/EIS contain numerous technical flaws that violate NEPA and CEQA and undermine the draft documents' usefulness. The BDCP and DEIR/EIS suffer from numerous technical flaws. The most significant of these flaws is that the documents are so disorganized and confusing that they fail their fundamental purpose -- to inform the public and decision-makers about the proposed plan and its potential effects. These problems are compounded by an inadequate project description, impermissibly mixed levels of specificity, and flaws in the BDCP's environmental baseline and climate change analysis. Taken together, these technical flaws violate NEPA and CEQA and undermine the documents' usefulness.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included Conservation Measures 2 to 21. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include Conservation Measures 2 through 21. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. 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. As explained in Master Response 2, the EIR/EIS analysis of conveyance facilities in the Proposed Project fulfills the CEQA and NEPA requirements for project-level review. A greater level of detail is not necessary for the lead agencies, decision-makers, or the public to understand the environmental impacts of the Proposed Project. For more information on public outreach and transparency please see Master Response 40 and 41, respectively. For more information on environmental baselines please see Master Response 1. Please also see Master Response 19, which addresses the discussion in the EIR/EIS of climate change.
1511	24	The BDCP and DEIR/EIS are inadequate because they are so disorganized and confusing that they do not serve the fundamental function of informing the public and decision-makers. NEPA requires that an EIS "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts" to the environment. (40 C.F.R. [Section] 1502.1.) Thus, an EIS must be "concise, clear, and to the point." (40 C.F.R. [Section] 1502.1.) Further, it "must 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 Envt'l Council v. Kunzman (9th Cir. 1987) 817 F.2d 484, 494.) Similarly, under CEQA, an EIR's function is "to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been taken into account." (Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412, 449.) For the EIR to serve these goals, it must "be written in plain language . . . so that decision-makers and the public can rapidly understand the documents." (Cal. Code Regs., tit. 14, [Section] 15140.) Accordingly, the DEIR/EIS must convey the required information clearly and present it "in such a matter that the foreseeable impacts of pursuing a project can be understood and weighed." (Vineyard Area Citizens for Responsible Growth, Inc., supra, 40 Cal.4th at p. 449.) The DEIR/EIS is legally inadequate as an informational document because it is poorly organized and very difficult to read, making it virtually incomprehensible to decision-makers	Please see Master Response 38 regarding the length and complexity of the environmental document. Please also see response to comment 1511-23. This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. Alternative 4A, the Proposed Project, no longer includes a decision tree, but does include a robust collaborative science and adaptive management plan designed to better understand key scientific uncertainties pertaining to Delta fish and operations, and provides a mechanism for adjustments to operations to ensure that the effects of the CVP and SWP are minimized with the new point of diversion.

DEIRS Ltr#	Cmt#	Comment	Response
		and the public alike. It is at turns so general, and at others so technical, as to provide no meaningful information about many of the project's environmental impacts. The confusing nature of the document itself -- its extreme length, numerous cross-references, and contradictory statements -- prevents the meaningful evaluation of BDCP's environmental consequences. The same is true for the BDCP itself. It suffers from these same deficiencies and, as such, is rendered unsuitable for the public review and comment process required by ESA and the NCCPA. (See 16 U.S.C. [Section] 1539(a)(2)(B); Fish & Game Code [Section] 2815.) A few examples illustrate this point. The documents' discussion of the crucial "decision tree" process is perhaps the best example. The proposed project is Alternative 4. Alternative 4 is analyzed as potentially operating under four different "Scenario H" Delta-outflow scenarios, one of which would be chosen -- after the proposed diversion facilities are built -- through a "decision tree" process. However, the DEIR/EIS states that, "Scenario H could be implemented with any other project alternative in order to create a hybrid alternative within the bookends created by the entire range of alternatives addressed in the EIR/EIS." (DEIR/EIS, p. 3-202.) Accordingly, there apparently are at least 36 different possible project alternatives "within the bookends," even though the environmental impacts of only Alternative 4 are actually analyzed in combination with the four different Scenario H possibilities. Stating that the ultimate project could be within the "entire range of alternatives" is an admission that the DEIR/EIS and BDCP documents do not adequately identify, or analyze the environmental impacts of, what may actually be permitted and built. This is a fatal deficiency of the project description. Similarly, it is nearly impossible to understand the DEIR/EIS's analysis of the proposed-project Alternative 4's impact on fish -- including listed salmonids that are among the species to be benefitted by BDCP -- because that discussion is so filled with, and dependent on, cross- references to the DEIR/EIS's fisheries analysis for Alternative 1A. Alternative 1A reflects a much larger north Delta diversion than Alternative 4. (DEIR/EIS, [Section] 11.3.4.9.) The documents fail to distinguish between the impacts of markedly different sizes of the project. In addition, there are numerous conflicting statements in BDCP and the DEIR/EIS. The DEIR/EIS's purpose statement provides, "[i]t is not intended to imply that increased quantities of water will be delivered under the BDCP." (DEIS/EIR, p. 2-5.) However, the BDCP itself states that "[t]he BDCP is intended to minimize entrainment levels, while also increasing water supply. . . " (BDCP, p. 5.B-2.) The BDCP documents also contain numerous contradictory statements concerning the operation of the proposed fish screen intakes, criteria for the new north Delta intakes, and purported impacts to salmonids. This is highlighted in the technical memorandum by fisheries expert Dave Vogel, which is attached to the NSWA comment letter. The BDCP documents are sufficiently confusing that, whatever the technical information contained in them, they do not meet the fundamental requirement of informing the public of what is being proposed and what impacts the proposal may cause.	
1511	25	The BDCP's and the DEIR/EIS's project descriptions are vague and uncertain. As discussed in the North State Water Alliance comment letter, the BDCP's and the DEIR/EIS's project description are vague and uncertain, and therefore do not satisfy the Endangered Species Act, the Natural Community Conservation Planning Act, NEPA and	Please see response to comment 1511-23.Since 2006, the BDCP and subsequently the California WaterFix Project have 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. From July to October 2015 a Recirculated Draft EIR/Supplemental Draft EIS with updates to the proposed project based on public comment on the 2013

DEIRS Ltr#	Cmt#	Comment	Response
		CEQA. These statutes necessarily require that a project contain well-defined and specific actions, the analysis of which will inform the public of what is proposed and the projected environmental effects of implementing the project. The BDCP's and the DEIR/EIS's project descriptions fail to satisfy these requirements because they contain numerous uncertainties, vague descriptions, and analytical gaps. Therefore, the BDCP and DEIR/EIS must be revised and recirculated for public review before any decisions may be made concerning permitting and implementation of BDCP.	Draft EIR/EIS was open for an additional public commenting period. Comments from the second comment period were incorporated into the Final EIR/EIS. For information on compliance with the Endangered Species Act please see Master Response29. For more information on permitting please see Master Response 45. Please also see response to comment 1511-44 regarding take permits.
1511	26	The DEIR/EIS illegally mixes project-level and program-level analyses. The DEIR/EIS takes a programmatic approach toward evaluating all of BDCP's proposed Conservation Measures except for Conservation Measure 1, the proposed tunnels, for which it takes a project-level approach. (DEIR/EIS, p. ES-3.) The DEIR/EIS notes that, because specific design information for the restoration and preservation actions within the conservation zones has not been identified, and because design information for the restoration and conservation strategies for aquatic and terrestrial habitat and other stressor reduction measures in Conservation Measures 2 through 22 are still at a "conceptual level," the analyses for the implementation of those conservation measures are presented at a program level." (DEIR/EIS, p. 4-2.) In contrast, because more specific design information on the water conveyance facilities is available, the elements of Conservation Measure 1 are analyzed at a project level. (DEIR/EIS, p. 4-2.) The DEIR/EIS states that its goal is to "meet the requirements of CEQA and NEPA, provide sufficient analysis to support BDCP decision making, and to inform permit decisions for the issuance of the ITPs [Incidental Take Permits]/NCCP permit." (DEIR/EIS, p. ES-3.) For those Conservation Measures presented and analyzed at a program level, the DEIR/EIS recognizes that "more detailed, site-specific analysis and site-specific environmental documents will be prepared later, prior to implementation of specific projects, as the BDCP is implemented over time, as appropriate." (DEIR/EIS, p. 3-2.) This approach is inadequate for two reasons. First, the lack of information and insufficient analysis provided for Conservation Measures 2 through 22, even at the program level, prevents the meaningful evaluation of their environmental impacts and improperly defers the required analysis of such impacts to the future. Second, as a result of combining programmatic and project-level alternative definitions and analyses, neither is sufficiently complete or accurate to comply with the requirements of CEQA and NEPA and to support the requested take coverage pursuant to the ESA and NCCPA. Permitting and implementation of Conservation Measure 1 is dependent on the other conservation measures under the ESA and the NCCPA, so it is inappropriate to leave the analysis of those other measures at a much vaguer level while essentially assuming that Conservation Measure 1 will proceed as designed. Under CEQA, a programmatic EIR is helpful if it deals with the effects of the program "as specifically and comprehensively as possible." (Cal. Code Regs., tit. 14, [Section] 15168, subd. ©(5).) A "good and detailed analysis of the program" must be provided. (Id.) Similarly, NEPA requires that an EIS for a programmatic plan provide "sufficient detail to foster informed decision-making." (Pacific Rivers Council v. U.S. Forest Service (9th Cir. 2012) 668 F.3d 609, 622-623.) That is, regardless of whether a programmatic or site-specific plan is at issue, NEPA requires that an EIS analyze the environmental consequences of a proposed plan as soon as it is "reasonably possible" to do so. (Kern v. U.S. Bureau of Land Management (9th Cir. 2002) 284 F.3d 1062, 1071-1073.) Agencies "may not avoid the	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included Conservation Measures 2 to 21. The Draft EIR/EIS analyzed the conveyance facilities (e.g., Conservation Measure 1) at a project level and Conservation Measures 2 through 21 at a programmatic level. Please see Master Response 2 regarding the combination of project-level and program-level analyses. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include Conservation Measures 2 through 21. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. Alternatives development is discussed in master Response 4. Please also see response to comment 1511-23. Please see Master Response 5 regarding Conservation Measure 1. Regarding habitat restoration, 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. 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.

DEIRS Ltr#	Cmt#	Comment	Response
		obligation to analyze in an EIS environmental consequences that foreseeably arise . . . Merely by saying that the consequences are unclear or will be analyzed later when an environmental assessment is prepared for a site- specific program . . . ." (Kern, supra, 284 F.3d at p. 1072.) As discussed in the North State Water Agency comment letter, there is significant uncertainty associated with many of the BDCP's proposed Conservation Measures. Numerous Conservation Measures are either ill-defined (and are qualified by statements noting that further environmental analysis will be refined in subsequent environmental documents) or contain too many uncertainties. (See, e.g., BDCP, pp. 3.4-48 (Conservation Measure 2); 3.4-147 (Conservation Measure 5); 3.4-196 (Conservation Measure 6); 3.4-294 (Conservation Measure 15); 3.4-315 (Conservation Measure 16).) An environmental document, however, cannot defer the analysis of one of its elements to a pending environmental document that will be completed in the future. (Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova (2007) 40 Cal.4th 412, 440-441.) While program-level analysis is possible under NEPA and CEQA, as the above authority makes clear, a NEPA/CEQA document must present a detailed analysis of a project as a whole. The BDCP documents fail this test because their combination of project-level analysis for Conservation Measure 1 and program-level analysis of everything else prevents interested parties from understanding how the project as a whole would function and impact relevant resources. For example, it is not possible to understand how salmonids migrating from the Sacramento Valley would be impacted by the project as a whole where the new north Delta intakes are well-defined, but the Yolo Bypass-based Conservation Measure 2 that could affect these fish is defined at the program level at most. It is not possible to integrate the analysis of even those two Conservation Measures, much less the other 20 Conservation Measures as well. The unequal treatment of Conservation Measure 1 and the other conservation measures is inappropriate because it prevents decision makers and the public from fully evaluating the project as a whole. Conservation Measure 1 is essentially the infrastructure project desired by the project proponents. Its characterization as a Conservation Measure is questionable. Regardless, it is analyzed at a project level and all of the mitigation (or conservation) measures are analyzed at a program level. This uneven treatment makes the infrastructure project (CM 1) far more well defined and certain; and the mitigation necessary for it to satisfy legal requirements ill-defined and uncertain. This approach is insufficient under NEPA and CEQA. Our agencies agree with prior comments by federal agencies regarding a related shortcoming due to the variation in level of environmental analysis. As the federal agencies ([Bureau of] Reclamation, USFWS [U.S. Fish and Wildlife Service] and NMFS [National Marine Fisheries Service]) pointed out in their comments on the BDCP Second Administrative Draft EIR/EIS dated July 18, 2013 ("Federal Agency Letter"), BDCP's approach to analyzing one alternative at a project level and the rest of the alternatives at a programmatic level makes it more difficult to assess whether either type of analysis "was provided completely or correctly. (See Federal Agency Letter, p. 47, available at http://baydeltaconservationplan.com/Library/Correspondence.aspx.)	
1511	27	The DEIR/EIS's handling of existing conditions and use of late long-term conditions as an analytical baseline violates CEQA. The DEIR/EIS relies entirely on 2060 "late long term" conditions to identify the impacts of the proposed project for, among other resource categories, aquatic species and water	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the

DEIRS Ltr#	Cmt#	Comment	Response
		supplies. The DEIR/EIS does not discuss the simulated operations of the twin tunnels and north Delta diversions in 2010 (the year the Notice of Preparation was issued) and does not analyze the impact of these simulated operations on existing conditions. (See DEIR/EIS, p. 5-47.) Instead, the DEIR/EIS uses an existing conditions baseline only in comparison to the No Action Alternative and Project Alternatives, all of which occur in the Late-Long Term (around 2060) and include the simulated effects of sea level rise and climate change. Comparing a 2010 existing conditions baseline without project with the simulated 2060 scenarios with and without the project is an "apples to oranges" comparison that fails to properly inform the public about the proposed project's impacts. The effects of 50 years' worth of sea level rise and climate change make it impossible for the reader to determine which significant effects are related to the proposed project. The BDCP acknowledges this flaw and states that comparing existing conditions with the Late-Long Term scenarios is unhelpful and obscures project-related impacts. (See DEIR/EIS, p. 5-47.) The limitation of project environmental analysis to one climate change scenario and one future timeframe increases the likelihood that the impacts of an indisputably major project are masked in a manner prohibited by Neighbors for Smart Rail, supra, 57 Cal.4th, at p. 456. Rather than analyze the proposed project's impacts under existing conditions, the DEIR/EIS chooses one possible climate change scenario and uses that scenario for its environmental analysis. In Neighbors for Smart Rail, however, the majority of the California Supreme Court expressly disapproved of such an approach to omitting all analysis of project impacts on existing conditions. The majority rejected the dissent's proposal for allowing future-condition baselines in broader circumstances: Justice Baxter's concurring and dissenting opinion proposes a significantly more lax rule . . . Under which a future conditions baseline may be employed, in lieu of one based on existing environmental conditions, so long as it is "a realistic measure of the physical conditions without the proposed project" projected at the agency's chosen future date . . . [This approach] would sanction the unwarranted omission of information on years or decades of a project's environmental impacts and open the door to gamesmanship in the choice of baselines. Under the rule proposed in Justice Baxter's opinion, agencies evaluating projects intended to exist and operate for many decades could seemingly choose a baseline of conditions from any period of the project's expected operations, 15, 30 or 60 years in the future, so long as the agency's projections were supported by reasonably reliable data and predictive modeling. (Neighbors for Smart Rail, supra, 57 Cal.4th at p. 456 (emphasis in original).) Similarly, the DEIR/EIS violates Neighbors for Smart Rail by failing to properly analyze the project's impacts on existing conditions in favor of relying solely on one future, with-climate change scenario. The DEIR/EIS selects 2060 as an allegedly appropriate date to evaluate the BDCP's impacts and bases its analysis on "predictive modeling" of what conditions will exist at that time. Under Neighbors for Smart Rail, there can be no adequate basis for the DEIR/EIS's use of such an approach because an environmental analysis of the proposed project's impacts in the existing conditions would be very helpful for the understanding of decision makers and the public.	BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. The EIR/EIS compares conditions under action alternatives to the Existing Conditions. As noted in this comment, these comparisons include both the effects of the implementation of the action alternatives and the effects of climate change, sea level rise, and increased water demand in the Sacramento Valley (primarily the American River watershed), as described in Chapter 5 of the Final EIR/EIS. The water conveyance facilities would not be operational until 2030, at which time, the increased water demands would have occurred in accordance with the published urban water management plans and agricultural water management plans for entities that effect the American River watershed flows. Also, by 2030, climate change and sea level rise would have changed surface water and water supply conditions; although, not to the extent that would occur by 2060. Comparisons at 2030 conditions are discussed in the RDEIR/SDEIS and the Final EIR/EIS for Alternatives 2D, 4A, and 5A. 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 Alternative 1 under the five climate change scenarios. 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 all action alternatives, the incremental changes appear to be similar under a range of climate change scenarios. For more information on environmental baselines please see Master Response 1. For more information on climate change please see Master Response 19. Please also see response to comment 1511-29.
1511	28	Using an existing conditions baseline would help all parties understand better what water-supply impacts would occur as CVP and SWP operations are modified to enable	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits.

DEIRS Ltr#	Cmt#	Comment	Response
		diversions through the proposed tunnels. As discussed in the enclosed technical memorandum by MBK Engineers, BDCP's hydrologic modeling appears to assume that Reclamation's patterns of releases from Folsom Reservoir would change by increasing in the summer, and decreasing in the fall, in order to move water through the proposed tunnels. [Footnote 1] As described by MBK, this altered pattern in turn would alter seasonal patterns of storage in the reservoir. Under the with- climate change baseline, however, the effects of these altered patterns are muted or masked by the overarching effect of climate change, which the DEIR/EIS projects will severely reduce Folsom Reservoir storage in drier years. This does not provide the information and analysis needed for our agencies and others to understand what effect the revised Folsom Reservoir release patterns necessary to implement BDCP would have under existing conditions. [Footnote 1: As elsewhere noted, this operational change to allow the project's main feature to function is not accompanied by any recognition of other operational changes that would necessarily follow given the addition of this project, and also climate change, to the picture. The absence of a realistic reasonably foreseeable operating plan or scenario for the SWP, CVP and related facilities is a significant omission from the DEIR/EIS.]	Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. Please see response to comment 1511-27 and response to comment 1511-29. Please also see Master Response 30.
1511	29	Using an existing-condition baseline would assist our agencies and others in understanding what impacts operations under BDCP would have on fish in the lower American River. As discussed in the enclosed technical memorandum by Cardno (Attachment B), the with-climate change baseline conditions projected by BDCP would have severe impacts on salmonids in the river, including steelhead listed under the federal Endangered Species Act (ESA) and fall-run Chinook salmon. As described by Cardno, it is unlikely that the Bureau of Reclamation would be allowed to operate the CVP in such a manner. Consistent with the concern of the California Supreme Court in Neighbors for Smart Rail that using a future baseline might cause "changes in background conditions" to "mask or swamp" project impacts (57 Cal.4th at p. 456), it is impossible to tell from the DEIR/EIS's fisheries analysis whether the proposed project -- and the changes in Folsom Reservoir operations that it apparently incorporates -- would cause any impacts to sensitive American River fish in addition to those projected as a result of climate change. An analysis based on existing and near-term conditions is necessary to allow our agencies and others to understand the proposed project's possible impacts on those fish. Because the DEIR/EIS does not properly analyze the proposed project's impacts on existing conditions, and existing evidence demonstrates that such an analysis is necessary for all parties to understand the proposed project's impacts, the DEIR/EIS is inadequate and violates CEQA.	The EIR/EIS does use Existing Conditions as the baseline for all CEQA analyses. Each impact in the Final EIR/EIS Chapter 11, Fish and Aquatic Species, in the EIR/EIS discusses the NEPA determination first, then discusses the CEQA determination (please see subsections labeled "CEQA Conclusion"). In all cases, the CEQA baseline is Existing Conditions. Therefore the Final EIR/EIS does properly and adequately analyze the project's impacts on existing conditions and does not violate CEQA. It also should be noted that effects to fisheries in the American River under the No Action Alternative as compared to the Existing Conditions are effected due to climate change, sea level rise, and increased water demand in the American River watershed that would occur by 2030 with or without the Project. The operational criteria for Folsom Lake is the same under the Existing Conditions, No Action Alternative, and all action alternatives. As shown in changes in Folsom Lake storage and related American River flows in Appendix 5A, Section C, of the EIR/EIS, under the No Action Alternative as compared to the Existing Conditions result in increased frequency of low American River flows and low storage elevations in Folsom Lake in drier years, including years during which the CALSIM II model results indicate that Folsom Lake would be at "dead pool" conditions with surface water elevations that would affect releases from Folsom Lake to the American River. 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. Please also see response to comment 1511-27.
1511	30	The DEIR/EIS violates CEQA by failing to properly analyze the proposed project's short- and medium-term impacts. While the proposed tunnels would begin operating in 10 years, the DEIR/EIS only analyzes project water-supply impacts in the late-long term with projected 2060 hydrology, leaving	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master

DEIRS Ltr#	Cmt#	Comment	Response
		35 years of project water-supply impacts unanalyzed. CEQA requires that the BDCP give due consideration to short- and medium-term impacts, and the DEIR/EIS provides no justification for failing to analyze project water-supply impacts prior to 2060. As a result, the DEIR/EIS is inadequate under CEQA.	Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. Please see response to comment 1511-27 and 1511-29 regarding environmental baselines.
1511	31	The BDCP preparers conducted CalSim II model runs for project impacts on hydrology in the near-term and early-long term (see DEIR/EIS, App. 5A, p. 4), but the DEIR/EIS's environmental analysis has no analysis of project impacts in the near-term or early-long term. Most tellingly, the BDCP modeling technical appendix — the core hydrologic analysis that is the basis for environmental analysis of project impacts on many resource categories, including water supply and aquatic life — does not include the results of CalSim II model runs for the near-term and early-long term. (See DEIR/EIS, App. 5C.) The DEIR/EIS provides no justification for these omissions. Analysis of project impacts in the early-long term is necessary to inform the public about the project's immediate impacts on water supply and aquatic life when the proposed tunnels are complete. As the draft EIR acknowledges, analysis of impacts in the late-long term with sea level rise and climate change is subject to error and the DEIR/EIS's analysis does not segregate project-related impacts. The draft EIR acknowledges that the document's hydrologic analysis may ultimately be inaccurate because predictions for climate change in 2060 are "inherently limited and reflect large degrees of speculation." (See DEIR/EIS, p. 5-49.) This is also a flaw of the one climate change scenario approach. The DEIR/EIS also acknowledges that project-related effects cannot be isolated from climate-change related effects in 2060 for CEQA analysis against existing conditions. (DEIR/EIS, p. 5-49.) The DEIR/EIS's failure to analyze interim impacts causes that document to be inadequate under CEQA. In Neighbors for Smart Rail, the California Supreme Court held that CEQA requires an environmental document to give due consideration to short- and medium-term impacts in addition to long-term impacts: Even when a project is intended and expected to improve conditions in the long term -- 20 or 30 years after an EIR is prepared -- decision makers and members of the public are entitled under CEQA to know the short- and medium-term environmental costs of achieving that desirable improvement. These costs include not only the impacts involved in constructing the project but also those the project will create during its initial years of operation. Though we might rationally choose to endure short- or medium-term hardship for a long-term, permanent benefit, deciding to make that tradeoff requires some knowledge about the severity and duration of the near-term hardship. An EIR stating that in 20 or 30 years the project will improve the environment, but neglecting, without justification, to provide any evaluation of the project's impacts in the meantime, does not "giv[e] due consideration to both the short-term and long-term effects" of the project (Cal. Code Regs., tit. 14, [Section] 15126.2, subd. (a)) and does not serve CEQA's informational purpose well. (Neighbors for Smart Rail, 57 Cal.4th at p. 455 (emphasis added).) Because the BDCP only analyzes impacts of the tunnels' operation in the 2060 timeframe and fails to analyze the previous 35 years of project impacts, DEIR/EIS fails to give due consideration to short- and medium-term impacts and therefore violates CEQA, as	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. Please see response to comment 1511-27 and 1511-29 regarding environmental baselines.

DEIRS Ltr#	Cmt#	Comment	Response
		interpreted by Neighbors for Smart Rail.	
1511	32	The BDCP's climate change analysis does not adequately inform the public of the project's potential impacts. The BDCP's climate change analysis uses an ensemble projection scenario that represents the median prediction of over one hundred aggregated climate change studies. This single scenario approach to predicting climate change is inadequate for several reasons. As discussed above, this approach is identical to the approach proposed by the dissent in Neighbors for Smart Rail and rejected by the majority of the California Supreme Court. (Neighbors for Smart Rail, supra, 57 Cal.4th at p. 456.) The DEIR/EIS's use of this approach therefore violates CEQA. In addition, the DEIR/EIS's use of a single, median climate change scenario does not adequately inform the public. As the document acknowledges, climate change predictions are highly uncertain, and the long-term effects of climate change on sea level rise, water availability, and water temperatures are unknown. It will not be possible to know for decades whether BDCP has significantly underestimated or overestimated the potential effects of climate change. (DEIR/EIS, p. 5-49.) Yet the BDCP presents the significant effects of climate change in the late- long term as reasonably certain and predictable by presenting the single, median climate change scenario. Facing similar uncertainty, other environmental studies, including the 2008 USBR Operations Criteria and Plan (OCAP) analysis and the 2009 DWR California Water Plan Update, have adopted a bracketed analysis that analyzes two or more scenarios representing the range of likely climate change scenarios. This analysis provides "bookends" for the uncertain effects of climate change, and it is more effective for informing the public about the potential impacts of BDCP. Bracketed predictions also better captures potential extreme effects, which can be more biologically significant for covered species, than median scenarios. As explained in the technical memorandum by Cardno (Attachment B), increasing water temperatures have already stressed steelhead and fall-run Chinook salmon in the lower American River. If the BDCP's water temperature analysis for late-long term conditions has underestimated warming by a few degrees, there will be devastating consequences for these covered species. Without analyzing a wider range of potential climate change outcomes and accounting for potential extreme temperature changes, the BDCP is inadequate.	The assumptions used for climate change and sea-level rise in the CALSIM modeling are described in Appendix 5A of this Final EIR/EIS including a complete explanation about why they were used. Because the focus of CEQA and NEPA analyses are on the potential environmental effects of the proposed project and alternatives, this approach for climate change and sea-level rise is adequate because climate change and sea-level rise that would occur with or without the project alternatives are not effects of the project/alternatives. By comparing the existing conditions (without climate change and sea-level rise) against the No Action Alternative (with climate change and sea-level rise), these potential effects are fully disclosed. 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 Alternative 1 under the five climate change scenarios. 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 all action alternatives, the incremental changes appear to be similar under a range of climate change scenarios. No changes to the EIR/EIS analyses are made based on this comment. For more information on climate change please see Master Response 19. For information on environmental baselines please see Master Response 1.
1511	33	The BDCP's median climate change scenario also is an inappropriate basis for the BDCP permittees to receive regulatory and economic assurances under the ESA and the NCCPA. The BDCP permittees will seek assurances under the "No Surprises" rule, which would prevent the fish and wildlife agencies from seeking additional regulatory and economic measures from the permittees if changed or unforeseen circumstances occur. The BDCP states that if climate change occurs other than as predicted by BDCP, then this will constitute a changed circumstance. (BDCP, p. 6-43 to 6-44.) However, even if the BDCP's climate change predictions are completely wrong, the BDCP states that BDCP permittees would still receive the benefits of the regulatory and economic assurances: Long-term changes in sea level, watershed, hydrology, precipitation, or temperature (air or water) that are of the magnitude or effect assumed for the effects analysis and that adversely affect conservation strategy implementation or covered species are considered a changed circumstances. [. . .] Because the BDCP already anticipates the effects of climate change, no additional actions will be required to remediate climate change effects on	This comment addresses BDCP (known as the Draft EIR/EIS Alternative 4) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. 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 Alternative 1 under the five climate change scenarios. 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

DEIRS Ltr#	Cmt#	Comment	Response
		covered species and natural communities in the reserve system. (BDCP, p. 6-43 (underlining added).) The BDCP also states that any climate change scenario requiring conservation measures in response to climate change beyond those described in BDCP are unforeseen circumstances and would require no remedial actions. (BDCP, p. 6-44 -- 6-45.) The effect of these provisions would shift the inherently uncertain risks of planning for climate change away from the BDCP permittees and onto the federal government, other public agencies, and private landowners. Even the DEIR/EIS, however, acknowledges that its predictions for climate change in 2060 are "inherently limited and reflect large degrees of speculation." (See DEIR/EIS, p. 5-49.) The DEIR/EIS needs to sufficiently identify the project impacts, including if that should be done within a range given the uncertainties, so that appropriate mitigation can be crafted in accordance with CEQA and NEPA. Leaving all other parties subject to potentially increased regulatory and economic burdens if climate change ultimately results in different conditions than those assumed by BDCP's admittedly speculative single projection would violate NEPA and CEQA, be highly inequitable and would violate, among other laws, the area-of-origin laws that so that the protected areas "shall not be deprived . . . directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein." (Water Code [Section] 11460; see also Water Code [Section] 11128 ([Section] 11460 applies to the CVP).)	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 all action alternatives, the incremental changes appear to be similar under a range of climate change scenarios. It should be noted that the use of the climate change, sea level rise, and population growth assumptions in the No Action Alternative and action alternatives are provided for two purposes. First, as an indication of future trends. Second, the model results can only be used in a comparative manner, not for absolute values. Therefore, the comparison of conditions under action alternatives as compared to the No Action Alternative due to implementation of the action alternatives without the effects of climate change, sea level rise, and population growth. Changes to environmental resources under the No Action Alternative as compared to Existing Conditions are related to changes caused by climate change, sea level rise, and population growth that would occur with or without the project and are not caused by the action alternatives/Project and are not mitigated under the Project.
1511	34	The BDCP's use of only one climate-change scenario, and the DEIR/EIS imprecise comparison of that scenario to existing conditions, is inappropriate and illegal. Under CEQA, existing conditions will normally constitute the baseline physical conditions by which an EIR analyzes whether an impact is significant. (Cal. Code Regs., tit. 14, [Section] 15125, subd. (a); Neighbors for Smart Rail, supra, 57 Cal.4th at 445.) To properly conduct this analysis, the standard practice is for the EIR to assume, counterfactually, that the project exists and is in full operation when the environmental analysis is conducted. (Neighbors for Smart Rail, 57 Cal.4th at p. 453; see Cal. Code Regs., tit. 14, [Section] 15125, subd. (a).) The EIR will then analyze this "existing conditions with project" scenario against an existing conditions baseline to predict the project's impacts. (Neighbors for Smart Rail, supra, 57 Cal.4th, at p. 453.) In this case, since the notice of preparation was issued in 2010, the EIR's primary mode of analysis should assume that the project is existing and operational in 2010, and the EIR must analyze this hypothetical 2010 project against existing conditions. The resulting analysis is an "apples to apples" comparison that predicts project impacts by comparing the hypothetically operating project with existing conditions. For these reasons, the California Supreme Court held in Neighbors for Smart Rail that an analysis of the project's impact on an existing conditions baseline generally is required and cannot be omitted from an EIR except under unusual circumstances (57 Cal.4th at pp. 451-452, 456): Projected future conditions may be used as the sole baseline for impacts if their use in place of measured existing condition — a departure from the norm stated in Guidelines section 15125(a) — is justified by unusual aspects of the project or the surrounding conditions. That the future conditions analysis would be informative is insufficient, but an agency does have discretion to completely omit an analysis of impacts on existing conditions when inclusion of such an analysis would detract from an EIR's effectiveness as an informational document,	This comment addresses BDCP (known also as the Draft EIR/EIS Alternative 4) or analysis contained within the Draft EIR/EIS and Draft BDCP at Year 2060 at the end of the period for the proposed HCP and NCCP permits. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. 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 Alternative 1 under the five climate change scenarios. 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 all action alternatives, the incremental changes appear to be similar under a range of climate change scenarios. Please see response to comment 1511-32.

DEIRS Ltr#	Cmt#	Comment	Response
		either because an analysis based on existing conditions would be uninformative or because it would be misleading to decision makers and the public . . . [A]n agency must not create unwarranted barriers to public understanding of the EIR by unnecessarily substituting a baseline of projected future conditions for one based on actual existing conditions. The DEIR/EIS's reliance on projected future, with-climate change 2060 scenarios in identifying the project's environmental impacts violates CEQA. The unusual circumstances under which an existing conditions baseline can be omitted from an EIR do not exist here because the analysis would be informative and would not mislead the public or decision makers. The comparison of 2060 scenarios with the existing conditions baseline without project is not particularly informative, given what DEIR/EIS admits is the wide range of possible climate outcomes. Superimposing the proposed project on existing conditions would assist the public and decision makers in understanding the proposed plan's impacts, and enable them to distinguish project impacts from climate change.	
1511	35	Elements of the BDCP are poorly conceived and would violate the ESA and NCCPA. Because of numerous technical and structural errors, the BDCP and DEIR/EIS are inadequate. The plan's funding, regulatory assurances, and draft implementation agreement do not meet the requirements imposed by state and federal law for conservation plans. Furthermore, significant issues render the plan's proposed governance structure inadequate. For the reasons discussed below, BDCP must be significantly revised before any decisions can be made regarding permitting and implementation of the plan.	For more information on the primary issues being raised with regard to the Implementing Agreement, as well as a discussion of the current status of the IA, please see Master Response 5. Governance structure and funding are also discussed in Master Response 5. Regarding compliance with the ESA please see Master Response 29. Permitting is discussed in Master Response 45.
1511	36	The BDCP's proposed funding is inadequate under the ESA and NCCPA. The ESA requires that proponents of a habitat conservation plan "ensure that adequate funding for the plan will be provided" and that adequate funding be available to implement the mitigation measures contained in the HCP. (16 U.S.C. [Sections] 1539(a)(2)(A), (a)(2)(B); see also Southwest Center for Biological Diversity v. Bartel (S.D. Cal. 2006) 457 F.Supp.2d 1070, 1105 (noting USFWS cannot issue an incidental take permit unless it finds that the applicant demonstrates sufficient funding will be available to implement the HCP).) Similarly, the NCCPA requires that a natural community conservation plan "contain provisions that ensure adequate funding to carry out the conservation actions identified in the plan." (Fish & Game Code [Section] 2820, subd. (a)(10).) Large-scale, regional HCPs/NCCPs such as BDCP therefore must demonstrate sufficient funding for long-term needs and, where perpetual funding is required to implement any of the proposed mitigation measures, the HCP must establish programs or mechanisms to generate those funds. (See USFWS and NMFS Habitat Conservation Planning and Incidental Take Processing Handbook (1996), p. 3-34.) HCP/NCCP proponents cannot rely on the speculative future actions of others. (Southwest Center for Biological Diversity, supra, 457 F.Supp.2d at p. 1105 (citing National Wildlife Federation v. Babbitt (E.D. Cal. 2000) 128 F.Supp.2d 1274; 1294-1295 and Sierra Club v. Babbitt (S.D. Ala. 1998) 15 F.Supp.2d 1274, 1280-82).) The lack of adequate funding in an HCP can be fatal to the validity of the plan. (See, e.g., National Wildlife Federation, supra, 128 F.Supp.2d at pp. 1293-1295 (HCP invalidated in part due to inadequate funding guarantees from city); Southwest Center for Biological Diversity, supra, 457 F.Supp.2d at pp. 1105-1106 (reliance on undependable and speculative funding sources violates ESA's funding requirement).)	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included large-scale habitat restoration under HCP and NCCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include the HCP/NCCP. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. Please see Master Response 5 regarding funding. 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. Please see response to comment 1511-44 for more information. Please also see response to comment 1511-26 for more information on habitat restoration. Regarding compliance with the ESA please see Master Response 29. Permitting is discussed in Master Response 45.

DEIRS Ltr#	Cmt#	Comment	Response
		The BDCP fails to satisfy the funding requirements of the ESA and the NCCPA because nearly all of the funding sources it identifies are too speculative and, to the extent that a particular funding source is identified in the plan, there are no guarantees in the BDCP that such funding will be adequate to implement the proposed conservation measures. Our agencies agree with the comprehensive comments submitted by the North State Water Alliance on this issue and incorporate those comments here. The NSWA letter points out that BDCP appears to anticipate that it will "corner the market" with respect to existing bond funds — i.e., using all available state bond funding for the BDCP — but does not discuss what other projects throughout the State will not receive funding as a consequence. It is speculative to conclude that all remaining bond funds under the various programs cited in the BDCP (see BDCP, pp. 8-86 -- 8-94) will be made available only to BDCP. For example, it notes that $378.7 million dollars of Proposition 1E funding for flood protection and habitat restoration in the Delta under the Disaster Preparedness and Flood Protection Bond Act of 2006 remains available as of November 2012. (BDCP, p. 8-87.) Of this amount, BDCP expects to receive up to $94.7 million dollars, which represents 25 percent of Proposition 1E funding still available for allocation. Yet BDCP does not explain its basis for claiming such a significant portion of these funds. To the contrary, all it does is state that Conservation Measures 2, 4, 5, 6, 7, 8, 9, 10 and 12 "may be eligible" for these funds. (BDCP, p. 8-87.) Eligibility for funding is in no way sufficient to guarantee that such funding will in fact materialize. In addition, BDCP assumes that a significant portion of Proposition 84 funding presently targeted to support Integrated Regional Water Management (IRWM) plans will be repurposed to fund BDCP. (BDCP, p. 8-89.) Specifically, BDCP assumes that it will receive anywhere from $40 to $80 million dollars of the remaining funds allocated to the San Francisco Bay Area ($21 million dollars), the Sacramento River ($12 million dollars) and the San Joaquin River ($10 million) to implement proposed Conservation Measures 2 through 10 and Conservation Measure 12. (Id., at p. 8-89.) The process for obtaining IRWM funds is highly competitive, with many government entities vying for the same limited funds. It is unreasonable for BDCP to assume that it will receive this funding at the expense of numerous other eligible projects in those regions. The fact that BDCP may qualify for some of these funds does not necessarily mean that it will receive these funds. One of BDCP's biggest flaws is that it contains no assurances that there will be adequate funding to implement the conservation measures that are the cornerstone of the regulatory coverage under the ESA and NCCPA that BDCP's proponents seek to acquire very soon. The BDCP improperly defers its discussion of its funding plan to some undefined future date, stating that "financing plans will be prepared separately by various funding agencies and through future discussions between state and federal agencies." (BDCP, p. 8-2.) As the NSWA comment letter points out, without an understanding of who will pay and what funding is required, there is no way of evaluating whether adequate funding exists sufficient to provide regulatory assurances to BDCP proponents. To the contrary, what assured funding there is from participating state and federal contractors only makes up a small portion of BDCP's overall costs, as they have committed only to funding construction, operation and construction-related mitigation costs for the conveyance tunnels and not to funding the administration of BDCP or the implementation of conservation measures	

DEIRS Ltr#	Cmt#	Comment	Response
		generally. (See BDCP, p. 8-73.) All other funding sources, as discussed above and in the NSWA comment letter, are either too uncertain or speculative to be relied upon.	
1511	37	The BDCP's proposed governance structure is confusing and causes the draft documents to inadequately describe possible impacts to other water users. BDCP proposes a complicated governance structure that, among other things: (1) may subject other water users to BDCP's requirements and risks created by BDCP; (2) depends on undefined participation by Reclamation; and (3) leaves CVP contractors other than BDCP proponents open to undefined risks. American River Water Agencies agrees with the detailed comments submitted by the North State Water Alliance on this issue and incorporate those comments here. As the NSWA letter points out, the proposed implementation structure described in BDCP's Chapter 7 is inadequate under the NCCPA, the ESA, NEPA and CEQA because it fails to clearly define how Reclamation — and, by extension, Reclamation's non-BDCP CVP contractors — would be affected by the decisions made within the BDCP. The uncertainties inherent in the proposed structure, which includes inconsistent statements concerning which particular entities would make decisions within the BDCP and prepare annual operations plans, and the lack of information contained in the BDCP concerning how project-specific actions relative to how operation of the proposed conveyance tunnels will be disentangled from the larger CVP and SWP operations that serve water users that are not BDCP proponents, render BDCP legally inadequate.	Please see Master Response 5 regarding governance and implementation.
1511	38	Regulatory and economic certainty under the "No Surprises" rule is incompatible with the BDCP's vague project description and uncertain conservation measures. The BDCP and draft Implementing Agreement state the BDCP proponents, except for Reclamation, would receive regulatory and economic assurances under the Endangered Species Act (ESA) and Natural Community Conservation Plan Act (NCCPA). These assurances would provide that if changed or unforeseen circumstances occur that adversely affect species covered by the BDCP, the fish and wildlife agencies could not impose additional regulatory restrictions or economic burdens on the BDCP proponents. Primary responsibility for undertaking additional conservation measures would rest with the federal government, other governmental agencies, or other nonfederal landowners. (See BDCP, p. 6-28.) The BDCP and draft Implementing Agreement do not meet the requirements for regulatory and economic assurances under ESA and NCCPA. The regulatory and economic certainty provided by the "No Surprises" rule is incompatible with the BDCP's vague project description and uncertain conservation measures. BDCP states that the purpose of the "No Surprises" rule is similar under the ESA and NCCPA -- to provide a degree of certainty regarding the Conservation Measures and economic commitment that the BDCP proponents will be required to undertake by limiting the proponents' exposure to additional regulatory and economic requirements. (BDCP, p. 6-28.) The "No Surprises" rule therefore presumes that the permittees receiving assurances have committed to certain, well-defined conservation measures. However, this is not the case in BDCP. The BDCP's Conservation Measures and project description are vague, and their results are so uncertain that they remain subject to substantial future revisions. Therefore, it is improper for the BDCP proponents to receive regulatory and economic assurances under the ESA and NCCPA when the BDCP is uncertain what conservation measures and	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included large-scale habitat restoration under HCP and NCCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include the HCP/NCCP. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. A portion of the comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). For more information on the primary issues being raised with regard to the IA, as well as a discussion of the current status of the IA, please see Master Response 8. Please see Master Response 2 for information on project level versus program level analysis. Please also see Master Response 5 for information on the Implementing Agreement. Regarding compliance with the ESA and permitting please see Master Response 29 and 45, respectively. Please also see response to comment 1511-36.

DEIRS Ltr#	Cmt#	Comment	Response
		biological objectives the BDCP permittees have committed to implement. Similarly, one significant limitation on the assurances available under the ESA and NCCPA is that the permittee must have fully complied with and implemented the HCP/NCCP's environmental commitments. (See 63 F.R. 8859, 8872, Feb. 23, 1998; Fish & Game Code [Section] 2820, subd. (f)(2).) Because the BDCP's Conservation Measures are not certain or well- defined, it would not be possible for the fish and wildlife agencies to evaluate full compliance and implementation of the measures. For related reasons, California Department of Fish and Wildlife (CDFW) may not provide assurances under the NCCPA for the proposed 50-year term of the Incidental Take Permit. Under the NCCPA, CDFW must consider several factors when determining the level and term of assurances to be afforded a permittee. (See Fish & Game Code [Section] 2820, subd. (f).) One factor CDFW must consider is the adequacy of analysis of the impact of take on covered species. (See Fish & Game Code [Section] 2820, subd. (f)(1)(B).) As discussed in this letter and in the technical memorandum prepared by Cardno (Attachment B [see ATT2]), the BDCP's analysis of the impact of take on aquatic species is deeply flawed. As a result, the BDCP is inadequate to support assurances under the NCCPA. Another factor CDFW must consider is the size and duration of the plan and the appropriateness of the size and duration of the plan regarding the quality and amount of data. (See Fish & Game Code [Section] 2820, subd. (f)(1)(D), (H).) As the draft documents repeatedly acknowledge, the size and duration of the BDCP is unprecedented and it is subject to significant, cascading uncertainties regarding impacts on aquatic species. Therefore, the proposed assurances to the BDCP permittees cannot be justified under the NCCPA.	
1511	39	Assurances under the Natural Community Conservation Planning Act (NCCPA) would be inappropriate because it is impossible to determine how the BDCP could satisfy the NCCPA's rough proportionality requirement. The NCCPA requires implementing mitigation and conservation measures to fully mitigate the impacts of authorized take. (See Fish & Game Code [Sections] 2081, subd. [b][2].) The proposed mitigation must be roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan. (Fish & Game Code [Sections] 2081, subd. (b)(9).) Before California Department of Fish and Wildlife (CDFW) can approve a NCCP, it must find that implementation of the required mitigation and conservation measures will provide mitigation roughly proportional to impacts on habitat or covered species. (Cal. Code Regs., tit. 14, [Section] 783.4, subd. (a)(2); see also Fish & Game Code [Section] 2820, subd. (b)(9).) These provisions ensure that a permittee will simultaneously mitigate any authorized take to a proportional extent. Failure to maintain this rough proportionality between impacts and mitigation is a basis for CDFW to suspend or revoke the incidental take permit. (Fish & Game Code [Section] 2820, subd. [c].) CDFW cannot make the mandatory finding of rough proportionality based on the BDCP or the draft implementing agreement. The BDCP fails to adequately describe and analyze the impacts of the proposed tunnels. Because the BDCP does not adequately disclose what impact the tunnels will have, CDFW cannot find the tunnels' impacts have been fully mitigated under the NCCPA or that proposed mitigation will be reasonably proportional to the extent of the tunnels' undisclosed and unanalyzed impacts. If the proposed project's impacts cannot be well-defined, it simply is not possible to determine that the necessary mitigation will occur in a manner roughly proportional, in time and extent, to those project	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included large-scale habitat restoration under HCP and NCCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include the HCP/NCCP. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. Please see Master Response 45 regarding permitting. For information on the implementing agreement, please see Master Response 5. Information on mitigation can be found in Master Response 22. For a discussion of project level versus program level analysis please see Master Response 2. Please also see responses to comments 1511-26 and 1511-36.

DEIRS Ltr#	Cmt#	Comment	Response
		impacts. Furthermore, the BDCP fails to adequately disclose and analyze the projects' proposed mitigation and conservation measures. The BDCP intends that proposed Conservation Measures 2 through 22 will mitigate the impacts of operating the proposed tunnels. However, the BDCP analyzes the proposed Conservation Measures 2 through 22 using a program level of environmental review, with many of the essential details left to future environmental review and decisions. Rather than disclosing and analyzing the conservation measures that the BDCP permittees would undertake to maintain rough proportionality, the BDCP treats the Conservation Measures 2 through 22 as a vague list of studies and activities the BDCP permittees might or might not undertake, subject to further development and environmental review. (See above, Section B.3.) With Conservation Measures 2 through 22 being defined at best at the program level and being subject to further development and changes through future environmental analyses -- even subject to changes of fundamental biological objectives -- it is not possible for CDFW to make a roughly-proportional find that would support any assurances under the NCCPA	
1511	40	The BDCP fails to explain how assurances would affect regulatory decisions of other agencies, such as the SWRCB. The BDCP contains no explanation how the regulatory and economic assurances that fish and wildlife agencies would provide to the BDCP permittees would affect other agencies that must approve the BDCP. As part of BDCP, Reclamation and DWR would submit water-right change petitions for the CVP and SWP to the State Water Resources Control Board. The BDCP does not state whether the BDCP's regulatory and economic assurances would prevent the SWRCB from requiring additional concessions to protect environmental resources beyond those set forth in BDCP, or whether the SWRCB must look to other legal users of waters to meet the board's requirements.	Agency roles are discussed in Chapter 1 of the Final EIR/EIS. For information on permitting please see Master Response 45. Please also see Master Response 5 regarding governance structure. Water rights issues are discussed in Master Response 32.
1511	41	Assurances for unforeseen circumstances under the NCCPA cannot extend to impacts from permittees' activities. For Department of Fish and Wildlife to issue an incidental take permit, California Endangered Species Act requires the impacts of the authorized take to be fully mitigated. (Fish & Game Code [Section] 2081, subd. (b)(2).) The California Supreme Court has interpreted this full mitigation requirement to prevent CDFW from providing regulatory and economic assurances for changed or unforeseen circumstances for which the BDCP permittees' activities were a contributing factor. (See Environmental Protection Information Ctr. v. Cal. Dept. of Forestry (2008) 44 Cal.4th 459, 512-513.) The BDCP's discussion of regulatory and economic assurances violates CESA's full mitigation requirement because it fails to limit regulatory and economic assurance under BDCP to circumstances for which the BDCP permittees' activities were not a contributing factor.	Please see responses to comments 1511-39.
1511	42	The BDCP Implementing Agreement highlights the draft plan's lack of an adequate project description and does not meet the NCCPA's requirements for such agreements. An Implementing Agreement is customary for a HCP and required for approval of an NCCP. (See Fish & Game Code [Section] 2820, subd. (b).) Its purpose is to define the key structural and operational requirements for the HCP and NCCP. Under the NCCPA, the Implementing Agreement defines the scope of permitted take and any regulatory or economic assurances. (See Fish & Game Code [Section] 2801, subd. (b).) The agreement also includes mechanisms	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP which also included large-scale habitat restoration under HCP and NCCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered which does not include the HCP and NCCP. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP Effects Analysis, please see Master Response 5. This comment also addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles

DEIRS Ltr#	Cmt#	Comment	Response
		to ensure adequate funding of the NCCP and provisions for suspension or revocation of the permit for violations of the incidental take permit. (Fish & Game Code [Section] 2801, subd. (b)(3), (8).) The Implementing Agreement for BDCP is subject to NEPA and CEQA review (Fish & Game Code [Sections] 2815, subd. (a), 2826) and should have been released in December 2013 as part of the BDCP. However, the draft Implementing Agreement was not made available for a 60-day review period until May 30, 2014.	and responsibilities of the various agencies under the BDCP (Alternative 4). For more information on the primary issues being raised with regard to the IA, as well as a discussion of the current status of the IA, please see Master Response 5.5. Please also see response to comment 1511-23.
1511	43	The draft Implementing Agreement highlights the BDCP's lack of an adequate project description. Like the BDCP, the draft Implementing Agreement does not describe how the proposed project would actually be implemented. Instead, the draft Implementing Agreement describes a series of decisions left to be made in the future about how the project might be designed and re-designed. These decisions could be made through adaptive management or the project's vague decision tree; in either case, the lack of a finite project description is spotlighted. The Implementing Agreement further provides that all of the key elements of the proposed project are subject to future development, changes and elimination, including the plan's biological objectives (pp. 24, 32-37), the decision tree for flows (p. 25), Delta outflow requirements (pp. 25-26), and all of the plan's Conservation Measures (p. 29). As the Implementing Agreement makes clear, the BDCP lacks a stable, adequate project description and leaves key elements of the plan to future design.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the Draft EIR/EIS and Draft BDCP. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. Alternative 4A, the Proposed Project, no longer includes a decision tree, but does include a robust collaborative science and adaptive management plan designed to better understand key scientific uncertainties pertaining to Delta fish and operations, and provides a mechanism for adjustments to operations to ensure that the effects of the CVP and SWP are minimized with the new point of diversion. Please see response to comment 1511-42.
1511	44	The Implementing Agreement also shows that the BDCP is inadequate for the Bureau of Reclamation to receive take authorization under Section 7 of the Endangered Species Act (ESA). The agreement provides that the Reclamation will receive ESA coverage through an integrated Biological Opinion under Section 7 of the ESA and not through the permitting process. (Implementing Agreement (IA), pp. 3-4, 15, 17, 22.) This Biological Opinion will be incorporated in, and supported by, the BDCP. (IA, pp. 3-4.) Section 7 and its implementing regulations will require the Biological Opinion to broadly identify and analyze all direct and indirect impacts of the BDCP on covered species and critical habitat, together with the effects of other activities that are interrelated or independent with the BDCP. (See 50 C.F.R. [Sections] 402.02 (defining "effects of the action"), 402.14.) Interrelated effects and interdependent effects are those effects that would not occur "but for" the proposed project's larger actions. (Ctr. for Biological Diversity v. United States BLM (9th Cir. 2012) 698 F.3d 1101, 1113; (U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Endangered Species Consultation Handbook (March 1998) p. 4-26.) Such effects include related actions that would occur to support the main proposed action. (Natural Resources Defense Council v. Rodgers (E.D. Cal. 2005) 381 F. Supp. 2d 1212, 1236.)	Please see response to comment 1511-42 regarding the Implementing Agreement. Incidental take permits take effect on the date of permit issuance. If an HCP alternative is selected for implementation, 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 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 to complete biological opinions or a joint biological opinion prior to federal action to carry out the proposed project. If a non-HCP alternative is selected for implementation, the USFWS and NMFS will complete an ESA section 7 consultation with the United States Bureau of Reclamation to complete biological opinions or a joint biological opinion prior to issuance of incidental take permits (ITPs). For more information regarding permitting please see Master Response 45. More information on compliance with the Endangered Species Act can be found in Master Response 29.
1511	45	Significant changes in the operation of reservoirs upstream of the Delta, including Folsom Reservoir, would be interrelated and interdependent effects of the BDCP. Folsom Reservoir operations apparently would have to change in the long-term to accommodate the BDCP and future climate change. This would be particularly true under the existing Coordinated Operations Agreement if Oroville Reservoir Storage would be used to meet increased Delta outflow requirements contained in BDCP permits. However, the BDCP improperly constrains its analysis to exclude impacts upstream from the Delta, including impacts to Folsom Reservoir, by saying these impacts are outside the project area. Because no proper analysis of interrelated and interdependent effects exists in the BDCP, the Bureau of Reclamation cannot receive Endangered Species Act coverage based on the current BDCP. To meet Section 7's requirements, Reclamation would essentially have to redo the DEIR/EIS's analysis of impacts to covered species in its integrated Biological Opinion. The BDCP must be	This comment appears to be a comment on the 2013 Draft BDCP. The EIR/EIS analyzes changes in conditions at the upstream SWP and CVP reservoirs and the streams downstream of those reservoirs. The operational criteria for all of the upstream reservoirs are identical in the Existing Conditions, No Action Alternative, and action alternatives, including the Proposed Project, Alternative 4A. Please see Master Response 25 related to BDCP's upstream reservoir effects. Alternative 4 remains a viable alternative, but a modified Proposed Project (Alternative 4A/California WaterFix) is being considered without the HCP or NCCP. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the Draft BDCP, please see Master Response 5. The Proposed Project is included in the Biological Assessment application submitted by Reclamation to the USFWS and NMFS for consideration in the modified biological opinions to be issued to Reclamation under

DEIRS Ltr#	Cmt#	Comment	Response
		revised to include an analysis of interrelated impacts on upstream reservoirs.	Section 7 of the Endangered Species Act. Please also see response to comment 1511-44 regarding take permits. For more information on climate change please see Master Response 29.
1511	46	The BDCP permittees' financial commitments are inadequate for the size and scope of the proposed conservation measures and 50-year adaptive management program. The draft implementation agreement's ostensible purpose is to detail and substantiate the BDCP permittees' commitments to fund the BDCP conservation measures. However, the draft Implementing Agreement merely incorporates by reference the vague financial commitments discussed in Chapter 8 of the BDCP. (See IA, p. 46.) The Implementing Agreement also provides no financial commitments whatsoever from the federal entities involved in the plan. (See IA, p. 46.) As a result, the draft Implementing Agreement fails to satisfy the NCCPA's requirement that the agreement identify adequate funding for the plan.	For information on the Implementing Agreement and funding please see Master Response 5.
1511	47	[Att 1] CalSim II is a computer program jointly developed by DWR and Reclamation. CalSim II presents a comprehensive simulation of State Water Project (SWP) and Central Valley Project (CVP) operations, and is used by DWR as a planning tool to predict future availability of water for the SWP. CalSim II is widely recognized as the most prominent water management model in California, and it is generally accepted as a useful and appropriate tool for assessing the water delivery capability of the SWP and the CVP. Broadly speaking, CalSim II estimates, for various times of the year, how much water will be diverted, how much will serve as instream flows (e.g., flow in the rivers at various locations, such as Delta outflow), and how much will remain in the reservoirs. Within the context of the BDCP, CalSim II is used to estimate the amount of water that will be diverted from BDCP's proposed North Delta Diversion (NDD) facilities. Thus, for BDCP, the CalSim II model estimates how much water will be diverted at the NDD facilities, how much flow will remain in the Sacramento River below Hood (the approximate location of the NDD facilities), how much water will be diverted through the existing South Delta Diversion (SDD) facilities at Tracy, how much flow will leave the Delta by flowing out to the Bay, and how much water will remain in storage in upstream reservoirs (including Folsom Reservoir). The location and timing of the diversion and the amount of water remaining instream and in reservoirs are significant because they can cause impacts on species, water quality degradation, and the like. The coding and assumptions included in the CalSim II model drive the results it yields. Data and assumptions, such as the amount of precipitation runoff at a certain measuring station or the demand for water by specific water users are input into the model. Criteria used to operate the CVP and the SWP (including current regulatory requirements) are included in the model as assumptions; because of the volume of water associated with the CVP and SWP, these operational criteria significantly influence the model's results. Additionally, 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 otherwise definitive rules (e.g., when to move water from upstream storage to south of Delta storage). This attempt to specify (i.e., code) the logic sequence and the relative weighting that humans will use as part of their "expert judgment" is a critical element to the CalSim II model. The model's ability to reliably predict effects of a proposed action depends on the accuracy of its coding and its representation of operations criteria. In other words, the model's results will be only as good as its data, coding, assumptions, and judgment and the	The portions of the comment related to the basis and use of CALSIM II are consistent with information contained in Appendix 5A of the EIR/EIS. However, as described in Appendix 5A, the CALSIM II model and all subsequent models that rely upon CALSIM II output 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 different scenarios, such as conditions under the action alternatives as compared to the Existing Conditions and the No Action Alternative. In general, changes in assumptions or model logic that are the same in all scenarios evaluated by the models would not affect the results of the comparative analyses. The operational criteria for the CALSIM II model runs are presented in Appendix 5A, Sections A and B, of the EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		knowledge of the modelers. For this reason, a detailed operating plan of existing facilities and the proposed facility is essential to create an accurate model of how a proposed action will affect existing water operations. In reviewing the BDCP modeling, it became apparent that coding errors and operating assumptions are inconsistent with the actual purposes and objectives of the CVP and SWP, thus limiting the utility and accuracy of the results. The CalSim II model is the foundational model for analysis of the BDCP, including the effects analysis in the Draft BDCP and the impacts evaluation in the Draft EIR/EIS. Results from CalSim II are used to examine how water supply and reservoir operations are modified by the BDCP, and the results are also used by subsequent models to determine physical and biological effects, such as water quality, water levels, temperature, Delta flows, and fish response. Any errors and inconsistencies identified in the underlying CalSim II model are therefore present in subsequent models that estimate impacts on water quality, hydrodynamics in the Delta, economics, hydropower, and other parameters and adversely affect the results of analyses based on those subsequent models.	
1511	48	[Att 1] Water operations modeling assumptions used in CalSim II for the BDCP No Action Alternatives (NAA) are defined in the December 2013 Draft BDCP [Footnote 1] and associated draft EIR/EIS. Those assumptions include assumed changes to hydrology cause by climate change, so the NAA includes that assumed climate change. Assumptions affecting modeling results for Folsom Reservoir and the American River are the focus of this review. Because Folsom Reservoir is operated as an integral part of the CVP, system-wide assumptions affect conditions on the American River and these assumptions are included in this review. Demands for American River supplies also influence American River storage and flow conditions, therefore demand assumptions are included in this review. Because climate change assumptions not only affect system-wide operations, but have a significant influence on American River operations, these assumptions are reviewed to understand the basis for the NAA model results. In addition to input assumptions, the NAA operation depicted by CalSim II is reviewed for reasonableness. Each of the NAA assumes the same regulatory requirements, generally representing the existing regulatory environment at the time of study formulation (February 2009), including Stanislaus ROP NMFS BO (June 2009) Actions III.1.2 and III.1.3, Trinity Preferred EIS Alternative, NMFS 2004 Winter-run BO, NMFS BO (June 2009) Action I.2.1, SWRCB WR90-5, CVPIA (b)(2) flows, NMFS BO (June 2009) Action I.2.2 , American River Flow Management NMFS BO (June 2009) Action II.1, no SJRRP flow modeled, Vernalis SWRCB D1641 Vernalis flow and WQ and NMFS BO (June 2009) Action IV.2.1, Delta D1641 and NMFS Delta Actions including Fall X2 FWS BO (December 2008) Action 4, Export restrictions including NMFS BO (June 2009) Action IV.11.2v Phase II, OMR FWS BO (December 2008) Actions 1-3 and NMFS BO (June 2009) Action IV.2.3v. The modeling protocols for the recent USFWS BO (2008) and NMFS BO (2009) have been cooperatively developed by Reclamation, NMFS, U.S. Fish and Wildlife Service (USF&WS), California Department of Fish and Wildlife (CDF&W), and DWR. [Footnote 1: The detailed assumptions are stated in BDCP draft EIR/EIS Appendix 5A.]	The portions of the comment related to the basis and use of CALSIM II are consistent with information contained in Appendix 5A of the EIR/EIS. However, as described in Appendix 5A, the CALSIM II model and all subsequent models that rely upon CALSIM II output 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 different scenarios, such as conditions under the action alternatives as compared to the Existing Conditions and the No Action Alternative. In general, changes in assumptions or model logic that are the same in all scenarios evaluated by the models would not affect the results of the comparative analyses. Please see response to comment 1511-47. The assumptions for the No Action Alternative, including water demands, were established using information that was available as of 2009 when the Notice of Preparation and Notice of Intent were published.
1511	49	[Att 1] BDCP model inputs were reviewed to understand demand assumptions for water purveyors in the American River Basin. Table 1 [Att1:Att1] is a summary of average annual demands used in CalSim II by the BDCP modeling at both the existing (Existing Conditions) and future (NAA) levels of development. The Existing Conditions model run was not used in	It should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when the construction of the conveyance facilities is anticipated. Increased water demand that occurs under the No Action Alternative and all action alternatives also effect operations of Folsom Lake with or without the Project. The No Action Alternative, Proposed Project, and all

DEIRS Ltr#	Cmt#	Comment	Response
		the analysis of project effects, but is provided for reference. A single level of demand was used to represent the two future conditions simulated, early long term (ELT) and late long term (LLT) that represent planning horizons of approximately 2025 and 2060, respectively. There are several problems with the demands summarized in Table 1. Existing Conditions are approximately representative of current demands. Future demands for Placer County Water Agency (PCWA) are not representative of current projections. PCWA diverts water at the American River Pump Station and delivers water into Folsom Reservoir for diversion by San Juan Water District (SJWD), Sacramento Suburban Water District (SSWD), and the City of Roseville (Roseville). The total projected annual demand for these four entities is approximately 120,000 acre-feet. Demands represented in the BDCP modeling total between 64,000 and 81,000 acre-feet annually, depending on the annual demand of SSWD. One error that contributes to underestimating PCWA's future demand is the assumption that Roseville will take only 5,000 acre-feet of their 30,000 acre-feet of contract supply from PCWA. Most future level of development CalSim II studies, such as those produced for the 2013 State Water Project Delivery Reliability Report, assume Roseville's demand for water from PCWA is 30,000 acre-feet. Roseville's 2010 urban water management plan projects that Roseville will have a demand for its 30,000 acre-feet per year of PCWA water by 2025. [Footnote 2] A second concern is that the BDCP modeling assumes that demands will increase significantly over the next 11 years, from Existing Conditions to ELT at approximately 2025, but then remain unchanged over the next 35 years to LLT conditions in 2060. Issues with this assumption are in part illustrated by reference to the City of Sacramento's most recent (2010) Urban Water Management Plan which identifies water demands continuing to increase as a result of development through at least 2035. For example, that UWMP projects total year 2030 demands within the retail service area and wholesale demands to be 250,000 acre-feet and year 2035 demands to be 261,000 acre-feet. Another demand-related issue with the NAA and the with-Project scenarios is that BDCP modeling does not simulate diversion limitations at the Fairbairn water treatment plant when releases from Nimbus Reservoir are below the "Hodge Flows" limits that apply to the City of Sacramento's diversions at Fairbairn. These limitations are included as terms in the City of Sacramento water right permits, and therefore are known and should be accurately reflected in the BDCP modeling. [Footnote 3] This omission affects modeling of flows in the lower American River downstream of Fairbairn and simulated diversions at Fairbairn and the Sacramento River Intake. [Footnote 2: Roseville's 2010 urban water management plan is available at https://www.roseville.ca.us/eu/water_utility/water_efficiency/plan.asp.] [Footnote 3: Water right permit numbers 11358, 11359, 11360, and 11361.]	other action alternatives were evaluated at 2030 conditions which include population growth projected by existing general plans as compared to the Existing Conditions. The additional population growth would increase water demands, including an increase of water demands in areas North of the Delta (primarily in El Dorado, Placer, and Sacramento counties) of 443,000 acre-feet per year of users of water rights water and CVP water supplies (including increased water demand in the American River watershed upstream of Folsom Lake for senior water rights) as compared to Existing Conditions, as described in Chapter 5, Water Supply, of the EIR/EIS. The increased water demands projected for 2030 under the No Action Alternative, Proposed Project, and all action alternatives are consistent with published urban water management plans and agricultural water management plans for entities that effect the American River watershed flows submitted to DWR by 2012, including approaches for urban water management plans to meet the 20 percent per capita urban water use by 2030 when the conveyance facilities would be operational until 2030. Chapter 30 of the EIR/EIS, describes long-term water demand in the hydrologic regions based on projections from the California Water Plan which includes assumptions that water conservation will be implemented by 2030 in accordance with State law. With respect to the portion of the comment related to "Hodge Flow" limits, the modeling results presented in the Final EIR/EIS indicate that the American River flows below Nimbus Dam under the Alternative 4A are below the Hodge criteria at similar or lower probability than the No Action Alternative under all months except August and September. Even though the flows are below the Hodge criteria for a few additional years under Alternative 4A compared to the No Action Alternative, City of Sacramento deliveries were found to be similar under both scenarios. The frequency at which the American River flows at H street under Alternative 4A are less than 500 cfs is similar in frequency to the conditions under the No Action Alternative. The changes in the Folsom Lake cold water pool and releases under Alternative 4A compared to the No Action Alternative and its fishery effects were analyzed in Chapter 11 of the Final EIR/EIS.
1511	50	[Att1: Att1] Table 1. American River Basin Demand Assumptions	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 the comment referencing the attachment or the Final EIR/EIS.
1511	51	[Att 1] Analysis presented in the BDCP draft plan and draft EIR/EIS attempts to incorporate the effects of climate change at two future climate periods: Early late term (ELT) at	The discussion of the information related to CALSIM II modeling in this comment is consistent with the information presented in the Appendix 5A of the EIR/EIS. No issues related to the adequacy of the

DEIRS Ltr#	Cmt#	Comment	Response
		approximately the year 2025; and late long term (LLT) at approximately 2060. Although BDCP modeling includes both the ELT and LLT, the EIR/EIS relies on the LLT and only includes the ELT in Appendix 5. As described in the BDCP draft plan and draft EIR/EIS [Footnote 4], other analytical tools were used to determine anticipated changes to precipitation and air temperature that is expected to occur under ELT and LLT conditions. Projected precipitation and temperature were then used to determine how much water is expected to flow into the upstream reservoirs over an 82-year period of variable hydrology; these time-series were then input to the CalSim II model. A second aspect of climate change, the anticipated amount of sea level rise, is incorporated into the CalSim II model by modifying a subroutine that determines salinity within the Delta based on flows within Delta channels. Effects of sea level rise will manifest as a need for additional outflow when Delta water quality is controlling operations to prevent seawater intrusion. In this technical memorandum, we do not critique the climate change assumptions themselves, except in the limited manner described below. [Footnote 5] This review is limited to evaluating how modified flows were incorporated into CalSim II and whether the operation of the CVP and SWP in response to modified flows and modified flow-salinity relationship is reasonable for ELT and LLT conditions. This review focuses on assumed underlying hydrology and simulated operation of the CVP and SWP, assumed regulatory requirements, and the resultant water deliveries. [Footnote 4: BDCP EIR/EIS Appendix 5A, Section A and BDCP HCP/NCCP plan Appendix 5.A.2] [Footnote 5: This should not be read to imply that climate change assumptions are reasonable or considered correct or incorrect; the limited review reflects the scope of this memorandum.]	environmental impact analysis in the EIR/S were raised.
1511	52	[ATT 1] To assess climate change, the three without Project ("baseline" or "no action") modeling scenarios were reviewed: No Action Alternative (NAA) [Footnote 6: NAA is also called the Existing Biological Conditions number 2 (EBC-2) in the Draft Plan.], No Action Alternative at the Early Long Term (NAA-ELT), and No Action Alternative at the Late Long Term (NAA-LLT). Assumptions for NAA, NAA-ELT, and NAA-LLT are provided in the Draft EIR/EIS's modeling appendix. [Footnote 7: BDCP EIR/EIS Appendix 5A, Section B, Table B-8] The only difference between these scenarios is the climate-related changes made for the ELT and LLT conditions (Table 2) [Att1:Att2] . Differences between the NAA and NAA-ELT reveal effects of climate change assumptions under ELT conditions; similarly, differences between the NAA and NAA-LLT reveal effects of climate change assumptions under LLT conditions.	The comment is consistent with the information presented in Chapter 5 and Appendix 5A of the EIR/EIS and has correctly identified a way to isolate and determine the climate change impacts separately from the impacts of the project. Similarly, comparing the NAA-ELT to and Alternative at ELT would identify the impacts of the alternative separate from the climate change impacts.
1511	53	[Att1: Att2] Table 2. Scenarios Used to Evaluate Climate Change	Please see response to comment 1511-52.
1511	54	[Att 1] There is considerable uncertainty regarding the effects of climate change on future temperature and precipitation. Analysis of only one potential future condition at different planning horizons does not cover the range of potential effects. While other analyses attempt to bracket the range of climate change effects (e.g. 2008 OCAP analysis [Footnote 8]) on proposed projects, BDCP's entire effects analysis is based on a single climate change scenario. Standard practice for modeling CVP and SWP operations is to impose future demand projections on historical hydrology to develop No Action Alternatives. BDCP did not follow the standard practice of evaluating effects of BDCP using historical hydrology, but	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. 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

DEIRS Ltr#	Cmt#	Comment	Response
		relied solely on one climate change scenario to form the basis of their analysis. [Footnote 8: USBR, 2008. Biological Assessment on the Continued Long-term Operations of the Central Valley Project and the State Water Project, Appendix R Sensitivity of Future Central Valley Project and State Water Project Operations to Potential Climate Change and Associated Sea Level Rise, U.S. Bureau of Reclamation, July 2008.]	Alternative 1 under the five climate change scenarios. 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 all action alternatives, the incremental changes appear to be similar under a range of climate change scenarios.
1511	55	[Att 1] The significance of changed hydrology between the three without project baselines (no action alternative) (NAA, NAA-ELT, and NAA-LLT) is illustrated below in Figure 1 [Att1:Att3] . The figure illustrates the projected combined inflow of Trinity, Shasta, Oroville, and Folsom Reservoirs under the NAA and the change relative to the NAA for the NAA- ELT and NAA-LLT baselines. BDCP baselines show Trinity, Shasta, and Oroville inflow are projected to increase overall, but with a significant shift from spring runoff to winter runoff and increases in wetter years with decreases in drier years. The effect of assumed climate change on average annual Folsom Reservoir inflow in the NAA-ELT scenario is minor, but causes decreases in inflow of about 70 Thousand Acre Feet in the NAA-LLT scenario. The spring to winter shift in runoff is also projected for Folsom Reservoir inflow. Figure 2 [Att1:Att4] is an illustration of Folsom inflow under the NAA and the change relative to NAA for the NAA-ELT and NAA-LLT baselines. To properly incorporate climate change into modeling of Folsom Reservoir and the American River, climate change effects must be applied to flows and reservoirs upstream from Folsom, which was not done. There is significant storage capacity in the upper American River watershed in PCWA's Middle Fork Project and the Sacramento Municipal Utility District's (SMUD) Upper American River Project. The operation of Folsom is significantly affected by changes in upstream conditions and operations. [Footnote 9] Because climate change in BDCP modeling is imposed on the American River by adjusting only the inflow to Folsom only, however, the effect on the American River is likely misrepresented in the BDCP NAA-ELT and NAA-LLT scenarios. Comparison of inflow changes illustrated in Figure 1 [Att1:Att3] and Figure 2 [Att1:Att4] show the effects of climate change are large in the American River Basin relative to changes in other river basins. Total changes illustrated in Figure 1 [Att1:Att3] show wetter conditions in wet years and drier conditions in dry years when considering the four basins together. However, climate change in the American River Basin for the LLT shows drier conditions in all year-types. Additionally, a large percentage of the dry and critical year inflow reduction, 57 and 37 percent respectively, for the combined four basins occur in the American River Basin. By comparison, runoff from the American River at Folsom is approximately 20 percent of the sum of runoff of the Trinity, Sacramento, Feather, and American rivers. [Footnote 9: SMUD's Upper American River Project alone is estimated to have water storage capacity of about 430,000 acre·feet. "The History of SMUD's UARP", Sacramento Municipal Utility District (2001).]	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. As described in Chapter 5 of the EIR/EIS analyses assume continued implementation of regulatory requirements in accordance with the requirements under the CEQA definition of Existing Conditions and under the NEPA definition of the No Action Alternative. Flows in the American River watershed were modified to reflect climate change. However, as described in Chapter 5, Water Supply, the EIR/EIS analyses assume continued implementation of regulatory requirements in accordance with the requirements under the CEQA definition of Existing Conditions and under the NEPA definition of the No Action Alternative. Changes in operational and/or regulatory requirements due to climate change and sea level rise would only occur following detailed analyses, including project-specific CEQA and NEPA analyses and ESA and CESA analyses. Following adoption of changes to the operational or 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.
1511	56	[Att1:Att 3] Figure 1. Inflow to Trinity, Shasta, Oroville, and Folsom Reservoirs -- NAA, NAA-ELT and NAA-LLT	Please see response to comment 1511-55.
1511	57	[Att1:Att 4] Figure 2. Projected Inflow to Folsom Reservoir -- NAA, NAA-ELT and NAA-LLT	Please see response to comment 1511-55.

DEIRS Ltr#	Cmt#	Comment	Response
1511	58	[Att 1] Changes in Folsom inflow can affect American River operations in a variety of ways, such as changes in lower American River flows based on the June 2009 NMFS BO Action II.1 (American River Flow Management), availability of water to M&I purveyors in the American Region Basin, and flood control operations in Folsom Reservoir. Climate change is imposed on the American River Basin by adjusting Folsom inflow without adjustments to operations upstream from Folsom. Lower American River flow requirements are calculated and adjusted using several different indices that include forecasted inflow to Folsom, end-of-September storage in Folsom and upstream reservoirs, forecasted Folsom storage, and the Sacramento River Index. Water deliveries from Folsom are partially based on water supply in upstream reservoirs. Required flood reservation space in Folsom Reservoir is affected by storage in upstream reservoirs. Because Folsom Reservoir operation is affected by storage conditions upstream from Folsom, climate change must be applied to the entire American River basin to properly analyze conditions with climate change. For Folsom and other upstream CVP and SWP reservoirs, the shift of in timing of inflows along with a continuing need to satisfy downstream environmental requirements and demands significantly affects carryover storage. Because of climate change's assumed effect on hydrology and the lack of CVP/SWP operational adaptations in the BDCP modeling, the CVP and SWP simply cannot satisfy water demands and regulatory criteria imposed on them in the no action alternative ELT and no action alternative LLT modeling scenarios.	Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project, responses are presented generally in Master Response 5. Flows in the American River watershed were modified to reflect climate change. However, as described in Chapter 5, Water Supply, the EIR/EIS analyses assume continued implementation of regulatory requirements in accordance with the requirements under the CEQA definition of Existing Conditions and under the NEPA definition of the No Action Alternative. Changes in operational and/or regulatory requirements due to climate change and sea level rise would only occur following detailed analyses, including project-specific CEQA and NEPA analyses and ESA and CESA analyses. Following adoption of changes to the operational or 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. 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. Therefore, it is anticipated that Reclamation would implement actions during these conditions, such as they implemented during the recent drought emergency, to continue to deliver water from Folsom Lake. These emergency operations would require separate engineering and environmental studies. Please see responses 1511-55, 1511-52 and 1511-49 above.
1511	59	[Att 1] Figure 3 [Att1:Att5] illustrates change in carryover storage in Folsom Reservoir. The relatively high frequency (approximately 10% of time) of minimum storage occurring at Folsom Reservoir leads us to question whether the no action alternatives reflect credible or defensible operations. The projected occurrences of low and dead storage conditions projected by the BDCP modeling result in severe reduction of flow available to sustain habitat in the Lower American River and severe reductions in water supply reliability. Assumed effects of climate change and lack of adaptation reduces CVP water supply allocations to American River CVP Water Service Contractors. Figure 4 contains exceedance probability plots of CVP municipal and industrial allocations for the no action alternative, no action alternative ELT, and no action alternative LLT scenarios. Full allocations are made 40% of the time under the NAA, this is reduced to about 30% in the no action alternative ELT, and full allocations are made about 25% of the time in the no action alternative LLT. The occurrence of 50% allocation increases from about 4% in the no action alternative to about 7% in the no action alternative ELT and to about 12% in the no action alternative LLT. In addition to reduced water service contract allocations, water supply allocations under any right cannot be satisfied due to low storage levels in Folsom Reservoir and low flow in the Lower American River. It is not physically possible to divert water for M&I use from Folsom Reservoir when reservoir storage drops below about 100,000 acre-feet because, at that level, the M&I intake in the reservoir would be dry. In addition, flows in the lower American River below about 500 cfs make it impossible for the City of Sacramento to divert water at its Fairbairn diversion. The water-supply and other effects of these physical conditions occurring in the no action alternative scenarios are not identified or evaluated in the draft	The No Action Alternative and all of the EIR/EIS alternatives include climate change and sea level rise assumptions by 2060. These changes would result in "dead pool" conditions in SWP and CVP reservoirs upstream of the Delta even without the action alternatives. 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, such as recent use of barges in Folsom Lake to extend the elevation of the intakes. Instead the model includes average operating criteria for all dry periods, and does not reflect specific changes. 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 or in the Cumulative Impact Analysis.

DEIRS Ltr#	Cmt#	Comment	Response
		BDCP EIR/EIS. Figure 4. CVP North of Delta M&I Water Service Contract Allocation If climate change were to result in significant inflow changes, it is highly likely that certain underlying operating criteria such as instream flow requirements and flood control diagrams would also require changes. For example, the CVP and SWP are unlikely to draw reservoirs to dead pool as often as the no action alternatives depict. The no action alternative ELT and no action alternative LLT model scenarios show that, in 10% of years, Folsom Lake levels would drop to a "dead pool" condition where diversions to municipal and industrial use from the reservoir would not be physically possible. As a result, in this scenario, the modeling implies that American River M&I deliveries from the reservoir would be below what is needed for public health and safety in 10% of years. Additionally, low storage in Folsom would lead to water temperature conditions that would likely be detrimental for listed species and not achieve the temperature objectives in the June 2009 NMFS BO Action II.2 (Lower American River Temperature Management). In addition to affecting fishery habitat in the lower American River, increases in temperature cause problems with water treatment for urban water supplies. In short, the no action alternative ELT and no action alternative LLT do not provide reasonable underlying CVP and SWP operations on which to superimpose the BDCP and evaluate effects of Alternatives.	
1511	60	[Att1:Att 5] Figure 3. Folsom Reservoir Carryover Storage	Please see response to comment 1511-59.
1511	61	[Att1:Att 6] Figure 4. CVP North of Delta M&I Water Service Contract Allocation	Please see response to comment 1511-59.
1511	62	[ATT 1] In the Reviewers' opinion, the CalSim II operations depicted in the no action alternative BDCP modeling that incorporate climate change do not represent a reasonably foreseeable future operation of the CVP and SWP. Although an argument is typically made that these no action alternative will be used in a comparison analysis with Project Alternatives tiering from these no action alternative, the Reviewers believe that the depicted no action alternative operations are so fundamentally flawed that there can be no confidence even in the comparative results. Therefore, results of the depicted operations are inappropriate as the foundation of technical analysis of a Project Alternative. As such, although the modeling approach may provide a relative comparison between equal foundational operations, little confidence can be placed in the computed differences shown between the no action alternative and Project Alternative Scenarios.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. The EIR/EIS modeling results presented in Appendix 5A, Section C, shows that changes in climate and sea level could result in "dead pool" conditions in SWP and CVP reservoirs upstream of the Delta even without BDCP alternatives. The "dead pool" conditions presented in the CALSIM II model results in the EIR/EIS are based on modeled SWP and CVP water operations under current regulations and future demand assumptions. In addition, CALSIM II cannot make decisions that occur in real-time, such as drought operations during the ongoing drought. Instead the model includes operating criteria per the current regulations for all dry periods, and does not reflect specific relaxations that could occur in drought conditions. As described in Chapter 5 of 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.
1511	63	[Att 1] BDCP No Action Alternatives include errors and omissions in American River demands and Fairbairn diversion limitations. However, the most significant issues with the NAAs are in operation of the CVP/SWP with climate change. The BDCP Model uses assumed future climate conditions that obscure the effects of implementing the BDCP. The future	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

DEIRS Ltr#	Cmt#	Comment	Response
		conditions assumed in the BDCP model include changes in precipitation, temperature, and sea level rise. The result of these assumptions is that BDCP's modeled changes in water project operations and subsequent environmental impacts are caused by undefined combinations and inter-relations of three different factors: (1) sea level rise; (2) climate change; and (3) implementation of the alternative that is being studied. The inclusion of 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 advanced 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 [Footnote 10]; and (3) if droughts become more frequent, the CVP and SWP would likely 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. [Footnote 10: See www.waterboards.ca.gov/waterrights/water_issues/programs/drought/tucp.shtml for information concerning the SWRCB's urgency drought orders for CVP/SWP operations this year.]	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. In addition, it is worth noting that models are simplified representations of extremely complex real world systems. The hydrologic and hydraulic models used to evaluate historic and future conditions with and without the action alternatives should be understood in this context. These models are not able to capture all of the actions or operational changes that would and do occur in extraordinary years (such as the drought conditions of 2013-14). The results of these models are most useful when comparing the differences between different runs of the model, i.e., how do water supplies or reservoir conditions change between the with and without project conditions. Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP), responses are presented generally in Master Response 5.
1511	64	[Att 1] The BDCP contemplates a dual conveyance system that would move water through the Delta's interior or around the Delta through an isolated conveyance facility. The BDCP CalSim II files contain a set of studies evaluating the projected operation of a specific version of such a facility. Each Alternative was imposed on two baselines: the no action alternative Early Long Term (ELT) scenario and the no action alternative Late Long Term (LLT) scenario. The BDCP Preferred Alternative, Alternative 4, has four possible sets of operational criteria, termed the Decision Tree. Key components of Alternative 4 ELT and Alternative 4 LLT are as follows: The same system demands and facilities are described in the No Action Alternative (NAA) with the following primary changes: three proposed North Delta Diversion (NDD) intakes of 3,000 cubic feet per second (cfs) each; NDD bypass flow requirements; additional positive Old and Middle River (OMR) flow requirements and elimination of the San Joaquin River	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For detailed responses on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. Alternative 4A, the Proposed Project, no longer includes a decision tree, but does include a robust collaborative science and adaptive management plan designed to better understand key scientific uncertainties pertaining to Delta fish and operations, and provides a mechanism for adjustments to operations to ensure that the effects of the CVP and SWP are minimized with the new point of diversion. The first two paragraphs of this comment are generally consistent with information contained in Appendix 5A of the EIR/EIS. It should be noted that the use of the climate change, sea level rise, and population growth assumptions in

DEIRS Ltr#	Cmt#	Comment	Response
		Import/Export (I/E) ratio and the export restrictions during Vernalis Adaptive Management Program; modification to the Fremont Weir to allow additional seasonal inundation and fish passage; modified Delta outflow requirements in the spring and/or fall (defined in the Decision Tree discussed below); relocation of the Emmaton salinity standard; redefinition of the E/I ratio; and removal of current permit limitations for the south Delta export facilities. Set within the ELT environment. The changes (benefits or impacts) of the operation due to Alternative 4 are highly dependent upon the assumed operation of not only the NDD and the changed regulatory requirements associated with those facilities, but also by the assumed integrated operation of existing CVP and SWP facilities. The modeling of the NAA Scenarios introduces significant changes in operating protocols suggested primarily to react to climate change. The extent of the reaction does not necessarily represent a likely outcome, and thus the Reviewers have little confidence that the NAA baselines are a valid representation of a baseline from which to compare an action Alternative. However, a comparison review of the Alt 4 to the NAA illuminates operational issues in the BDCP modeling and provides insight as to where benefits or impacts may occur. BDCP Alternative 4 has four possible sets of operational criteria, termed the Decision Tree, that differ based on the "X2" standards that they contemplate: - Low Outflow Scenario (LOS), otherwise known as operational scenario H1, assumes existing spring X2 standard and the removal of the existing fall X2 standard; - High Outflow Scenario (HOS), otherwise known as H4, contemplates the existing fall X2 standard and providing additional outflow during the spring; - Evaluated Starting Operations (ESO), otherwise known as H3, assumes continuation of the existing X2 spring and fall standards; - Enhanced spring outflow only (not evaluated in the December 2013 Draft BDCP), scenario H2, assumes additional spring outflow and no fall X2 standards. While it is not entirely clear how the Decision Tree would work in practice, the general concept is that, prior to operation of the NDD, implementing authorities would select the appropriate decision tree scenario (from amongst the four choices) based on their evaluation of targeted research and studies to be conducted during planning and construction of the facility. For this analysis, the Reviewers analyzed the HOS (or H4) scenario because the BDCP [Footnote 11] indicates the initial permit will include HOS operations that may be later modified at the conclusion of the targeted research studies. The HOS includes the existing fall X2 requirements but adds additional outflow requirements in the spring. The model code was reviewed and discussed with DWR and the Bureau of Reclamation, who acknowledged that, although the SWP was bearing the majority of the responsibility for meeting the additional spring outflow in the modeling, the responsibility would need to be shared with the CVP under the CVP/SWP Coordinated Operations Agreement (COA) [Footnote 12]. In subsequent discussions, DWR and Reclamation suggested the additional water for the HOS scenario may be purchased from other water users. However, the actual source of water for the additional outflow has not been defined. The actual source of the water will involve impacts that cannot be reflected in the modeling until the source is	the No Action Alternative and action alternatives are provided for two purposes. First, as an indication of future trends. Second, the model results can only be used in a comparative manner, not for absolute values. Therefore, the comparison of conditions under action alternatives as compared to the No Action Alternative due to implementation of the action alternatives without the effects of climate change, sea level rise, and population growth. Changes to environmental resources under the No Action Alternative as compared to Existing Conditions are related to changes caused by climate change, sea level rise, and population growth that would occur with or without the project and are not caused by the action alternatives/Project and are not mitigated under the Project. As described in Appendix 5A, Section B, of the EIR/EIS flows to meet the Delta outflow criteria based upon the State Water Resources Control Board Decision 1641 and the 2008 USFWS biological opinion are provided by a combination of SWP and CVP reservoir releases and limitations on Delta exports. Under Alternatives 4 H2 and 4 H4, water to support enhanced spring Delta outflow was provided by additional water releases from reductions in Delta exports and releases from Lake Oroville. The enhanced spring Delta outflow was considered to be met outside of the Coordinated Operations Agreement which defines sharing criteria between the SWP and CVP. This would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results. Under Alternative 4A, the enhanced spring Delta outflow was only met by reduction in Delta exports.

DEIRS Ltr#	Cmt#	Comment	Response
		identified. While it is agreed that this is not how the projects would actually be operated, since the BDCP Model assumes that the SWP bears the majority of the responsibility for meeting the additional outflow, the Reviewers' analysis of the BDCP modeling results for HOS is limited to the evaluation of how the SWP reservoir releases on the Feather River translate into changes in Delta outflow and exports. The Reviewers' remaining analysis examines the Evaluated Starting Operations [ESO] (or H3) scenario (labeled Alt 4-ELT or Alt 4-LLT in this section) because it employs the same X2 standards as are implemented in the NAA-ELT and NAA- LLT. This allowed the Reviewers to focus the analysis on the effects of BDCP operations independent of the possible change in the X2 standard. [Footnote 11: Draft BDCP, Chapter 3, Section 3.4.1.4.4] [Footnote 12: August 7, 2013 meeting with DWR, Reclamation, and CH2M HILL]	
1511	65	[Att 1] According to the Draft EIR/EIS [Footnote 13], the high outflow scenario will reduce SWP south of Delta water deliveries for municipal and industrial (M&I) water users 7% below the level that they would receive without the BDCP (on average). During dry and critical years, SWP south of Delta water deliveries for M&I and agricultural water users will drop 17% below the level that they would receive without the BDCP. In other words, according to BDCP modeling, SWP contractors would get less water with BDCP than under the no action alternative. The shared CVP and SWP obligation to provide flow to satisfy Delta outflow requirements is described in the Coordinated Operations Agreement. Because the CVP and SWP share responsibility for meeting required Delta outflow based on that specific sharing (rules under the Coordinated Operations Agreement), it is not reasonable to conclude that CVP water supplies would increase an average of 70 thousand acre feet while SWP water supplies decrease on average of 100 thousand acre feet under the high outflow scenario. These results, however, are what the BDCP modeling projects for the high outflow scenario -LLT scenario. The manner in which this alternative is modeled is inconsistent with existing agreements and operating criteria. If the increases in outflow were met based on Coordinated Operations Agreement, there would likely be reductions in Shasta and Folsom storage that would likely cause adverse environmental impacts, which have not been modeled or analyzed in the BDCP EIR/EIS. Furthermore, there is no apparent source of water to satisfy the increased outflow requirements and pay back the Coordinated Operations Agreement debt that the CVP would incur if the SWP were used to meet high outflow scenario requirements. It appears, through recent public discussions regarding the High Outflow Scenario 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 months, 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 without releasing stored water from the reservoirs. The overall effect of the high outflow scenario appears to be increases in Oroville releases to support both CVP and SWP exports in wetter years, with modest increases in Delta outflow. There is also a decrease in SWP reliability through large delivery reductions in drier	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For detailed responses on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. Water deliveries under Alternative 4A are different than the values presented in this comment for the Alternative 4. It should be noted that the Proposed Project operational assumptions were developed for SWP and CVP Delta exports to remain similar or increase in wetter years and decrease in drier years as compared to Delta exports under No Action Alternative based on the capability to divert water at the north Delta intakes during winter and spring months and to reduce other stressors on the ecological functions of the Delta As described in Appendix 5A, Section B, of the EIR/EIS flows to meet the Delta outflow criteria based upon the State Water Resources Control Board Decision 1641 and the 2008 USFWS biological opinion are provided by a combination of SWP and CVP reservoir releases and limitations on Delta exports. Under Alternatives 4 H2 and 4 H4, water to support enhanced spring Delta outflow was provided by additional water releases from reductions in Delta exports and releases from Lake Oroville. The enhanced spring Delta outflow was considered to be met outside of the Coordinated Operations Agreement which defines sharing criteria between the SWP and CVP. This would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results. Under Alternative 4A, the enhanced spring Delta outflow was only met by reduction in Delta exports. Please see Appendix 5E for additional modeling results related to SWP and CVP deliveries as well as Master Response 28 regarding operational criteria.

DEIRS Ltr#	Cmt#	Comment	Response
		years accompanied by Oroville storage increases. In addition to increases in dry and critical year storage in Oroville, total CVP dry and critical year carryover increases by 100 thousand acre feet and 380 thousand acre feet respectively with negligible reductions in wetter years types. [Footnote 13: Draft EIR/EIS, Appendix 5A-C, Table C-13-20-2]	
1511	66	[ATT 1] The following section presents comparisons of model results and describes changes between the No Action Alternative Late Long Term [NAA-LLT] and Alternative 4 H3, evaluated at LLT (referred to in this discussion as Alt 4-LLT), for key American River operations. These results focus on changes that directly impact American River water purveyors, flows, and temperatures in the American River downstream of Folsom Dam. Based on a comparison of BDCP modeling of Alt4-LLT to NAA-LLT, there is a general trend for Folsom Reservoir to be drawn down more in Alt4-LLT during May and June, and then remain lower until September. This change in storage is accompanied by increases in Lower American River flow in May and June, and decreases from July through September. This shift in timing forms the basis of many concerns regarding impacts of BDCP on American River operations and environmental conditions. BDCP modeling did not include a with-Project scenario without climate change. As a result of this omission it is impossible to clearly identify the effects of the Project separate from the effects of climate change.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For detailed responses on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. The first two paragraphs of this comment are generally consistent with information contained in Appendix 5A of the EIR/EIS. It should be noted that the use of the climate change, sea level rise, and population growth assumptions in the No Action Alternative and action alternatives are provided for two purposes. First, as an indication of future trends. Second, the model results can only be used in a comparative manner, not for absolute values. Therefore, the comparison of conditions under action alternatives as compared to the No Action Alternative due to implementation of the action alternatives without the effects of climate change, sea level rise, and population growth. Changes to environmental resources under the No Action Alternative as compared to Existing Conditions are related to changes caused by climate change, sea level rise, and population growth that would occur with or without the project and are not caused by the action alternatives/Project and are not mitigated under the Project.
1511	67	[Att 1] Figure 5 is a comparison of simulated monthly Folsom Reservoir water surface elevations for the baseline and with-Project scenarios. A probability of exceedance chart for each month illustrates differences between the two model simulations and potential Project effects. Dashed horizontal lines indicate water surface elevations when groups of shutters on the intake device must be removed. For example, when the water surface elevation goes below approximately 430 feet, the first group of shutters must be removed. These lines are 30 feet above the top of shutter elevations for the three groups of shutters to account for water depth to prevent the formation of a vortex and cavitation at the intake which would prevent diversion. Results presented in Figure 5 [Att1:Att7] illustrate that Folsom Reservoir water surface elevation is lower under the with-Project scenario. The largest difference in Folsom elevation occurs from June through August and can affect temperature management by changing when shutters are removed. Shutters are removed from Folsom Dam's intakes in order to access colder water located lower in the reservoir. While removing shutters causes the temperature of water diverted and released from the reservoir to drop almost immediately, that effect does not cause release temperatures to remain cooler indefinitely. Accordingly shutters must be removed strategically. The timing of shutter removal at Folsom Reservoir would change in the with-project condition. For example, in August the probability of all three shutters being in use is reduced from approximately 25 percent to 15 percent, and the probability of at least one shutter still in used is reduced from approximately 90 percent to 85 percent. Figure 6 [Att1:Att8] is a comparison of simulated monthly Folsom Reservoir storage for the baseline and	The shutter operational assumptions were analyzed by the Reclamation monthly temperature model, as described in Chapter 11, Fish and Aquatic Resources, of the Draft BDCP EIR/EIS. Reservoir releases from SWP and CVP models were not changed in alternatives that did not fully comply with downstream temperature criteria; however, the effects to the fisheries were described in Section 11.3 of Chapter 11. The conditions under the No Action Alternative and actions alternatives include climate change and sea level rises which would result in low water elevations in drier years in the SWP and CVP reservoirs upstream of the Delta even without action alternatives. These conditions occur in the CALSIM II model results in the EIR/EIS because the model calculates 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the action alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial.

DEIRS Ltr#	Cmt#	Comment	Response
		with-Project scenarios. A probability of exceedance chart for each month illustrates differences between the two model simulations and potential Project effects. Dashed horizontal lines in Figure 6 [Att1:Att8] represent storage levels below which municipal and industrial water purveyors cannot meet peak demands (322 thousand acre feet) with diversions from Folsom (illustrated for peak demand months only) or when Municipal and Industrial (M&I) diversions are interrupted because water levels in Folsom are below the M&I intake (90 thousand acre feet). Results summarized in Figure 6 [Att1:Att8] show that Folsom Reservoir storage is more likely to be lower under the BDCP Alt4-LLT (Late Long Term) than the no action alternative LLT particularly in peak summer months. Lower storage impacts the ability of the water purveyors that divert directly from Folsom Reservoir, as well as downstream purveyors on the American River, to meet peak demands in the summer and increases the probability of M&I delivery interruptions.	
1511	68	[Att1:Att 7] Figure 5. NAA-LLT and Alt 4-LLT Simulated Folsom Reservoir Elevation	Please see response to comment 1511-67.
1511	69	[Att1:Att 8] Figure 6. NAA-LLT and Alt 4-LLT Simulated Folsom Reservoir Storage	Please see response to comment 1511-67.
1511	70	[Att 1] Figure 7 [Att1:Att9] and Figure 8 [Att1:Att10] contain comparisons of simulated monthly flow at Nimbus and H Street for the no action alternative LLT and Alt4-LLT scenarios. Results show that under the Alt4-LLT American River flow is higher in the months of May and June, and lower in July, August, and September. Higher releases in May and June drive changes in Folsom storage and water surface elevation seen in previous figures. Likewise, lower releases from July through September bring simulated end-of-September storage between the baseline and with-Project scenarios closer. BDCP modeling shows a higher probability of Lower American River flows being above Hodge Flows in May and June and a higher probability of flows being below Hodge Flows in July, August, and September. When Nimbus releases are below Hodge Flows, diversion limitations under the City of Sacramento's American River water right permits for the Fairbarn Water Treatment Plant on the American River constrain the amount of water available to divert. The changes in American River flows will affect the location of the City of Sacramento's diversion, but this is not reflected in the BDCP modeling. There are also limitations on the City's Sacramento River diversion capability, which could interfere with any such shift in the location of diversions, and hence reduce the supply available to the City. This is not reflected in the BDCP modeling. In the Alt 4-LLT the City of Sacramento will be able to divert more water from the American River at Fairbairn during May and June and less during August and September. Flow in the lower American River at H Street drops below 500 cfs in both the NAA-LLT and Alt4-LLT. This is critical for the City of Sacramento because their ability to divert water from the American River is affected when flow at H Street falls below 500 cfs due to the potential for pump cavitation. There are times when American River at H Street falls below 500 cfs more often in Alt 4-LLT than in the NAA-LLT. Water availability to the City of Sacramento, including under its settlement contract with Reclamation [Footnote 14], would be curtailed or eliminated on the American River when water levels in Folsom Reservoir drop below to dead pool level of 90,000 AF. Changes in Nimbus release under the Alt4-LLT would likely affect cold-water pool management and water temperatures downstream of Folsom Dam. Increased releases in May and June would reduce cold-water pool, lower reservoir water surface elevation, and require shutters to be removed earlier. Removing shutters earlier would drain Folsom	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. The Final EIR/EIS includes model results specifically for the Proposed Project, Alternative 4A, and Alternatives 2D and 5A as compared to Existing Conditions and No Action Alternative. These results indicate that the American River flows below Nimbus Dam under the Alternative 4A are below the Hodge criteria at similar or lower probability than the No Action Alternative under all months except August and September. Even though the flows are below the Hodge criteria for a few additional years under Alternative 4A compared to the No Action Alternative, City of Sacramento deliveries were found to be similar under both scenarios. The frequency at which the American River flows at H street under Alternative 4A are less than 500 cfs is similar in frequency to the conditions under the No Action Alternative. The changes in the Folsom Lake cold water pool and releases under Alternative 4A compared to the No Action Alternative and its fishery effects were analyzed in Chapter 11 of the Final EIR/EIS. It should be noted that 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 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.

DEIRS Ltr#	Cmt#	Comment	Response
		Reservoir's limited cold-water pool more rapidly and potentially impact salmon and steelhead in the lower American River by resulting in warmer river temperatures. From July through September temperature management would be affected by the combination of a reduced cold-water pool and lower releases from Nimbus, i.e. lesser amounts of warmer water would be released and warm up quicker as it flows downstream. The change in timing of release from Folsom Reservoir is caused in the Alt 4-LLT by BDCP using of different assumptions for balancing reservoirs upstream of the Delta with San Luis Reservoir in Alt 4-LLT relative to assumptions in the NAA. In other words, the BDCP operations triggered changes in the timing of Folsom Reservoir releases. These balancing rules attempt to move more water into San Luis Reservoir earlier in the year in the with-Project scenario. It is unclear why BDCP modeling changed these assumptions to simulate Project alternatives. [Footnote 14: Operating Contract No.14-06-200-6497.]	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 fall months. 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 EIR/EIS proposed project and other 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. It is recognized that future projects could change the San Luis Reservoir rule curve. 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 project proponents, and are not included in the action alternatives.
1511	71	[Att 1] Figure 9 [Att1:Att11] contains comparisons of simulated monthly flow in the Sacramento River at the confluence of the American River for the no action alternative LLT and Alt4-LLT scenarios. When Sacramento River elevation falls below two feet above sea level (NGVD 1929) the City of Sacramento's intake structure capacity is reduced. Elevation 2.0 occurs when the flow rate is between approximately 5,000 cfs and 9,000 cfs and depends on tidal variation. Moreover, flow rates below 5,000 cfs may result in cavitation or vortexing, causing significant pump damage. Based on CalSim II modeling results, the frequency of the Sacramento River falling below 6,000 cfs is similar in the NAA-LLT and Alt4-LLT.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. The comment suggests that the Draft EIR/EIS Alternative 4 scenario does not increase the frequency at which Sacramento River at the confluence of the American River falls below 6000 cfs as compared to the No Action Alternative. The Final EIR/EIS includes model results specifically for Alternative 4A as compared to Existing Conditions and No Action Alternative. These results confirm the conclusion in this comment regarding flows below 6000 cfs.
1511	72	[Att1:Att 9] Figure 7. NAA-LLT and Alt 4-LLT Simulated Nimbus Release	Please see response to comment 1511-70.
1511	73	[Att1:Att 10] Figure 8. NAA-LLT and Alt 4-LLT Simulated H Street Flow	Please see response to comment 1511-70.
1511	74	[Att1:Att 11] Figure 9. NAA-LLT and Alt 4-LLT Simulated Sacramento River Flow at the American River	Please see response to comment 1511-71.
1511	75	[Att 1] Figure 10 [Att1:Att12] is an exceedance probability plot of CVP North of Delta M&I Water Service Contract Allocation for the no action alternative LLT and Alt4-LLT. Changes in these allocations would affect the numerous CVP water- service contractors in the American River Basin, including the cities of Folsom and Roseville, Placer County Water Agency, SMUD and Sacramento County Water Agency. Average annual allocation to CVP municipal and industrial water service contractors is about 78% and increases by about one half of one percent in Alt 4-LLT compared to no action alternative LLT. Although allocation	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. The comment describes that the CVP north-of-Delta M&I water service contractors allocation is slightly

DEIRS Ltr#	Cmt#	Comment	Response
		never falls below 50%, deliveries are not always met due to low reservoir and river flows.	higher under Alternative 4 as compared to the No Action Alternative. The modeling of the Alternative 4A in the Final EIR/EIS confirms CVP north-of-Delta M&I service contractor deliveries are similar or slightly higher than the No Action Alternative. The low Folsom Lake storage values are associated with climate change effects on reservoir operations were included in the No Action Alternative (ELT at 2025 and LLT at 2060) and were used to compare the EIR/EIS alternatives under future conditions. Folsom Lake minimum storage was assumed to be 90 taf, corresponding to an elevation of 320 feet (to allow water supply releases). This condition was simulated to occur in 3 years for the Existing Conditions (CEQA baseline) and was simulated in 6 years for the No Action Alternative (ELT) and in 9 years for the No Action Alternative (LLT). Because the CALSIM model used the same assumed reservoir operations rules for each alternative, the comparison between alternatives and the No Action Alternative result in changes related to the alternative implementation only. Increased water demand that occurs under the No Action Alternative and all action alternatives also effect operations of Folsom Lake with or without the Project. The No Action Alternative, Proposed Project, and all other action alternatives were evaluated at 2030 conditions which include population growth projected by existing general plans as compared to the Existing Conditions. The additional population growth would increase water demands, including an increase of water demands in areas North of the Delta (primarily in El Dorado, Placer, and Sacramento counties) of 443,000 acre-feet per year of users of water rights water and CVP water supplies (including increased water demand in the American River watershed upstream of Folsom Lake for senior water rights) as compared to Existing Conditions, as described in Chapter 5, Water Supply, of the EIR/EIS. The increased water demands projected for 2030 under the No Action Alternative, Proposed Project, and all action alternatives are consistent with published urban water management plans and agricultural water management plans for entities that effect the American River watershed flows submitted to DWR by 2012, including approaches for urban water management plans to meet the 20 percent per capita urban water use by 2030 when the conveyance facilities would be operational.
1511	76	[Att1:Att 12] Figure 10. CVP North of Delta M&I Water Service Contract Allocation	Please see response to comment 1511-75.
1511	77	[Att1] BDCP's "High Outflow Scenario" is not sufficiently defined for analysis. The High Outflow Scenario (HOS) requires additional water (Delta outflow) during certain periods in the spring. The BDCP modeling 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 coordinated operations agreement 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 coordinated operations agreement requires balancing to ensure the burden does not fall on only one of the projects. The BDCP modeling is misleading because it fails to adjust project operations, as required by the coordinated operations agreement, to pay back the water debt to the SWP due to these additional Delta outflow requirements. Unless there is a significant revision to coordinated operations agreement, the BDCP modeling overstates the impacts of increased Delta outflow on the SWP and understates the effects on the CVP, including Folsom Reservoir and the Lower American River.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. As described in Appendix 5A, Section B, of the EIR/EIS flows to meet the Delta outflow criteria based upon the State Water Resources Control Board Decision 1641 and the 2008 USFWS biological opinion are provided by a combination of SWP and CVP reservoir releases and limitations on Delta exports. Under Alternatives 4 H2 and 4 H4, water to support enhanced spring Delta outflow was provided by additional water releases from reductions in Delta exports and releases from Lake Oroville. The enhanced spring Delta outflow was considered to be met outside of the Coordinated Operations Agreement which defines sharing criteria between the SWP and CVP. This would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results. Under Alternative 4A, the enhanced spring Delta outflow was only met by reduction in Delta exports.
1511	78	[Att1] Based on the information made available from the BDCP environmental review process and after consulting with DWR and Bureau of 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 coordinated operations agreement debt to the SWP without substantially depleting upstream water storage. It appears, through recent public discussions regarding the High Outflow Scenario	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		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 may be unrealistic. During most of the spring, when BDCP proposes that Delta outflow be increased, agricultural water users, who are the only source of water in adequate volumes, are not irrigating. This means that they cannot transfer water during that time frame, and hence there is not sufficient transfer water available to meet the increased Delta outflow requirements without releasing stored water from the reservoirs. Releasing stored water to meet the increased Delta outflow requirements would deplete cold water pools and could potentially impact salmonids on the Sacramento and American River systems.	As described in Appendix 5A, Section B, of the EIR/EIS flows to meet the Delta outflow criteria based upon the State Water Resources Control Board Decision 1641 and the 2008 USFWS biological opinion are provided by a combination of SWP and CVP reservoir releases and limitations on Delta exports. Under Alternatives 4 H2 and 4 H4, water to support enhanced spring Delta outflow was provided by additional water releases from reductions in Delta exports and releases from Lake Oroville. The enhanced spring Delta outflow was considered to be met outside of the Coordinated Operations Agreement which defines sharing criteria between the SWP and CVP. This would result in reductions in SWP water contract deliveries as indicated in Appendix 5A, Section C, Modeling Results. Under Alternative 4A, the enhanced spring Delta outflow was only met by reduction in Delta exports.
1511	79	[Att 2] ADVERSE IMPACTS TO CENTRAL VALLEY STEELHEAD AND FALL-RUN CHINOOK SALMON IN THE LOWER AMERICAN RIVER The following identifies impacts to Central Valley (CV) steelhead and fall-run Chinook salmon in the lower American river (LAR) under operations of the CVP/SWP, as modeled in the Draft EIR/EIS. The impacts are based on comparing modeled existing and future BDCP habitat and water temperature conditions. The discussion first describes the LAR setting, summarizes the current status of CV steelhead and fall-run Chinook salmon, describes key life history information and temperature requirements, reviews existing habitat conditions in the LAR (including key environmental stressors), and discusses the BDCP temperature significance criteria in the Draft EIR/EIS. The discussion then characterizes habitat conditions in the LAR under future BDCP operations of the CVP/SWP compared to existing conditions and identifies the resulting adverse impacts to CV steelhead and fall-run Chinook salmon. The American River is a major tributary to the Sacramento River. Historically, it provided over 125 miles of anadromous salmonid habitat (CV steelhead, Chinook salmon). The majority of the historical spawning and rearing habitat existed upstream of present-day Nimbus and Folsom dams (NMFS 2009; Yoshiyama et al. 2001). Since 1955, after construction of Folsom and Nimbus dams, use of the American River by anadromous fish has been limited to the lowest 22.5 miles of river downstream of Nimbus Dam (LAR). The Nimbus Fish Hatchery was built immediately downstream of Nimbus Dam in 1955 to mitigate for lost anadromous fish habitat due to construction of the Folsom-Nimbus Project (the adjacent American River Trout Hatchery was constructed in 1968 to rear resident salmonids). Historically, summer and early fall habitat conditions in the LAR were relatively unsuitable for cold water salmonids due to naturally low flows and high water temperatures in the summer - fall (as high as 75-80 degrees F) (Gerstung 1971). The Folsom-Nimbus Project modified the hydrology of the LAR. Currently, winter/spring flows in the LAR are much lower than historical flows and summer - fall flows are much higher (NMFS 2009). Folsom Reservoir provides a source of summer cold water for the LAR from the hypolimnion of the reservoir. However, the LAR is on the Central Valley floor at an elevation of approximately 100 feet (ft) above sea level. Summer and early fall air temperatures are very warm, with peak daily temperatures frequently above 100 degrees F. Under existing conditions, water temperature in the LAR is colder in the summer - early fall, but warmer in the late-fall - winter than historical water temperatures (Reclamation 2008; NMFS 2009). Extensive effort has been made to provide and maintain water temperatures in the LAR suitable for the remaining CV steelhead and fall-run Chinook salmon habitat and the two cold water fish hatcheries. Most of the cold water rearing and spawning habitat in the LAR	The Final EIR/EIS evaluates impacts to fall-run Chinook and Central Valley Steelhead on the American River for the new preferred alternative, Alternative 4A. When comparing American River impacts in Alternative 4A against impacts in the No Action Alternative (NAA; both alternatives include future conditions in the early long-term (2025), thus making it an apples-to-apple comparison, in contrast to the existing conditions baseline, which does not include assumptions in the future), it was determined there would no adverse impacts to aquatic resources in the American River. In addition, modifications of Folsom Reservoir operational criteria are not proposed under Alternative 4A, and the preferred alternative would continue to comply with existing fish and wildlife regulatory requirements in the American River. Adaptive management under the preferred alternative would also have the ability to inform and improve operations of SWP/CVP facilities to minimize and avoid impacts to fish species similar to Mitigation Measure AQUA-78d.

DEIRS Ltr#	Cmt#	Comment	Response
		occurs in the upper 13-mile portion (Nimbus Dam downstream to Watt Avenue [River Mile (RM) 9.4]), because the downstream portion of the river is generally too warm, in spite of, the cold hypolimnetic releases from Folsom Reservoir. Selective withdrawal shutters have been installed on the three powerhouse intakes and the municipal water intake at Folsom Dam to provide cold water management capability for the LAR. Detailed temperature modeling and reservoir operations scheduling are performed each year to obtain the best summer temperature conditions for CV steelhead, fall temperature conditions for fall-run Chinook salmon, and summer/fall temperature conditions for the hatcheries. Water temperature management of the LAR is challenging and water temperatures are impaired for cold water fish under existing conditions, particularly in drier/low storage years due to high summer/fall temperatures (NMFS 2009; Reclamation 2008; Water Forum 2005; CDFW 2001). In addition to management for LAR water temperature (salmonid species and the fish hatcheries), Folsom Reservoir storage is also managed to meet Delta water quality objectives and deliveries to municipal and industrial (M&I) and agricultural water users. LAR water temperature is severely constrained by the limited amount of storage available in Folsom Reservoir. The amount of cold water pool available for release to the LAR is directly related to the amount of storage in the reservoir at the beginning of the summer when reservoir stratification occurs. In drier years and/or when the storage in Folsom Reservoir is drawn down heavily to meet downstream demands (e.g., Delta water quality requirements, water exports, etc.), the cold water pool is not large enough to provide sufficient cold water releases for CV steelhead juvenile rearing (June - September), fall-run Chinook salmon spawning (October - December), and summer/fall hatchery operations. Water temperature management for both CV steelhead and fall-run Chinook salmon, particularly in low Folsom storage years, requires tradeoffs between releasing cool water in the summer for CV steelhead rearing or saving some cool water until the fall for fall-run Chinook spawning/incubation. The Nimbus and American River fish hatcheries at the top of the LAR reach obtain their 20-60 cubic feet per second (cfs) water supply from the Nimbus Dam. Water temperatures are typically within the suitable range for Chinook salmon and CV steelhead, except in the summer - fall. When water temperatures exceed 60 degrees F, fish are treated with chemicals to prevent disease. As temperatures continue to increase, treatment becomes difficult and water temperatures become increasingly dangerous to fish. Hatchery personnel and Reclamation routinely meet to determine a compromise for operations of Folsom Dam to release cooler water. If water temperatures exceed 70 degrees F, the fish may have to be released or moved to another hatchery (Reclamation 2008). In an unprecedented operation this year, 2014, due to anticipated warm water temperatures, California Department of Fish and Wildlife (CDFW) determined in June that it was necessary to release all CV steelhead juveniles early from the Nimbus Fish Hatchery (released at a small size and much lower survival potential) and moved all trout from the American River Trout Hatchery rather than risk potential mortality to fish due to warm summer water temperatures. Reclamation is required each year to prepare a draft Operations Forecast and Temperature Management Plan for Folsom Reservoir and the LAR and submit it to National Marine Fisheries Service (NMFS) for review by May 1 and a final plan by May 15. The plan can be updated, but requires NMFS approval for deviations. The NMFS Biological Opinion temperature requirement is 65 degrees F (daily average) in the LAR at Watt Avenue from	

DEIRS Ltr#	Cmt#	Comment	Response
		May 15 through October 31 for CV juvenile steelhead rearing. If this temperature is exceeded for three consecutive days, or is exceeded by more than 3 degrees F for a single day, Reclamation is required to notify NMFS in writing and convene the American River Group (ARG) to make recommendations regarding potential cold water management alternatives to improve water temperature, including potential power bypasses. If the May Operations Forecast and Temperature Management Plan identifies that Reclamation cannot meet the 65 degrees F NMFS requirement because of insufficient cold water pool in the reservoir, after taking all actions within its authority, then the target daily average water temperature schedule [Footnote 1] at Watt Avenue may be increased incrementally (i.e., no more than 1 degrees F every 12 hours) to as high as 68 degrees F. The priority for use of the temperature control shutters at Folsom Dam is to achieve the water temperature requirement for CV steelhead and, thereafter, may also be used to provide cold water for fall-run Chinook salmon spawning (RPA Action II.1, NMFS 2011). [Footnote 1: Automated temperature selection procedure schedules are identified in the LAR Flow Management Standard.]	
1511	80	[Att 2] STATUS OF CENTRAL VALLEY STEELHEAD Central valley steelhead have been extirpated from most of their historical range and their numbers are a fraction of their historical abundance due to blockage of freshwater habitats (e.g., dams), habitat degradation/destruction, water allocation, and possibly genetic introgression with hatchery fish. It has been estimated that CV steelhead habitat has been reduced from 6,000 miles historically to 300 miles currently. In 1996, National Marine Fisheries Service estimated that fewer than 10,000 CV steelhead existed throughout its present-day range (from a combination of dam counts, hatchery returns, and spawning surveys). CV steelhead were listed as threatened in 1998 (reaffirmed in 2006), including naturally spawned CV steelhead in the American River. The Nimbus Fish Hatchery population in the American River was not listed because it was originally derived from out of basin fish, however, recent genetic information suggests that the status of the Nimbus Fish Hatchery population should be reconsidered (NMFS 2011). Critical CV steelhead habitat was designated in 2005, including all of the American River below Nimbus Dam. One of the primary goals of the CV steelhead recovery plan (NMFS 2009) is to secure and improve all extant populations. In the American River, the extant CV steelhead population is confined to the Lower American River; however, 100% of the historical spawning habitat (located upstream of Nimbus Dam) is no longer accessible. Only a few hundred fish currently spawn naturally in the LAR (NMFS 2009). A relatively small percentage of CV steelhead redds are from natural spawned fish (i.e., non-hatchery fish without adipose clips) (Hannon and Deason 2008). In 2014, 112 CV steelhead redds were observed in the LAR (American River Group, Meeting Notes April 17, 2014). Currently, rearing and spawning habitat primarily exists in the upper 13 miles of the LAR. Ninety percent of spawning occurs above Watt Avenue (RM 9.4) (Hannon and Deason 2008). CV steelhead rearing habitat during the summer is particularly limited in the LAR due to warm summer water temperature (see below) and most juvenile rearing, similar to spawning habitat, occurs upstream of Watt Avenue. Nimbus Fish Hatchery currently produces about 430,000 steelhead annually. The hatchery steelhead population is operated as a "segregated population" to mitigate for recreational	See response to comment 1511-79.

DEIRS Ltr#	Cmt#	Comment	Response
		fishery losses from the dam and is not used to enhance natural CV steelhead. The hatchery is operated to the extent possible to minimize effects on the limited natural population (California HSRG 2012).	
1511	81	[Att 2] STATUS OF FALL-RUN CHINOOK SALMON Four seasonal runs of Chinook salmon occur in the Sacramento-San Joaquin River system. The runs are named after the upstream migration season -- winter, spring, fall, and late-fall. Central Valley fall/late fall-run Chinook salmon were lumped together and jointly classified as a Federal Species of Concern in 2004. These two runs are separate runs, however, with the late-fall run occurring primarily only in the Sacramento River (Moyle et al. 2008), whereas, fall-run Chinook salmon occur throughout the Central Valley. Fall-run Chinook salmon are the only Chinook salmon run extant in the American River. Spring-run Chinook (listed as threatened 1996) were extirpated from the American River historically and it is uncertain whether or not a late fall-run existed in the American River (Yoshiyama et al. 2001). Approximately 70% of the historical spawning habitat used by Chinook salmon in the American River was blocked by the Folsom- Nimbus Project. Central Valley fall-run Chinook salmon are currently and were historically the most abundant Chinook salmon run in the Central Valley (Moyle 2002; Williamson 2006). Since the 1950's escapement has been relatively robust with various cycles of years with low escapement of <100,000 fish (e.g., 1990 and 2007-2009) and years with high escapement >400,000 fish (e.g., 1999-2005 and 2013). The CV fall-run Chinook salmon in the Lower American River have similar abundance cycles to those of the larger population in the Central Valley. On average 17% of the total Central Valley escapement (48,000 fish) occurs in the LAR and, on average, 75% of the LAR escapement occurs in-river and 25% enters Nimbus Fish Hatchery (CDFW GrandTab data, 1952-2013). Similar to CV steelhead, the majority of CV fall-run Chinook salmon spawning occurs in the upper portion of the LAR. Both spawning gravels and suitable fall water temperature (<58 to 60 degrees F) are most prevalent above Watt Avenue. Warm water temperature in the fall delays spawning and affects adult mortality and in-vivo egg mortality. For example, in 2001 due to warm fall water temperature, a large portion of fall-run Chinook salmon died before spawning (Water Forum 2005). Nimbus Fish Hatchery currently produces about 4 million Chinook salmon annually. The hatchery production helps fulfill mitigation requirements for construction of the Folsom-Nimbus Project. However, hatchery production and release of fish in the Carquinez Straits (in the estuary) has been implicated as part of the cause of lack of genetic structure and prevalence of straying in CV fall-run Chinook salmon (California HSRG 2012).	See response to comment 1511-79.
1511	82	[Att 2] KEY LIFE HISTORY INFORMATION AND TEMPERATURE REQUIREMENTS Adult Central Valley steelhead generally migrate from the ocean from August through April and spawn from December through April, with a peak in the LAR from February to early March (Hannon and Deason 2008; OCAP pg 104). Egg incubation occurs between December and May. Most juvenile fish emigrate as fry or rear for approximately a year (through one summer) before emigrating. Emigration typically occurs January through June (SWRI 2001; Sogard et al. 2012). In the Lower American River, water temperature in the summer is the primary CV steelhead stressor. Marginally acceptable CV steelhead rearing water temperature for short duration (e.g., weeks) is <70 degrees F, with an upper long-term	See response to comment 1511-79.

DEIRS Ltr#	Cmt#	Comment	Response
		tolerance temperature of approximately 68 degrees F. The upper range of optimal rearing temperature is 65 degrees F (e.g., Cech and Myrick 1999; Bratovich et al. 2011). Adult fall-run Chinook salmon generally migrate from the ocean in late summer, with migration peaking mid-October through November. Spawning in the LAR occurs between October and December (peak spawning in November). Fry emergence usually begins in mid- to late-January, with peak emergence usually mid- to late-February. Juvenile emigration occurs after emergence from January through June (e.g., SWRI 2001). In the LAR, water temperature in the fall is a primary factor affecting migrating/spawning fall-run Chinook salmon. Spawning does not occur until temperatures are <58-60 degrees F and delayed spawning and warm temperatures can result in adult and in-vivo egg mortality. Acceptable Chinook salmon spawning/incubation water temperature is <58 degrees F (e.g., USFWS 1999; NMFS 2002; Reclamation 2008; Bratovich et al. 2011).	
1511	83	[Att 2] EXISTING HABITAT CONDITIONS There are a number of potential environmental stressors for Central Valley steelhead and fall-run Chinook salmon, however, the key environmental stressor in the Lower American River under existing conditions (and future conditions) is water temperature in drier years with low Folsom Reservoir storage. Water temperature in the summer (CV steelhead rearing) and fall (Chinook salmon spawning) currently exceeds threshold tolerances for critical life stages in drier years (Figure 1). Frequently, only the upper portion of the river provides suitable water temperatures for CV steelhead and Chinook salmon (Figures 2 and 3). Over the 1922-2003 period of record analyzed in the effects analysis in the Draft EIR/EIS, water temperature at Watt Avenue in August under modeled existing conditions is 69-71 degrees F; at the upper end of the acceptable range for CV steelhead rearing (Figures 4a and b). In drier years, daily measured water temperatures have reached 75 degrees F at Watt Avenue in the summer (Reclamation 2008) (Figures 1 and 2). Water temperature at Watt Avenue in November under modeled existing conditions is 56-57 degrees F (Figures 4a and b), at the upper end of the suitable range for Chinook salmon spawning temperatures. The primary factor that is responsible for warm water temperature in the LAR is the limited storage/cold water pool in Folsom Reservoir in drier years. Any CVP/SWP operations (or BDCP operations) that reduce storage in drier years for whatever reason (sea level rise, climate change, Delta water quality standards, exports, etc.) directly and negatively impact water temperature conditions for CV steelhead and Chinook salmon in the LAR.	See response to comment 1511-79.
1511	84	[Att 2] HABITAT CONDITIONS UNDER BDCP FUTURE CONDITIONS The Draft EIR/EIS attempts to use the no action alternative as the baseline for the analysis. Below we show that the NAA is a radical departure from existing habitat conditions and has large, significant, unmitigated impacts on anadromous fish in the lower American River compared to existing conditions. The NAA would likely cause age class failures in drier years and eventual local extinction of the small natural rearing Central Valley steelhead population in the LAR. The NAA would result in large scale fall-run Chinook salmon fish kills in the fall of the drier years. The operation of the CVP/SWP as modeled in the NAA with the sea level rise, climate change, and future demand assumptions results in much lower Folsom Reservoir storage	Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP), responses are presented generally in Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when construction of the conveyance facilities is anticipated to be complete. See response to comment 1511-79. Please see Chapter 11 in the Final EIR/EIS, for a discussion on the methodology used for reaching a conclusion for fish Impacts related to water operations, which includes impacts on the American River. Impact determinations were based on a combination of biological models, numerical thresholds (based on existing literature, consultation with state and federal fish agencies, and existing regulatory requirements),

DEIRS Ltr#	Cmt#	Comment	Response
		elevations compared to existing conditions (Figures 5a and b) and greatly increased LAR water temperature. The frequency of Folsom Reservoir being at low storage levels (e.g., <350 thousand acre-feet [TAF]) would increase substantially in July and August under the NAA compared to existing conditions (increases from about 10% of the time under existing conditions to about 30% of the time under the NAA) (Figure 5a). In critical years, mean monthly Folsom Reservoir storage would be 119 TAF, 105 TAF, and 81 TAF lower in July, August, and September, respectively, than under existing conditions (down to 210 TAF, 165 TAF, and 159 TAF, respectively, under the NAA). Mean monthly storage in drier years would drop to less than 350 TAF in August and September under the NAA (>440 TAF under existing conditions) (Figure 5b). Further, the frequency of which Folsom Reservoir would be drained to dead pool storage would increase by about 10% (DWR et al. 2013; p. 5-61). This would result in greatly increased water temperatures in the LAR. Higher American River summer temperature schedules occur when Folsom Reservoir storage drops, particularly as storage falls below 350 TAF in July. Figure 6 shows a relationship between the Folsom Reservoir storage in July and LAR water temperature schedules. [Footnote 2] Figure 7 shows relatively large increases in fall water temperature below Nimbus Dam at low Folsom Reservoir water levels as reported in the BDCP EIR/EIS (and the associated Folsom Reservoir storage) under the NAA operations. These changes are most pronounced in drier years. The marginally acceptable CV steelhead rearing water temperature is <70 degrees F, with an upper long-term tolerance temperature of approximately 68 degrees F (see above). Under the NAA, LAR water temperature increases during summer rearing would have a significant adverse impact on CV steelhead (Figures 4a and b). Mean monthly summer (August) water temperatures increase from the modeled existing condition of 69-71 degrees F to 73-77 degrees F (average and critical water years) under the NAA (Figures 4a and b). Over the 1922-2003 period of record, mean monthly water temperatures at Watt Avenue reach 70 degrees F in 9% more of the July months, 13% more of the August months (90% of all August months), and 34% more of the September months (60% of all September months) under the NAA compared to existing conditions. The assumed CVP/SWP operations in the NAA would significantly impact CV steelhead and would result in take of CV steelhead in the LAR. More significantly, entire year classes of CV steelhead juveniles would be lost and, most likely, a complete loss of the LAR naturally spawning CV steelhead population would occur. In the critically dry years, for example, average monthly August water temperatures under NAA (and the Proposed Action Alternative) for the entire LAR are ≥76 degrees F (DWR et al. 2013; Appendix 11C). This would kill all over-summering juvenile CV steelhead. Critically dry years occur 15% of the time. Often critically dry years are sequenced back-to-back (e.g., 1976-1977) and sequenced with multiple dry years. Dry years (22% of the years) have entire LAR August water temperatures ≥72 degrees F. Large scale mortality would occur in these years. It is easy to conceive of a sequence of years under NAA (and the Proposed Project) where the naturally occurring CV steelhead population sequential year mortality coupled with the current low abundance would result in the loss of the natural population. The historic sequence of years from 1987 to 1991 (dry, critically dry, dry, critically dry, critically dry, respectively) (DWR et al 2013; Section 5.5) would result in the loss of the LAR CV steelhead population. Similarly, projected changes in water temperature under the NAA would have large adverse	and subject matter expert opinion. The Final EIR/EIS evaluates impacts to fall-run Chinook and Central Valley Steelhead on the American River for the new preferred alternative, Alternative 4A. When comparing American River impacts in Alternative 4A against impacts in the No Action Alternative (NAA; both alternatives include future conditions in the early long-term (2025), thus making it an apples-to-apple comparison, in contrast to the existing conditions baseline, which does not include assumptions in the future), it was determined there would no adverse impacts to aquatic resources in the American River. While some modeling outputs indicated differences between the NAA and the preferred alternative, these differences either did not occur frequent enough or in the months that are most important for certain life stages, the magnitude of change did not warrant an adverse determination, and/or the differences between alternatives were small enough that they were within the margin of error of the models (usually <5%). In addition, Mitigation Measure AQUA-78d commits to using real-time operational adjustments at Folsom, Shasta, and Oroville Reservoirs, whenever possible, to slightly adjust operations, within all existing regulations and requirements, to reduce migration-related effects to Fall-run Chinook salmon. While the modeling used in this analysis represents the best available science, it should also be noted that due to inherent modeling uncertainties and the inability to predict actual future conditions (including real-time operational adjustments), modeling outputs should be used on a comparative basis only and are not intended to be used as predictive tools. The increase in water temperatures in the American River are due to low storage elevations in Folsom Lake in drier years, including years during which the CALSIM II model results indicate that Folsom Lake would be at “dead pool” conditions with surface water elevations that would affect releases from Folsom Lake to the American River. 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. In addition, Folsom Reservoir operational criteria are consistent under the Existing Conditions, No Action Alternative, Proposed Project, and all other action alternatives for continued compliance with existing fish and wildlife regulatory requirements in the American River. Adaptive management under the preferred alternative would also have the ability to inform and improve operations of SWP/CVP facilities to minimize and avoid impacts to fish species similar to Mitigation Measure AQUA-78d.

DEIRS Ltr#	Cmt#	Comment	Response
		impacts on Chinook salmon spawning in the LAR. Mean monthly fall water temperature (November) in the LAR would increase from existing conditions (modeling) of 56-57 degrees F to 60 degrees F under the NAA. Acceptable Chinook salmon spawning/incubation water temperature is <58 degrees F (see above). These assumed operations in the NAA would result in significant adverse impacts to Chinook salmon in the LAR (Figures 4a and b). Likely large fish kills of pre-spawning fall-run Chinook salmon would occur due to the extreme delays in spawning similar to pre-spawn mortality that happened in 2001 (Water Forum 2005). Monthly average November water temperatures in the NAA (and Proposed Action Alternative) are 3-4 degrees F higher than the existing conditions that have caused mortality. [Footnote 2: Automated temperature selection procedure schedules are identified in the LAR Flow Management Standard.]	
1511	85	[Att 2] BDCP TEMPERATURE SIGNIFICANCE CRITERIA Under current CVP/SWP operations, Lower American River water temperatures exceed threshold tolerances for anadromous fish during critical life stages (as discussed in the preceding sections). Because the populations are already in stressful temperature conditions, even small increases in water temperature above the current CVP/SWP operations would result in adverse impacts to these species. The BDCP significance criterion do not consider the current condition of the sensitive species and habitat with respect to water temperature in the LAR. For example, significant impacts in the BDCP EIR/EIS were determined as follows: "Physical modeling outputs each month and water year type were compared for between model scenarios at multiple locations to determine whether there were differences between scenarios at each location. A "difference" was defined as a >5% difference between the pair of model scenarios in at least one water year type in at least 1 month." (DWR et al. 2013, p. 11-102). The significance criteria in the Draft EIR/EIS are inadequate and incapable of identifying significant impacts. A <5% increase in mean monthly water temperature in the summer months (July-September) during CV steelhead rearing and/or in the fall during fall-run Chinook salmon spawning (primarily in November) would result in significant adverse impacts to these species. For example, a <5% water temperature change with existing summer temperatures at 68 degrees F results in an increase of approximately 3.4 degrees F, which would result in temperatures of approximately 71.4 degrees F, well above the long-term upper tolerance limit for steelhead juvenile rearing (e.g., Cech and Myrick 1999; Bratovich et al. 2011). Similarly, a <5% temperature change in the existing fall-run Chinook salmon spawning temperature at 60 degrees F results in an increase of approximately 3.0 degrees F, which would result in temperatures of approximately 63.0 degrees F, well above the spawning threshold and mortality water temperature threshold for incubating eggs (e.g., USFWS 1999; NMFS 2002; Reclamation 2008; Bratovich et al. 2011). Figures 4a and b shows the modeled 1922-2003 average monthly water temperatures. Under existing conditions, water temperatures are below 68 degrees F in July and September, except in Critical years, and between 60-70 degrees F in August of all water year types, except Critical years. Although the temperature significance criteria were not exceeded in the BDCP EIS/EIR analysis, water temperatures under the No Action Alternative (NAA) and Proposed Action Alternative are above the threshold criteria for CV steelhead and Chinook salmon survival, particularly in the drier years (>74 degrees F in late summer	See response to comment 1511-79. Please see Chapter 11 in the Final EIR/EIS, for a discussion on the methodology used for reaching a conclusion for fish Impacts related to water operations, which includes impacts on the American River. Impact determinations were based on a combination of biological models, numerical thresholds (based on existing literature, consultation with state and federal fish agencies, and existing regulatory requirements), and subject matter expert opinion. inThe Final EIR/EIS evaluates impacts to fall-run Chinook and Central Valley Steelhead on the American River for the new preferred alternative, Alternative 4A. When comparing American River impacts in Alternative 4A against impacts in the No Action Alternative (NAA; both alternatives include future conditions in the early long-term (2025), thus making it an apples-to-apple comparison, in contrast to the existing conditions baseline, which does not include assumptions in the future), it was determined there would no adverse impacts to aquatic resources in the American River. Please note that 5% was not used as a significance threshold here, as construed by the commenter. It was used merely as a threshold above which differences could be attributable to the project as opposed to model noise, determined to be <5%. While some modeling outputs indicated differences between the NAA and the preferred alternative, these differences either did not occur frequent enough or in the months that are most important for certain life stages, the magnitude of change did not warrant an adverse determination, and/or the differences between alternatives were small enough that they were within the margin of error of the models (usually <5%). In addition, Mitigation Measure AQUA-78d commits to using real-time operational adjustments at Folsom, Shasta, and Oroville Reservoirs, whenever possible, to slightly adjust operations, within all existing regulations and requirements, to reduce migration-related effects to Fall-run Chinook salmon. While the modeling used in this analysis represents the best available science, it should also be noted that due to inherent modeling uncertainties and the inability to predict actual future conditions (including real-time operational adjustments), modeling outputs should be used on a comparative basis only and are not intended to be used as predictive tools. In addition, Folsom Reservoir operational criteria are consistent under the Existing Conditions, No Action Alternative, Proposed Project, and all other action alternatives for continued compliance with existing fish and wildlife regulatory requirements in the American River. Adaptive management under the preferred alternative would also have the ability to inform and improve operations of SWP/CVP facilities to minimize and avoid impacts to fish species similar to Mitigation Measure AQUA-78d.

DEIRS Ltr#	Cmt#	Comment	Response
		months), and greatly exceed existing conditions.	
1511	86	[Att 2] The fatal flaw in the Draft EIR/EIS impact analysis is that under the no action alternative (which includes sea level rise, climate change, and future demand), the modeled CVP/SWP operations resulted in significant adverse effects to upstream resources, including Central Valley steelhead and fall-run Chinook salmon in the Lower American River relative to the existing conditions (environment). These modeled operations are not reasonable or a proxy for future operations that would be allowed under the Endangered Species Act.	Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP), responses are presented generally in Master Response 5. It also should be noted that the study period for the Proposed Project as presented in the Final EIR/EIS extends through approximately 2030 when construction of the conveyance facilities is anticipated to be complete. The increase in water temperatures in the rivers downstream of SWP and CVP reservoirs are due to low storage elevations in the SWP and CVP reservoirs in drier years, including years during which the CALSIM II model results indicate that the SWP and CVP reservoirs would be at "dead pool" conditions with surface water elevations that would affect releases from the reservoirs. 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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. Please see Chapter 11 in the Final EIR/EIS, for a discussion on the methodology used for reaching a conclusion for fish Impacts related to water operations, which includes impacts on the American River. Impact determinations were based on a combination of biological models, numerical thresholds (based on existing literature, consultation with state and federal fish agencies, and existing regulatory requirements), and subject matter expert opinion. The Final EIR/EIS evaluates impacts, including changes in temperature and flow, to fall-run Chinook and Central Valley Steelhead on the American River for the new preferred alternative, Alternative 4A (see Chapter 11). When comparing impacts in the American River from the preferred alternative against impacts in the No Action Alternative, In addition, Mitigation Measure AQUA-78d commits to using real-time operational adjustments at Folsom, Shasta, and Oroville Reservoirs, whenever possible, to slightly adjust operations, within all existing regulations and requirements, to reduce migration-related effects to Fall-run Chinook salmon. Adaptive management under the preferred alternative would also have the ability to inform and improve operations of SWP/CVP facilities to minimize and avoid impacts to fish species similar to Mitigation Measure AQUA-78d.
1511	87	[Att 2] The Draft EIR/EIS acknowledges that the CVP/SWP operations would need to change from those depicted. For example, on page 5-61 in DWR et al. (2013), the Draft EIR/EIS discusses operational changes that may need to occur to avoid dead pool conditions: "Adaption measures would need to be implemented on upstream operations to manage coldwater pool storage levels under future sea level rise and climate change conditions. As described in the methods section, model results when storages are at or near dead pool may not be representative of actual future conditions because changes in assumed	The No Action Alternative and all of the EIR/EIS alternatives include climate change and sea level rise assumptions by 2060. These changes would result in "dead pool" conditions in SWP and CVP reservoirs upstream of the Delta even without the action alternatives. 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, such as recent use of barges in Folsom Lake to extend the elevation of the intakes. Instead the model includes average operating criteria for all dry periods, and does not reflect

DEIRS Ltr#	Cmt#	Comment	Response
		operations may be implemented to avoid these conditions." (DWR et al. 2013; p. 5-61) Further, the Draft EIR/EIS clearly states that future CVP/SWP operations would be different than the operations used for evaluating impacts of the BDCP: "The CALSIM II simulations do not consider future climate change adaptation which may manage the SWP and CVP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the BDCP. Thus, the CALSIM II BDCP results represent the risks to operations, water users, and the environment in the absence of dynamic adaptation for climate change." (DWR et al. 2013; pg. 5A.A23) The modeling developed for the Draft EIR/EIS, by their own admission, failed to address climate change and sea level rise in a manner that is reasonable, prudent, or representative of future hydrologic conditions in the upstream systems, including Folsom operations and resulting hydrology in the Lower American River. The Folsom operations in the No Action Alternative would jeopardize the continued existence of Central Valley steelhead and fall-run Chinook salmon in the LAR. By comparing the environmental conditions in the Existing Condition and NAA, it is apparent that future CVP/SWP operations under climate change and sea level rise, as modeled, are unrealistic.	specific changes. As described in Chapter 5, Water Supply, the BDCP EIR/EIS analyses assume continued implementation of regulatory requirements 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 or in the Cumulative Impact Analysis. Effects on steelhead and Fall-run Chinook Salmon are analyzed in Chapter 11, Fish and Aquatic Resources, in the BDCP EIR/EIS.
1511	88	[Att 2] Therefore, a revised operations model must be developed under the NAA that addresses climate change and sea level in a manner that is protective of upstream resources, including CV steelhead and Chinook salmon in the Lower American River. The conclusions in the Draft EIR/EIS impact analysis are invalid because they are based on modeling that is not representative of future conditions and do not incorporate climate change adaptations in the CVP/SWP operations. The impact analysis was based on comparison of the NAA to Project alternatives under modeled operations that in all cases result in significant impacts to CV steelhead and Chinook salmon in the LAR compared to the existing condition. The fundamental error in the impact analysis is that it totally ignores these impacts. The analysis assumes that conditions in the NAA are representative of future conditions and compounds this error by modeling the Project alternatives using the same faulty operations. It The conclusions in the Draft EIR/EIS impact analysis are invalid because they are based on modeling that is not representative of future conditions and do not incorporate climate change adaptations in the CVP/SWP operations. The impact analysis was based on comparison of the NAA to Project alternatives under modeled operations that in all cases result in significant impacts to CV steelhead and Chinook salmon in the LAR compared to the existing condition. The fundamental error in the impact analysis is that it totally ignores these impacts. The analysis assumes that conditions in the NAA are representative of future conditions and compounds this error by modeling the Project alternatives using the same faulty operations. It Further, the impact analysis fails to disclose the impacts of the Project because it co-mingles the effects of climate change, sea level rise, future demand, and implementation of the Project. In the analysis, the Draft EIR/EIS concludes: "These results are primarily caused by four factors: differences in sea level rise, differences in climate change, future water demands, and implementation of the alternative. The analysis described above comparing Existing Conditions to Alternative 1A [used for Alternative 4 as well] does not partition the effect of implementation of the alternative from	Please refer to Master Response 1 for information on how baselines were determined for the analysis.

DEIRS Ltr#	Cmt#	Comment	Response
		those of sea level rise, climate change and future water demands using the model simulation results presented in this chapter. " (DWR et al. 2013; pp. 11-405; 11- 411; 11-445; 11-455; 11-518). Therefore, the Draft EIR/EIS is inadequate and does not provide sufficient information to evaluate Project effects on CV steelhead and fall-run Chinook salmon in the LAR. To comply with NEPA and CEQA, the impacts analysis must be revised to disclose project impacts.	
1511	89	[Att2:Att1] Figure 1. American River Water Temperature and Flow at Monitoring Sites on the Lower American River in Dry and Wet Years	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 the comment referencing the attachment or the Final EIR/EIS.
1511	90	[Att2:Att2] Figure 2. Measured Lower American River Daily Average Water Temperatures below Folsom Dam, at Hazel Avenue, William B. Pond Park, and Watt Avenue and Flow at Fair Oaks Avenue (1998-2012).	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 the comment referencing the attachment or the Final EIR/EIS.
1511	91	[Att2:Att3] Figure 3. Measured Lower American River Monthly Average Water Temperatures below Folsom Dam, at Hazel Avenue, William B. Park, and Watt Avenue and Flow at Fair Oaks Avenue (1998-2012).	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 the comment referencing the attachment or the Final EIR/EIS.
1511	92	[Att2:Att4] Figure 4a. Percent of Months during 1922-2003 Period during which Mean Monthly Water Temperatures under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4, H3) Scenarios (Early and Late Long-term) in the Lower American River at Watt Avenue Exceeded Temperature Thresholds, May through October.	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 the comment referencing the attachment or the Final EIR/EIS.
1511	93	[Att2:Att5] Figure 4b. Mean Monthly Water Temperature (°F) in the American River at Watt Avenue under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4, H3) (Early and Late Long-term).	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 the comment referencing the attachment or the Final EIR/EIS.
1511	94	[Att2:Att6] Figure 4b. Mean Monthly Water Temperature (°F) in the American River at Watt Avenue under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4, H3) (Early and Late Long-term).	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 the comment referencing the attachment or the Final EIR/EIS.
1511	95	[Att2:Att7] Figure 5b. Summer (July - October) Monthly Mean End-of-Month of Storage Folsom Reservoir Storage (TAF) under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4) by Water Year Type.	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 the comment referencing the attachment or the Final EIR/EIS.
1511	96	[Att2:Att8] Figure 6. Folsom Reservoir Storage (TAF) in Relation to ATSP Temperature Schedule. [Footnote 1] Higher ATSP Schedules Correspond to Warmer Summer Temperatures. All Schedules Larger than 55 Exceed Summer Temperatures of 70°F. [Footnote 1: ATSP (Automated Temperature Selection Procedure); Lower ATSP schedules equal colder water temperatures; as identified in the lower American River Flow Management Standard.]	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 the comment referencing the attachment or the Final EIR/EIS.
1511	97	[Att2:Att9] Figure 7. Folsom Reservoir Storage (TAF) in Relation to Water Temperature (°F) at Nimbus Dam (September and October) under the Existing Condition (EBC1), No Action Alternative (EBC2_LLT), and Preferred Alternative 4, H3 (PP_LLT).	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 the comment referencing the attachment or the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
1512	1	The USBR (United States Bureau of Reclamation) and SWRCB (State Water Resources Control Board) need to be signatories to the Agreement. The Bureau of Reclamation operates the largest and more senior water export project and has a defined role in the Implementing Agreement (IA). Simply stating that they will negotiate their own IA leaves a major hole in this document. The SWRCB with its various water quality decisions will need to be involved in the Annual and Operating 5 Year Plans. How it will be involved, and when it will assert its authority in the process needs to be defined in the IA.	This comment is on the 2014 Draft Implementing Agreement (IA), a document prepared in connection with the proposed BDCP. The IA defines the obligations of the Department of Water Resources, the participating public water agencies, the state and federal fish and wildlife agencies, State of California, and the United States would have had regarding the implementation of the draft BDCP (Alternative 4). An IA is required for approval of a Natural Community Conservation Plan under section 2820(b) of the Fish & Game Code to satisfy the requirements of the Natural Community Conservation Planning Act (NCCP Act), and is frequently entered in conjunction with approval of a Habitat Conservation Plan (HCP) under the federal Endangered Species Act. It was circulated for public review and comment for 60 days pursuant to section 2815(a) of the Fish & Game Code. Many key elements of the draft BDCP were incorporated by reference into the draft IA, such as the conservation strategy, governance structure, implementation schedule, and public funding to be made available by state and federal governments. The draft IA also includes the relationship of the BDCP to future regulatory processes; regulatory assurances that are anticipated to be provided to the Department of Water Resources and the public water agencies; and remedies and procedures in the event of a funding shortfall or a failure to comply with the terms of the Agreement, the Plan, or the associated incidental take permits. But aside from making more specific certain aspects of implementation of the BDCP, executing the IA would not cause any environmental impacts. Nor does the draft IA contemplate or allow for violation of any regulatory requirements applicable to the BDCP. For more discussion of BDCP governance as well as the IA, please see Master Response 5 (BDCP). Please note, however, that the BDCP is no longer the preferred alternative. The proposed project is now Alternative 4A (the California WaterFix) as evaluated in the RDEIR/SDEIS and Final EIR/EIS, and it does not include an NCCP/HCP. Since the current California WaterFix Project is no longer an NCCP or HCP, an implementing agreement was not released with the RDEIR/SDEIS or the Final EIR/EIS. The State Water Resources Control Board would not be a permittee under the BDCP. Nor does it have jurisdiction over issuance of an incidental take permit under the NCCP Act, so it would be inappropriate for it to be included in the governance structure for the BDCP. Should the California WaterFix be approved instead of the BDCP, an adaptive management and monitoring program would be implemented to develop additional scientific information to inform and improve conveyance facility operational limits and criteria. For additional information regarding adaptive management, please see Master Response 33. As part of this structure, a memorandum of agreement will be executed between a variety of stakeholders and regulatory agencies, including the Bureau of Reclamation. The SWRCB will be consulted with and applicable conditions identified in permits will be complied with subject to adjustments made pursuant to the adaptive management process as described in the 2008/2009 BiOps (see Executive Summary, Section ES.2.2 of the RDEIR/SDEIS). Please also see Appendix C of the RDEIR/SDEIS Supplemental Modeling requested by the State Water Resources Control Board as related to increasing Delta outflows.
1512	2	The IA (Implementing Agreement), with the exception of one statement, ignores the protection of water quality in the Delta and for senior Delta water rights holders. How the IA protects beneficial uses of the Delta beyond water supply and ecosystem restoration is left silent. The required Annual and Operating 5 Year Plans do not address water quality at all.	Please see the response to comment no. 1512-1 regarding the implementing agreement. With references to water quality concerns and operational criteria, please refer to Master Response Nos. 14 (Water Quality) and 28 (Operational Criteria), respectively. As explained in response to comment no. 1, the Draft IA is required under the NCCP Act. Water quality and water rights are addressed under different statutory and regulatory regimes. See Master Response 45 (Permitting) for a discussion of some of those regimes. Nothing in the Draft IA, the BDCP (Alternative 4), or the preferred alternative (Alternative 4A) will change any water rights or water rights priorities.

DEIRS Ltr#	Cmt#	Comment	Response
			In addition, prior to the start of construction, the State Water Resources Control Board must grant a petition by DWR and the U.S. Bureau of Reclamation for a change in point of diversion in their existing water rights to add new points of diversion on the Sacramento River. (Cal. Wat. Code, §§ 85088, 1701.) The State Water Resources Control Board may issue the order granting the change petition on a showing, among others, "that the change will not operate to the injury of any legal user of the water involved." (Cal. Wat. Code, § 1702.) For more discussion of other permitting processes, please see Master Response 45 (Permitting). For more discussion of water rights, please see Master Responses 26 (Area of Origin), 32 (Water Rights), and 34 (Beneficial Uses of Water).
1512	3	The IA (Implementing Agreement) governance structure includes state and federal contractors but ignores consultation or protection of potentially impacted water rights holders unless they join the BDCP process, the cost and requirements for this joining are not defined.	Implementing agreements are a requirement under the California Natural Community Conservation Planning Act (NCCPA), and are routinely executed under the ESA Section 10 (HCP) permitting process. Since the current proposed project is no longer an HCP/NCCP, an implementing agreement was not released with the RDEIR/SDEIS or Final EIR/EIS for the project, and will not be required for issuance of incidental take authorizations under the California Endangered Species Act or section 7 of the federal ESA. An Implementing Agreement is not required to address water rights; those are addressed under different statutory and regulatory regimes, as explained in response to comment no. 2 of this letter (LTR#1512). The State Water Resources Control Board, not DWR, is responsible for decisions relating to water rights. DWR holds water rights approved by the State Water Resources Control Board but does not have the power or authority to issue water rights to others. Additionally, 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. Importantly, all water exported by the SWP and CVP is the subject of the existing water rights of those two agencies, which will continue to be subject to State Water Resources Control Board Water Rights Decision 1641 (D-1641). The proposed project and its alternatives do not alter the protections in D-1641 designed to protect other beneficial uses of water in the Delta. Moreover, 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. With respect to the question about the cost to join the BDCP process, the comment is noted. It is not a comment on the EIR/EIS. Funding issues are discussed in Master Response 5.
1512	4	The IA (Implementing Agreement) is premised on the foundation that State and Federal Contractors have paid for the ESA (Endangered Species Act) consultations and protections offered in the ESA permits. It does not explain how senior water right holders will be protected with their existing ESA permits or diversions as the new BDCP ESA permits are issued.	Please see the response to comments 1512-2 and 1512-3 regarding the implementing agreement and water rights, and the protections afforded to water rights holders under the California Water Code and State Water Resources Control Board administrative proceedings. Water rights holders who also hold ESA permits are subject to the terms and conditions of those permits. Issuance of incidental take permits for the construction and operation of the proposed project does not alter the priority or terms and conditions of DWR's or the U.S. Bureau of Reclamation's existing water rights permits.
1512	5	The Draft IA (Implementing Agreement) appears to be a "rough draft" work in progress document. It does lay out a process for moving forward with ESA (Endangered Species Act) protections with certain commitments from all parties currently listed in the Agreement. However, it does not include all relevant parties and leaves protections for water quality and Senior Water rights holders in the dark.	Please see the responses to comments 1512-1 through 1512-4 regarding the implementing agreement and the concerns listed by the commenter.
1513	1	The City of Fountain Valley is a retail water supplier in Orange County that is governed by a	This comment is consistent with the fundamental purpose of the project to make physical and operational improvements to the SWP system in the Delta and water supplies of the SWP and CVP for users located

DEIRS Ltr#	Cmt#	Comment	Response
		publicly elected City Council. In spite of the world-class efforts of agencies in Orange County to provide greater water supply certainty for eight percent of California's population and the $200 billion economy they represent, Orange County remains dependent on imported water to meet approximately 45 percent of its average annual demand, with the State Water Project (SWP) deliveries from the Delta meeting approximately half of those needs. The Delta ecosystem and water supply conveyance problems have long been recognized, and have remained in a continuing state of degradation, conflict, and stalemate.	south of the Delta 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. 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. 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.
1513	2	Many years and hundreds of millions of dollars have been spent on study efforts while the delta system continues to be used for water conveyance in a manner for which it was not intended. The longer it takes to implement the resolution, the more expensive it will become. The stalemate has been punctuated by droughts, floods, economic losses, environmental degradation and litigation every decade since the construction of the SWP in the 1960s. We can no longer delay action in the Delta, and urge the State and federal government to quickly move forward with the Preferred Alternative. Failing to act and move forward is not an acceptable alternative.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. 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.
1513	3	In recent years the endangered species Biological Opinions for protection of Delta and Longfin Smelt and Chinook Salmon have resulted in massive cutbacks in exports by over 1.5 million acre-feet per year and without the BDCP further cuts of another 1.0 million acre-feet per year could occur with new endangered species listing according to the BDCP briefing documents. This situation is untenable and a solution must be found to stop this hemorrhaging of this critical foundation of water supply to southern California. The BDCP is the best hope we have and it must be approved and implemented in a timely and cost-effective manner.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1513	4	We strongly support the BDCP Preferred Alternative (No. 4) and oppose the No Action Alternative: It is critical to the state's economy and environment that both the State and federal government expeditiously follow through with the decision for adopting and implementing the BDCP.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1513	5	Co-Equal Goals: The BDCP must be implemented in a manner consistent with the co-equal goals adopted by the State. Preferred Alternative (No.4) is consistent with the Delta Reform Act of 2009's co-equal goals.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1513	6	New Facilities and In-Delta Operational Flexibility: The modernization of the Delta conveyance system is essential in order for habitat restoration and conservation to have its intended effect; Preferred Alternative (No.4), which incorporates the 9,000 cubic feet per second (cfs) three intake, twin tunnel conveyance system, provides the best balance between operational flexibility and modernizing the conveyance system for environmental benefit and water supply reliability.	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.

DEIRS Ltr#	Cmt#	Comment	Response
1513	7	Reduced Future Reliance: The 2009 Delta legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent "self-reliant." While our major efforts in these areas will continue, it is important to note that "reduced reliance" does not equate to and was never intended to require a move to 100 percent "self-reliance" and the notion of co-equal goals was never intended to result in a future with significant reduction of exports from levels achieved before the 2008 bio-opinions.	Please see Master Response 31 Compliance with the Delta Reform Act and EIR/EIS Appendix 3I, BDCP Compliance with the 2009 Delta Reform Act, for more information regarding compliance with the Delta Reform Act and reducing reliance on the Delta. The proposed 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.
1513	8	Plan Implementation and Regulatory Assurance: The BDCP must provide the needed implantation and regulatory structure and assurances to help achieve the co-equal goals. a. To us, this means that it is virtually impossible to predict the outcome of the BOCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS. b. Furthermore the means that changed circumstances under the operation of the BDCP, including the potential for new species listing, is incorporated in such a manner to result in a minimum impact on future water supply exports.	Please see response to comment 1533-7.
1513	9	Sound Science: It is critical that sound science is provided in order to assure the long-term success of the BDCP. We strongly support the inclusion of independent scientific investigation and research to be included in the BDCP.	The proposed project was developed over several years with guidance from several independent scientific advisory panels; this guidance process is detailed in the 2013 Public Draft Chapter 10. Proposed project implementation would continue to be guided by the "best available science." 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.
1513	10	Economy. Environment and Water Management: The State Water Project (SWP) is critically important to the Orange County economy, environment and water management. Implementation of the BDCP is critical to Orange County's future. a. Orange County and our agency have invested heavily to diversify our water portfolio but the SWP remains a critical source of low salinity water supply that is currently unacceptably jeopardized by the lack of sustainability of the current Bay-Delta system. b. Orange County relies on the SWP to support groundwater conjunctive use programs and water recycling programs - it is an essential part of our water reliability strategy that sustains our citizens and businesses. c. We support the 9,000 cfs twin tunnel Preferred Alternative (No.4) provided reasonable assurances are included regarding governance and future decision-making in the process. We strongly advocate for a seat at the table for the water Permittees in the various oversight groups. The investment and decision-making must be stretched to achieve a positive outcome for both SWP and Permittees and the ecosystem restoration in a collaborative, partnership manner. It is now time for the State and Federal government to adopt and move the BDCP to implementation in order to achieve the 2009 legislation's co-equal goals of improving water	The efforts completed by Orange County are supportive of the action alternatives and included in the Existing Conditions, No Action Alternative, and Cumulative Impact analysis assumptions. 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).

DEIRS Ltr#	Cmt#	Comment	Response
		supply reliability and ecosystem restoration and improved function by implementing the BDCP Preferred Alternative.	
1514	1	Eastern Municipal Water District has a diverse water supply portfolio of 55-percent imported water, 25-percent recycled water, 15-percent local groundwater and 5-percent brackish desalinated water. On average, more than half of the imported water received by EMWD is through the State Water Project and Sacramento-San Joaquin River Delta (Delta). Although EMWD has a diverse water supply portfolio and has unprecedented levels of water use efficiency with one of the lowest per capita use rates in the state (155 gallons per capita per day), the climate and population of the area will always require that EMWD receive imported water In recent years, both state and federal project deliveries have been repeatedly interrupted and reduced due to operational conflicts with threatened and endangered Delta species. Additionally, both projects risk complete failure given the vulnerability of the Delta levee system to catastrophic earthquake and flood events as there is a better than 63 percent chance of a magnitude 6.7 or higher earthquake occurring within the Delta region in the next thirty-years. An earthquake of this magnitude is estimated by economists to result in a $40 billion economic loss to the state and would threaten water supplies for Southern California, the Bay Area, the Central Coast and the Central Valley for up to three years. These risks are unacceptable, and conditions are expected to worsen unless steps are taken to mitigate these concerns	The comment is consistent with information presented in Figure 30-1 of Chapter 30, Growth Inducement and Other Indirect Effects, of the EIR/EIS, the SWP represents less than 30 percent of the total existing Southern California water supply which also includes groundwater, importation from the Colorado River and other surface water sources, recycled water, and desalination.
1514	2	The proposed BDCP, being developed under provisions of the state and federal endangered species protection laws, is the most promising plan developed to-date to solve these challenges and resolve decades of conflicts between agricultural, urban, and environmental water interests. The BDCP represents a comprehensive solution that achieves California's co-equal goals of establishing a reliable water supply and restoring the Delta ecosystem for the benefit of all water users.	Please note that the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. 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.
1514	3	The release of the public draft BDCP is an important milestone in this eight-year stakeholder driven process. In a very detailed manner, the draft BDCP illustrates the complexity of the problems and highlights the need for a comprehensive approach to resolve conflicts in the Delta through a multi-species habitat conservation plan that protects the state's water resources and infrastructure.	Please note that the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. 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.
1514	4	We are supportive of the BDCP's environmentally superior proposed twin-tunnel conveyance system that isolates and protects drinking water supplies and helps restore natural flow patterns in the Delta for the benefit of native species; as well as the complementary habitat restoration, water quality, and predator control measures outlined in the BDCP. We also support the plan's recognition that changing conditions in the Delta	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. For information on adaptive management and monitoring, as noted by the commenter, refer to Master Response 33. Other issues noted by the commenter as key decisions are further discussed in the following Master Responses: 28 (Operational Criteria), 44 (Decision Tree), 5 (Costs of Implementation and

DEIRS Ltr#	Cmt#	Comment	Response
		will require ongoing scientific review and realtime monitoring so the plan can effectively adapt over time to emerging science and the evolving ecosystem. The draft plan also provides an important framework for a range of operational outcomes and level of certainty necessary for a final plan to merit investment by participating public water agencies and by the state and federal governments. Although key decisions remain related to cost allocations, permitted operations, outflow range, financing and other issues, we believe the current draft details a workable solution to the challenges facing California's water resources and the Delta.	BDCP Funding and Governance Structure and Implementation).
1514	5	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Provide Water Supply Reliability. Conveyance options need to provide water supply reliability consistent with the Department of Water Resource's most recent State Water Project Reliability Report (2005). Comment: BDCP has the potential to regain State Water Project supplies and meet this benchmark. BDCP potential water supplies are within the range of recent twenty-year averages. For the participating public water agencies, reliable and adequate supplies are necessary to make this project financeable.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1514	6	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Improve Export Quality. Conveyance options should reduce bromide and dissolved organic carbon concentrations. Existing in-Delta intakes cause direct conflict between the need to reduce organic carbon to meet stricter urban drinking water standards, and the need to increase carbon to promote a healthy food web for fish. Comment: In addition to the overall treatment benefits of reduced bromide and dissolved organic carbon, the BDCP will also provide substantial salinity reduction benefits to southern California. Existing in-Delta supplies are in the range of 300 milligrams per liter in salinity levels (expressed as the concentration of Total Dissolved Solids, or TDS). Upstream supplies on the Sacramento River are in the range of 100 milligrams per liter TDS. The construction of intakes in the northern Delta, and BDCP's dual conveyance water operations strategy would provide a substantial reduction in salt loading in southern California. This is particularly important to EMWD for several reasons; but most notably the ability to sustainably manage our local groundwater basins which are periodically replenished with imported water during wet periods, and to maintain the viability of our recycled water program (which provides 25% of EMWD's supply) through source water salinity control. Maintaining EMWD's local supply portfolio through access to low salinity, high-quality imported water is critical to ensuring reduced the need for additional imported supplies.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1514	7	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern	The issue raised by the commenter addresses the merits of the project and does not raise any issues with

DEIRS Ltr#	Cmt#	Comment	Response
		Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Allow Flexible Pumping Operations in a Dynamic Fishery Environment. Water supply conveyance options should allow the greatest flexibility in meeting water demands by taking water where and when it is least harmful to migrating salmon and in-Delta fish species. All options should reduce the inherent conflict between fisheries and water conveyance. Comment: The new screened intakes proposed by BDCP in the northern Delta would eliminate reverse flow conditions when water is diverted in the north and lead to a far more natural flow pattern in the estuary -- a critical component of ecosystem sustainability in the Delta.	the environmental analysis provided in the EIR/S.
1514	8	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Enhance Delta Ecosystem. Conveyance options should provide the ability to restore fishery habitat throughout the entire Delta and minimize disruptions to tidal food web processes, and provide for fluctuating salinity levels. Comment: The modernization of the Delta conveyance system as proposed by BDCP is an environmentally superior approach that is essential in order for the proposed habitat restoration to have its intended effect.	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.
1514	9	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Reduce Seismic Risks. Conveyance options should provide significant reductions in risks to export water supplies from seismic-induced levee failure and flooding. Comment: The twin tunnels to transport northern Delta supplies would protect this critical supply from future disasters. The twin-tunnel subsurface design provides important operational redundancy and reduces risks associated with surface movement -- such as levee failure and liquefaction -- during earthquakes, allowing for the isolation of repairs if needed to specific tunnel segments, rather than compromising the entire Delta water supply with saline ocean water, should there be a multiple-island levee failure and flooding event. Seismic preparedness is crucial for this vulnerable segment of the statewide water	The comment describes the benefits of the proposed project. It does not raise any environmental issue related to the EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		delivery system.	
1514	10	The Metropolitan Water District of Southern California (Metropolitan), of which Eastern Municipal Water District is a member, has established six benchmarks for a comprehensive Delta solution. The following benchmark is supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter: Reduce Climate Change Risks. Conveyance options should reduce long-term risks from salinity intrusion associated with rising sea levels. Intake locations should be able to withstand an estimated 1-to-3-foot sea-level rise in the next 100 years. Comment: The proposed intakes in the northern Delta are upstream of predicted long-term salinity intrusion due to climate change. The future water system must be sized sufficiently to capture water when available in the face of climate change.	No issues related to the adequacy of the environmental impact analysis in the EIR/S were raised.
1514	11	Governance: The final BDCP governance structure must provide for public water agencies to be full participants in the implementation process in a manner that maintains the existing authorities of the state and federal wildlife agencies. Metropolitan must be among the project permittees in order to assure its active participation in BDCP.	The governance structure proposed in the 2013 public draft BDCP is consistent with the recommendation of the comment. Please see Master Response 5 regarding governance structure and implementation. This comment addresses analysis contained within the draft BDCP Effects Analysis. Please see Master Response 5 regarding the adequacy of the proposed governance structure in the 2013 public draft BDCP. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1514	12	Assurances: As a Habitat Conservation Plan under Section 10 of the federal Endangered Species Act (ESA) and a Natural Community Conservation Plan pursuant to Fish and Game Code Section 2800 et seq.; BDCP offers a path of regulatory stability for both the public water agencies and the wildlife agencies. It is important to better define and describe this regulatory stability so that the final BDCP offers a clearer choice between this approach and today's ineffective species-by-species approach to regulation and ESA enforcement.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the

DEIRS Ltr#	Cmt#	Comment	Response
			BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1514	13	Co-Equal Goals: The Delta Reform Act of 2009 passed by the California Legislature established the co-equal goals of a reliable water supply for California and ecosystem restoration for the Delta. The BDCP must be implemented in a manner consistent with the co-equal goals.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5.
1514	14	In-Delta Impacts: We are encouraged by recent changes in the proposed intake/tunnel project that will reduce by 50 percent the overall footprint of the project. While the hydrological simulation model in the BDCP analysis suggests that Delta salinity objectives may be exceeded in some instances, the DEIR/EIS explains that this is due to modeling anomalies. In any event, the project would be operated to meet all Delta Salinity Standards thus it is not expected to have a significant impact to local agriculture	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1514	15	Habitat Restoration: Habitat restoration, meanwhile, is expected to lead to a net increase of 50,000 local Delta-area jobs. Continued efforts to reduce in-Delta impacts and increase in-Delta benefits of BDCP will improve the final project.	The commenter's opinion on the project is acknowledged.
1514	16	Metropolitan Water District of Southern California and its member agencies, including Eastern Municipal Water District, and our ratepayers have been investing in the State Water Project for more than four decades, and have additionally invested in regional storage and conveyance to allow Southern California to capture water when it is plentiful and reduce demands on imported supplies during dry and critically dry years. These investments are effectively stranded, if water deliveries from the project continue to degrade.	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.
1514	17	The State Water Project provides essential water supply and water quality benefits to Southern California and, as noted earlier, helps Eastern Municipal Water District and the region achieve critical local water resource development objectives. When blended with the southland's other imported water source, the Colorado River, State Water Project water helps ensure water recycling and groundwater production is sustained. Recycling might otherwise be limited since Colorado River water is over twice the salinity level and recycling concentrates salts to levels that can exceed protective groundwater basin standards. Similarly, recharge of Colorado River water alone into many groundwater basins, including the principal potable water supply groundwater basin in EMWD's service area, would not be permitted under basin plan salinity objectives set forth by the State Water Resources Control Board.	As shown in Tables EC-12 through EC-20 in Appendix 8H, Electrical Conductivity, of the EIR/EIS, salinity has declined in the SWP and CVP export area located south of the Delta.
1514	18	The proposed BDCP is the most comprehensive effort ever undertaken to address the chronic water challenges facing the state and federal water projects in a manner that is protective of the Delta environment. We urge the state to move forward with the draft plan and focus on resolving those remaining issues needed to provide assurances that the plan will achieve California's co-equal goals of water supply reliability and ecosystem restoration	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. Issues noted by the commenter as key decisions are further discussed in the following Master Responses: 31 (Compliance with Delta Reform Act), 5 (Compliance with Endangered Species Act), 28 (Operational Criteria), 44 (Decision Tree), 5 (Costs of Implementation, BDCP Funding, Governance Structure and Implementation). The environmental documentation and project approval will be acted on by the

DEIRS Ltr#	Cmt#	Comment	Response
		in a costeffective manner.	decision makers from each lead agency at the conclusion of the CEQA and NEPA processes.
1517	1	This is my request for you to extend Public Comment Period beyond July 29, 2014 of BDCP EIR documents.	Lead agencies recognized the need to provide sufficient time for public review of the draft documents. As such, the public review period was extended twice for a total of 228 days. More information about the comment period extensions is provided in Master Response 39.
1518	1	At our July 11,2014 meeting the Chamber of Commerce Alliance of Ventura and Santa Barbara Counties voted to join the coalition in support of the Alternate #4 of the Bat Delta Conservation Plan. The State Water Project (SWP) is a vital component of Southern California's water system, providing roughly 30 percent of the region's water needs. However, 70 percent of the annual water demand for over 600,000 water users in southern Ventura County is met with state water supplies. While many efforts are underway to reduce our service area's imported water demand, it will continue to serve as a primary source for our drinking water supply and recycled water projects. As such, a reliable supply of imported state water is critical for the future social and economic vitality of Ventura County.	The fundamental purpose of the project is to make physical and operational improvements to the SWP system in the Delta and water supplies of the SWP and CVP for users located south of the Delta 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. The efforts completed by southern Ventura County are supportive of the action alternatives and included in the Existing Conditions, No Action Alternative, and Cumulative Impact analysis assumptions. 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).
1518	2	Southern California ratepayers have been investing in the State Water Project for more than four decades, and have additionally invested billions of dollars in regional storage and conveyance to allow Southern California to capture water when it is plentiful and reduce demands on imported supplies during dry and critically dry years. These investments are effectively stranded if water deliveries from project continue to degrade.	The comment describes concerns regarding the need for a more stable water supply for Southern California water contractors whose ratepayers receive water from the Delta.
1518	3	We are supportive of the BDCP's proposed twin-tunnel conveyance system, known as Alternative #4, that isolates and protects drinking water supplies and helps restore natural flow patterns in the Delta for the benefit of native species, as well as the complementary habitat restoration, water quality and predator control measures outlined in the BDCP. We also support the plan's recognition that changing conditions in the Delta will require ongoing scientific review and real-time monitoring so the plan can effectively adapt over time to emerging science and the evolving ecosystem. The draft plan also provides an important framework for a range of operational outcomes and level of certainty necessary for a final plan to merit investment by participating public water agencies and by the state and federal governments. We remain supportive of the efforts of Metropolitan and the other state and federal water contractors in the development of the BDCP and urge the state to move forward with the draft plan and focus on resolving those remaining issues needed to provide assurances that the plan will achieve California's co-equal goals of water supply reliability and ecosystem restoration in a cost-effective manner.	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. For information on adaptive management and monitoring, as noted by the commenter, refer to Master Response 33. Other issues noted by the commenter as key decisions are discussed in the following Master Responses: 28 (Operational Criteria), 44 (Decision Tree), 5 (Costs of Implementation, BDCP Funding, Governance Structure and Implementation). The environmental documentation and project approval will be acted on by the decision makers from each lead agency at the conclusion of the CEQA and NEPA processes.
1519	1	The Board of Directors of the Pasadena Chamber of Commerce would like to see a permanent resolution to the challenges facing water delivery systems and the environment in California. A safe, reliable and environmentally supportive water conveyance system for California is essential to our growth, economy and quality of life. The Pasadena Chamber Board is supportive of the Bay Delta Conservation Plan. The Board favors an approach, such as Alternative 4, which provides for appropriate water conveyance and still preserves habitat and protects the ecosystem. The proposal also provides for	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. Issues noted by the commenter as key decisions are discussed in the following Master Responses: 31 (Compliance with Delta Reform Act), 28 (Operational Criteria), 44 (Decision Tree), 5 (Costs of Implementation, BDCP Funding, Governance Structure and Implementation). The environmental documentation and project approval will be acted on by the decision makers from each lead agency at the conclusion of the CEQA and NEPA processes.

DEIRS Ltr#	Cmt#	Comment	Response
		seismic and other safety measures which will help protect citizens, habitat and the economy of California in the event of a disaster. We certainly anticipate that the Bay Delta Conservation Plan can provide the resolution to California's water challenges and support approval of Alternative 4.	
1520	1	I am writing to express my concerns about the substantial adverse physical changes to the environment that the construction of three north Delta intake facilities and pumping plants will have on the historic communities of Freeport, Courtland and Clarksburg, including the scenic views along, and from, the river banks in those areas. The proposed Intakes 2, 3, and 5 are large, industrial, concrete and steel intake structures, measuring approximately 55 feet from the river bottom to the top of the structure (rising 20 to 30 feet above the river surface), and extending 700 - 2,300 feet in length. The proposed pumping stations are approximately 70 feet tall and look similar to industrial warehouses. Each will have a surge tower l 00 in diameter and between 60 and 75 feet in height. As you may .know, the Delta Refonn Act of 2009 designated Courtland and Clarksburg as legacy communities. All three of these Delta villages are icons of the unique, historic culture of the Delta, and would be adversely impacted by the construction of intake facilities and pumping plants in their vicinities. All three communities were steamboat landings during the Gold Rush era, and each has a distinct cultural and historic character based upon its history, architecture, riverside location, and views. The addition of intake facilities and pumping stations wou1d result in reasonably forseeable adverse physical changes, contrary to the California Environmental Quality Act (see Draft BDCP, Chapter 16, p. 16-1.)	For additional information about the approach to cultural resources identification and evaluation, please see Master Response 20. For additional information regarding the relationship between the Delta Reform Act and the proposed project, please see Master Response 31.
1520	2	Applying of the Bureau of Land Management Visual Resource Inventory system (see Draft BDCP, Chapter 17, p. 17-40) to evaluate the scenic quality of the riverside landscapes in and around Freeport, Courtland and Clarksburg reveals that each little town and its environs has a high landscape sensitivity level. In the draft BDCP, a landscape the area, highly sensitive viewer groups present, high public interest in changes to the area, and high concern over how changes may affect adjacent land uses." (Draft BDCP, Chapter 17, p. 17-40, lines 33-36.) The riverfront from, and including, Freeport to Courtland, and from, and including, Clarksburg to Walnut Grove is of great interest to drivers and their passengers on the river roads, boaters on the Sacramento River, tourists, and residents of the area. To tourists and residents, this area is of special interest due to its unique river character and the historic significance of the few remaining Gold Rush era river towns of Freeport, Courtland and Clarksburg. Due to its unusual river culture where fa1mland, riparian river banks, and small, historic towns intermix, along with the fact that few Gold Rush era towns still exist along the river, a greater number of viewers are drawn to this area than to nearby surrounding areas that are farther away from the river. Both tourists and residents are highly sensitive to changes that would alter the appearance of the river banks and historic towns. It is still possible to figuratively step back in time by visiting these historic towns of the Delta, and to imagine the river boats that once plied the Sacramento River between the towns. All of these aspects make public interest in changes to t1.-ie area, and how such changes may affect the area and adjacent land uses, of high concern to the viewer groups mentioned above. Clearly, the historic communities of Freeport, Courtland and Clarksburg, including the scenic views along, and from, the river banks in those areas are sites of high landscape sensitivity levels. The draft BDCP recognizes that "[t]he existing character of the landscape in areas of high	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.

DEIRS Ltr#	Cmt#	Comment	Response
		sensitivity should be preserved. .... The level of change to landscape should be very low and must not attract attention." (Draft BDCP, Chapter 17, p. 17-40, lines 35- 38.) The modern, industrial-appearing, proposed intake facilities and pumping stations would completely alter the character of the landscape, which now is of farmlands, riparian river banks, and historic little towns. Considerable adjacent farmland would be destroyed through condemnation, the boring of the tunnels, and the storing of the earth and rock excavated from the building of the twin tunnels and the intake and pumping facilities, further altering the landscape. The level of change would not be low and it would attract attention, contrary to the mandate to preserve the existing character of the landscape in areas of high sensitivity. Instead, if the intake and pumping facilities are built, the historic aspect and feel of the area would be irrevocably damaged. The new facilities would stick out like a sore thumb. According to draft BDCP, the level of visual dominance of proposed facilities, here specifically, the intake facilities and the pumping plants, is determined by assessing the contrast between the proposed facilities and their settings. (Draft BDCP, Chapter 17, p. 17-41, line 23.) In other words, how visually prominent is the proposed structure to a viewer? A project is deemed dominant if it "dominates the view and attracts more attention than other components of the setting." (Draft BDCP, Chapter 17, p. 17-41, lines 30-31.) How could the massive structures of the intake facilities and pumping stations do anything other than overshadow the riparian and historic settings where they would be located? The clash between the historic settings and the large, industrial appearance of the proposed intake facilities and pumping plants would dominate the view and draw the viewer's eye to discordance between the areas of the river bank where the facilities would be and the areas of the river bank where they would not They would be a jarring, modem intrusion to the historic appearance of nearby small Delta towns of Freeport, Courtland, and Clarksburg Finally, as stated in the draft BDCP, "[a] project's level of dominance can be measured by comparing the project's features with major features in the existing landscape. The combination of the visual dominance rating ... and the landscape sensitivity level ... [i)s used to determine the overall effect of project-related landscape changes on viewers." (Draft BDCP, Chapter 17, p. 17-41, lines 37-39; p. 17-42, line 1.) 1f one compares the current landscape of riparian and agricultural river views, and of the small Delta towns of Freeport, Courtland, and Clarksburg with the gigantic, planned, intake facilities and pumping plants, it is clear that the intake and pumping facilities would overwhelm the natural and historic views. The proposed structures would be totally contrary to the current views, and would redirect a viewers eye to them because of the complete clash in appearance between the low-lying, natural, and historic views with the out-of-character, large, industrial-appearing intake and pumping facilities.	
1520	3	As described in the draft BDPC, proposed Intakes 2, 3, and 5 are large, industrial, concrete and steel intake structures, which will rise 20 to 30 feet above the river surface, and sprawl 700 - 2,300 feet along the river bank. The proposed pumping stations would look similar to industrial warehouses, and be over seven stories high. The structures would violently clash with the surrounding rural landscape and Pastoral River banks in both appearance and size. The height and length of the facilities would disrupt the historic	Please see response to Comment 1520-2.

DEIRS Ltr#	Cmt#	Comment	Response
		Delta appearance in the Freeport, Courtland and Clarksburg areas with the addition of large, intrusive, modern, industrial structures towering over the current natural vegetation along the river bank and the existing low homes and buildings. Driving along the river roads or boating on the Sacramento in these areas would no longer provide the uninterrupted riparian and historic river views which those of us who love Delta value so highly. The people who live in these areas, many of whose families have been in the Delta for generations, would have their river views destroyed. For a resident of Clarksburg, the view from the River Road on the west side of the river would be of a huge, hideously out-of-character intake facility and pumping station. Even the draft BDCP summarizes and concludes that the visual effects of the intake facilities and plants would be adverse and incompatible with ex1s1tng visual environment. "Construction of Intakes 1-5 and the accompanying pumping plants ... would introduce visually discordant features into foreground and middle ground views.... These elements would introduce visually dominant features that would be very noticeable to all viewer groups and would segment the visual landscape of the study area, reduce the amount of open space lands available to viewers, and eliminate valued visual resources." (Draft BDCP, Chapter 17, p. 17-95, lines 7-12.) "These changes ... would result in reductions to the visual quality in some locations [such as the towns of Freeport, Courtland and Clarksburg, and the river bank areas between and introduce dominant visual elements that would result in noticeable changes that do not blend and are not in keeping or are incompatible with the existing visual environment." (Draft BDCP, Chapter 17, p. 17-95, lines 37-40.) As such, the draft BDCP itself acknowledges that there are reasonably forseeable adverse physical changes which are contrary to the California Environmental Quality Act, and that the level of change to the landscape by proposed Intakes 2, 3, and 5, and their pumping stations is unacceptable and contrary to preserving the existing character of the landscape of high sensitivity level as the Bureau of Land Management Visual Resource Inventory system requires. If the Twin Tunnels, the intake facilities, and the pumping plants are built, the unique charm of the historic California Delta will be immeasurably damaged. Please stop this project before it is too late to repair the harm it will do.	
1522	1	The most critical issues that Department of Water Resources seems to seek to solve in this upgrade to the Bay Delta conveyance system are to move entry point for fresh water intakes beyond increasing Delta salinity zone, and to assure a 9000 cubic feet per second supply without damaging San Francisco Estuary ecosystems and fisheries. The BDCP Draft was not entirely clear as to how far and fast into Delta marshes these saline conditions are occurring, but it does not look as if proposed intake tunnels' point of entry will be viable for even half of life of 50 year project. Is this design flaw critical? The draft needs more precise data on elevation along lower reach of Sacramento River in respect to bay rise.	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. As such, the tunnels will be part of the state's strategy in adapting to climate change. 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. The proposed project does not increase the amount of water to which DWR holds water rights or for use as 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

DEIRS Ltr#	Cmt#	Comment	Response
			steep decline. Refer to Master Response 26 (Area of Origin).
1522	2	If Suisun Marsh is experiencing sufficient brackish water conditions to raise concern for duckling survival the salinity levels may not be in compliance with water quality criteria and required fresh water flows. Recently a State water official referenced average historical tidal flow at Chipps Island to be 170,000 cubic feet per second which is not the same as average historic Delta outflows of 10,404,731.3 cfs at Chipps Island. I may be unclear as to his exact frame of reference, but do feel Delta outflow data needs firm and consistent criteria.	As noted in the Section 4.3.4 of the Partially Recirculated Draft EIR/Supplemental Draft EIS, changes in salinity in Suisun Marsh under Alternative 4A are expected to have no adverse effect on marsh beneficial uses. The effects of Alternatives 1 through 9 as compared to the Existing Conditions and the No Action Alternative were estimated based on the CALSIM II, DSM2 and other numerical models as described the Appendix 5A of the Draft BDCP EIR/EIS.
1522	3	BDCP maps show 'Legal Delta' (Delta Flood Management Facilities, Figure 7.5) coupled with Suisun Marsh in manner to imply they are legally linked as to water supply criteria when had thought establishment of conservation plan for Suisun Marsh had given it special guarantees. To be technical, BDCP is a misnomer, and the plan should be called Sacramento-San Joaquin Delta Plan as it does not address associated impacts of Delta flow to entire San Francisco Bay.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1522	4	"Bay is an inlet of the sea", and Suisun Marsh in San Francisco Bay, merits management integral to entire Estuary. Estuary is defined as "a passage where tide meets river current; especially an arm of the sea at lower end of a river". I feel truncated scope of BDCP's review in regards flows and sediment transfer does not provide scientific integrity in project's EIR/EIS analysis of impacts to ecosystems. To ignore San Francisco Bay as a whole and South Bay marshes in particular, by CEQA and NEPA standards, is a deficient review.	Chapter 11 of the EIR/EIS was revised to include a robust discussion of the potential effects on the bays downstream of the Delta, relevant to both operations and the habitat restoration proposed for some alternatives.
1522	5	Estimates of an 8 to 9 % reduction in sediment yield to estuary system by implementation of facility upgrade is a critical concern. South Bay Salt Pond Restoration efforts rely totally on sediment coming out of Delta. It also has to be a concern how best to screen sediments from intake tunnels and keep 40' diameter tunnel maintenance at manageable levels. USGS records note that sediment load discharge in Sacramento River at Freeport on December 24, 1983 reached a maximum of 58,000 tons. At time of high winter flows wouldn't such a bedload impair intake tunnel function and impact water quality of prime stream flow transfer? This conveyance systems touts reliance on gravity flow with both single bore and dual bore tunnels but still requires pumping plants at either end. In consideration of sediment loads in this reach of Sacramento River, and project's 30 mile length of dual bore tunnels, one would appreciate substantiation of credibility of science of design. In past experience find	The EIR/EIS includes an analysis of the potential changes in sediment load as a result of construction, operations and restoration, applicable to each alternative for a number of resource areas. Specifically, the commenter might be interested in the discussions regarding sediment presented in Chapters 8, 10, 11, 13 and 15. Chapter 3 of the EIR/EIS describes how the proposed facility would be operated and maintained, including the sedimentation basins and suction dredging o mechanical excavation.

DEIRS Ltr#	Cmt#	Comment	Response
		estimation of impacts of sediment transfer is Achilles heel of flood projects.	
1522	6	I do have serious concern that burrowing 2 40 foot diameter tunnels through organic peat with high groundwater for thirty miles under fragile Delta Island sub-strata may cause levee or perhaps island collapse which might have irreversible domino effect on project area. Global warming and bay rise conditions continue to challenge integrity of Delta islands and levees, but pumping high groundwater may trigger soil failure.	Please refer to Impacts GW-10 and SOILS-3 in Chapters 9 and 10 for analyses of subsidence: both impacts are less than significant for Alternative 4A. For more information regarding flood and levees please see Appendix 6A of the FEIR/EIS.
1522	7	An impact I do not believe is fully addressed is interruption by on-bank intake tunnels of historic anadromous fishery migration route up main stem of Sacramento River. The installation of facility structures will necessitate extensive loss of riparian vegetation and canopy, with attendant rise in stream temperatures. Despite armoring of river banks, design's current deflection of such magnitude will inevitably result in channel erosion and likely progressive head-cutting. Proposed mitigation measures cannot compensate for critical migratory corridor habitat degradation for Estuary's endangered and threatened Steelhead and Chinook Salmon runs Yolo Bypass is always going to present critical temperature challenges for cold water fisheries, even with a mature riparian canopy, which may not be acceptable to USACE flood control design for this floodplain. Do not find sufficient science in BDCP anticipating extent of global warming impacts on magnitude and timing of Sierra spring runoff in Sacramento River project area and on ecosystems of Estuary. This is a deficiency.	The construction-related effects of the North Delta Diversion (NDD) are described in the EIR/EIS for each fish species evaluated. Overall, the habitat value in the proposed NDD area is low, consisting primarily of rip-rapped steep channel bank, with minimal mature vegetation. Nevertheless, the alternatives, including the preferred Alternative 4A, include mitigation to compensate for the loss of this habitat. The actual amount of compensation, its location and design may be refined through discussions with the fish and wildlife agencies through other permitting processes. Temporary and permanent erosion control measures would be implemented. The alternatives are evaluated to determine the effect of the alternative on each resource, by comparing to the appropriate NEPA and CEQA baselines. The NEPA baseline and all of the alternatives incorporate climate change assumptions in the modeling.
1522	8	From past experience might comment that have found mitigation measures are likely to be more destructive of wetlands, riparian and marsh habitat than actual project. Case in point, #85 overpass of Coyote Creek at #101 in Santa Clara County permitted diversion of flows to marginal uplands, to create mitigation wetlands, which resulted in dry-back to main channel with loss of anadromous runs, and historic freshwaater marsh.	The effects of the mitigation are described in the RDEIR/SDEIS.
1522	9	Adaptive management criteria should be precise with consideration of timing of pulse flows to support natural migratory cycles and historic fishery instincts to go with stream flow. Diversionary fencing to steer fish away from certain channels does not seem promising and likely to run afoul of recreation boating. I fear that BDCP 'conservation efforts' might tend to override autonomy of responsible, well functioning Delta user groups in impractical projects which would be a mistake.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1522	10	Appreciate Delta agriculture that makes multi-use of river water for crops (hopefully with minimal use of fertilizer), for humans, for wildlife vegetation, (such as rice stubble fields sustaining Pacific flyway migration), and then returns runoff to river with usable quality for downstream island.	The commenter is thanked for their comment. The BDCP/California WaterFix project is being proposed to address the conflict between the ecological needs of a range of at-risk Delta species and natural communities, while providing for more reliable water supplies for people, communities, agriculture, and industry.

DEIRS Ltr#	Cmt#	Comment	Response
1522	11	If an ultimate earthquake does occur in Delta region these long term residents will be their only source of aid. General public support systems will be overwhelmed throughout State and highways likely be impassable. Water traffic will remain flexible and be lifeblood for entire region. So do not let BDCP overrule water rights and historic uses that may not appear neat but which are working successfully. Delta life, recreation and sports fishing offers freedoms of old west and project reach of Sacramento River impacts critical link in this. Also do not think BDCP project design for water conveyance upgrade is entirely viable or can be implemented without permanent degradation to San Francisco Bay and Estuary ecosystems, would like to offer alternative designs which believe are feasible. However, need to close at this time and will extend comment tomorrow.	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. Based on the proposed tunnel alignments, depths, tunneling method, and the energy involved in boring, the construction of tunnels is not expected to increase the chance of an earthquake. Chapter 9 of the Draft EIR/EIS describes the potential effects that could result from project construction, operation and maintenance, and restoration due to geologic and seismic-related conditions and hazards. As described in Section 9.3, all the proposed facilities would be designed and managed during and after construction to meet the safety and collapse-prevention requirements of the relevant state codes and standards listed in Appendix 3B of the RDEIR/SDEIS for the anticipated seismic loads. Regarding emergency responders during a major earthquake during the project's construction, impacts on traffic safety are discussed in Section 4.3.15 of the RDEIR/SDEIS, Transportation, Impact TRANS-3. The potential for significant impacts is identified and mitigation is proposed to avoid or minimize these effects. Section 4.3.11 RDEIR/SDEIS, Recreation, Impact REC-3, discusses potential impacts on boating activity. Significant impacts are identified and mitigation is proposed to implement site-specific construction traffic management plans. The proposed mitigation will allow for emergency responders to respond in a timely manner. This potential impact is discussed in Section 4.3.16, Public Services and Utilities, Impact UT-1 of the RDEIR/SDEIS. The proposed project would not affect upstream water rights or entitlements. 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. For more information on alternatives to the project, the commenter can refer to Master Response 4 (Alternatives Development, Tunnel Option), 6 (Desalination/ Demand Management), 7 (Desalination), and 37 (Storage). The overall recreation experience for boaters or fishermen in the vicinity of intake construction areas would be reduced during construction activities, because of the elevated noise levels as well as visual setting disruptions. These temporary construction-related effects and proposed mitigation are discussed in Chapter 15 of the 2013 Draft EIR/EIS and of Appendix A (Chapter 15) of the RDEIR/SDEIS. Socioeconomic effects of the various alternatives are described and assessed in Chapter 16, Socioeconomics, of the Draft EIR/EIS. A Draft BDCP Statewide Economic Impact Report has also been published, which indicates that the project would result in a substantial economic net benefit to the State.
1523	1	Hey, let's work on conserving our water not using it up in a generation while a few make huge profits on water rights and the construction of the Twin Tunnels in the Bay Area Delta. It is time to end corporate rule of this country and our state. The serious water shortage does not mean that we have to destroy our natural world in favor of large corporate interests. The twin tunnels may service the corporations, small farmers and residents of the central valley but it will be destructive to our communities and environment from Sacramento to San Francisco. The Delta is important to our fisheries, our water systems and the plain old beauty of the Bay Delta. Stop plans for the "Twin tunnels. I will invest to keep our Delta System in place and to stop corporate power from destroying our precious God-given resources. Please heed the following message.	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. 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. 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. 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 with the goal of improving water volume, timing, and salinity, 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. The project does not increase the amount of water to which DWR holds water rights or for use as allowed

DEIRS Ltr#	Cmt#	Comment	Response
			under its contracts. State constitutional restrictions require the reasonable and beneficial use of water and state law requires that water supplied from the Delta be put to beneficial uses. The Lead Agencies do not have the authority to designate what water deliveries are used for. See Master Response 34 (Beneficial Use of Water), Master Response 26 (Change in Delta Exports), and Master Response 35 (Southern California Water Supply).
1524	1	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 seem to be significantly under budget. Furthermore in section 8.3.4.2.1 it was alarming to read that full funding is not really known at this point for all aspects of the Plan; "one scenario under consideration is bond funding" There is absolutely no guarantee that Californians will approve a water bond this year or in the near future, or that any bond they do approve will include funding for BDCP. Furthermore, it is highly doubtful that Congress will fund $4 billion toward a habitat conservation plan for California as described in the BDCP presently. Frightening that with a proposed ~$50 Billion project these documents are not directly clear on how it would be funded in totality.	Please see Master Response 5 for a discussion of the proposed project funding issues, including an evaluation of the likelihood and funding being provided by state and federal sources, such as state general obligation bonds. Please note that the preferred alternative is now Alternative 4A, which reduces the cost of the proposed project and shifts financial responsibility to state and federal water contractors receiving exported water. Alternative 4A has been developed in response to public and agency input. The EIR/EIS analyzes all alternatives, including Alternative 4A.
1524	2	From a budget perspective the Plan also seems blatantly serving the water contractors who are "committed to funding" the full cost of Conservation Measure 1 (CM1 -- aka 'the tunnels') as referenced in Table 8.41. Why wouldn't they want to fund the very measure that brings them precious water supply and with it profit? It suits their needs and they are willing to pay for it. If they want the water, shouldn't they pay for the remaining measures it would take to protect the species, conserve habitats, and restore communities left decimated in the wake of their water grab? They cannot be allowed to take the water without funding the remainder of the project, that should not in good conscious be left for tax payers nor rate payers in this state to absorb.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1524	3	I was further offended by the comments in Section 8.3.4.4 "The costs of CM1 and associated mitigation and conservation are affordable by the ratepayers of the urban and agricultural agencies receiving federal and state water supply delivered through the Delta. The benefits of the preferred project to these ratepayers will exceed the total costs of CM1 and associated mitigation and conservation." - But given what I read in Section 8.3.4.2.1 regarding bond funding scenarios under consideration that statement does not appear to be true. It is only true as it pertains to building the tunnels in CM1, not the remainder of the conservation measures therefore the full plan. The comments are offensive because it speaks to the ever increasing demand of the Southern California rural and urban rate payers who want the water from the Delta and the greed water contractors. Another example I found of greed versus what should be a genuine conservation plan: Table 8-45 documents personal income levels for the rate payers of the water. Basically this	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be

DEIRS Ltr#	Cmt#	Comment	Response
		reads as; they can pay for the water grab, so they should be allowed to have it. The comment directly following the table is "not only is BDCP affordable, but the benefits to the ratepayers will exceed the total cost to contractors." Again the Plans own written words highlight the focus on the profit of the water contractors and not the destruction left in their wake with 21 other Conservation Measures left unfunded.	given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1524	4	After scrutinizing the budgetary components of the Plan I looked at impact. Which was even more startling, a conservation plan with 22 measures is too broad, will be difficult to implement and it would appear BDCP has created for itself the largest loophole ever as referred to in the Plan as "Adaptive Management -- as the implementation of the Plan evolves there is the opportunity to reduce uncertainly over time" in Section 3.6.4.2. While I agree with this concept overall, that plans must change as more data is known, it would also appear that this creates the opportunity for species to become extinct, for land and other conservation measures to 'fall out of plan' because of "adaptive management". The entire section on Adaptive Management in the Executive Summary reads as a loophole and self-serving to the purpose of the Plan if you read between the lines.	Commenter is referred to BDCP Section 3.6, which provides far more detail on the adaptive management, monitoring and research program than is presented in the Executive Summary. Regardless, the Executive Summary does not propose the extinction of covered species. The NCCPA unambiguously requires that an NCCP, such as the BDCP, demonstrate conservation of all covered species – that is, the plan must support their recovery. Failure of a plan to meet that requirement can result in permit revocation. It is true that through adaptive management, a conservation measure can be given less support, or even discontinued altogether, if other conservation measures are found to provide greater benefit for the same cost. A conservation measure cannot be reduced or eliminated, however, to reduce costs. Any cost savings must be spent on the other conservation measures. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1524	5	In Section 1.2, Planning Goals and Conservation Objectives, I was relieved to see many of the Conservation Measures listed directly as objectives. Since the list was bullet format and not numbered or sequenced it did seem strange to see the objective of CM1 listed later in the list. "Provide a means to implement covered activities in a manner that complies with applicable state and federal fish and wildlife protection laws." Given the water contractors are not willing to fund the full project, i.e. the full set of Conservation Measures why should the fisheries and agencies give them the 'take permits' they need? And if this plan cannot guarantee those take permits for the water contractors why should CM1 be allowed at its astonishing cost and with the destruction it will cause?	Please see Master Response 5 for additional detail on the BDCP and the alternatives involving an HCP component. See master response 39 regarding project funding. 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.
1524	6	I further was alarmed about impact statements in Table 31.1 which literally outline "no feasible mitigation to address this impact" - much of which was related to ground water supplies. Implies that under construction of CM1 while taking precious open water resources from the Delta the groundwater will also be compromised? So those who reside in the area are meant to suffer years of construction projects and irreparable ground water damage? Shocking that this plan would be willing to compromise the health and wellbeing of entire communities by affecting their groundwater!	As described under Section 7.3.3.2 of Chapter 7, Groundwater, of the EIR/EIS, groundwater impacts are related to dewatering activities during construction of the conveyance facilities (Impact GW-1); during operation of the forebay facilities (Impact GW-5); and during operation of tidal, channel margin, and seasonally inundated floodplain restoration sites (Impact GW-6). During construction, dewatering wells would be installed at the intakes, levees, forebays, pumping plants, and tunnel shafts; and along the pipelines near the intakes and forebays. No dewatering would be required along the tunnel alignment. Following construction, the groundwater elevations would rise towards pre-construction elevations. Mitigation measures have been identified in the EIR/EIS. In most cases, the mitigation measures would reduce the impacts to become less than significant as compared to Existing Conditions. However, it is possible, that some impacts may not be mitigable depending upon specific

DEIRS Ltr#	Cmt#	Comment	Response
			information that would be collected during design and construction phases. The forebay facilities would be designed to minimize seepage to adjacent lands; however, groundwater elevations could rise and adversely affect agricultural drainage near the forebays. Similarly, groundwater elevations could rise in areas adjacent to restored wetlands habitat areas, along with sea level rise that would occur with and without implementation of action alternatives.
1524	7	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 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.	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. It is important to note that the proposed project does not 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. For more information regarding purpose and need please see Master Response 3. For more information regarding water demand management please see Master Response 6.
1524	8	I do have a compliment to the Plan as published; the photos provided in the Executive Summary were breathtaking. The Delta is an amazing place; the animals, birds, fish, the landscape, the habitat, the entire ecosystem that supports Northern California deserves to be conserved and respected. I am saddened to say the BDCP does not provide the Delta the appropriate conservation. I researched other conservation plans as referenced in your executive summary; the Great Lakes project was quite interesting and their objectives clearly defined the conservation they intend to do; clean-ups, prevention of invasive species, health of the shorelines - those are the topics for us to focus on in a Delta Conservation Plan. I would encourage you to actually and literally be inspired by their work and not just in print. 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, it has irreparable impact and consequences to the Delta coupled with a ridiculous loophole written by the Plan for the Plan. Finally it would appear this proposed plan is basically illegal in accordance with legislation already in place to protect the Delta.	The Lead Agencies respectfully disagree with the general assertion that the documentation is fundamentally flawed and "basically illegal in accordance with legislation already in place to protect the Delta" as stated by the commenter. Refer to the following Master Responses for information on compliance with current legislation: 31 (Compliance with Delta Reform Act), 11 (Applicability of City and County General Plans), 13 (Public Trust Doctrine), and 5 (Compliance with Endangered Species Act). Furthermore, the preparation and processing of the documentation are in compliance with state and federal environmental laws and regulations. For example, 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]). Since 2006, the BDCP and subsequently the California WaterFix Project have 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. Please refer to Chapter 32 (Public Involvement, Consultation, and Coordination) in the Draft EIR/EIS and Master Response 40 (Public Outreach Adequacy). The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. The proposed project has been analyzed through a joint RDEIR/SDEIS 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. This document, along with the Draft EIR/EIS, and expected Final EIR/EIS 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 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 and EPA). For more information please on the CEQA and NEPA process, see 1.1.5 of Section 1 Introduction of the RDEIR/SDEIS.
1525	1	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative

DEIRS Ltr#	Cmt#	Comment	Response
		comment on the draft Bay Delta Conservation Plan: Appendix 2A.23.2.1: does not take into account the results of the 2014 Statewide Survey, in which a population estimate of 145,000 birds was derived. In no way have population numbers stabilized, rather a steep decline in numbers persists. The results of the Statewide Surveys prior to 2008 are not directly comparable to those of 2008, 2011, and 2014 due to large differences in methods and levels of effort. The 2014 Statewide Survey was believed to be the most comprehensive yet, with 802 known locations surveyed but only 143 of these were found to be occupied by 145,000 birds.	4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1525	2	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comment on the draft Bay Delta Conservation Plan: Appendix 2A.23.3.1: The Plan Area could support breeding by many thousands of birds if existing nesting substrates were managed properly. For example, the marsh associated with the Hay Road landfill in Solano County is contoured for geese, not tricolored blackbirds. If it were to be recontoured correctly to provide tricolor habitat, as its permit requires, it could support breeding by 5-10,000 birds. There are numerous examples of poorly maintained nesting or potential nesting substrates in the Plan area and it is well within the historic breeding range of the species. The Plan area could contribute substantially to tricolored blackbird conservation by providing far more extensive breeding opportunities as there is much productive foraging habitat in the Plan area.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1525	3	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comment on the draft Bay Delta Conservation Plan: Appendix 2A.23.4.2: The Plan area is the dominant known wintering area of the species. I and Ted Beedy observed a visually estimated 50,000 tricolors on a private ranch just north of Birds Landing, Solano County, October 28, 2007. The precise roost site is unknown and ought to be determined and protected.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1525	4	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comment on the draft Bay Delta Conservation Plan:	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the

DEIRS Ltr#	Cmt#	Comment	Response
		Appendix 2A.23.4.3: The nestling interval is 10-14 days, there is no evidence of a "transition" from hatchlings to fledglings in 24 days, and the entire breeding cycle takes about 32 days, not 45. Fledglings are independent from adults in 4-6 days, except for off-colony feedings, which may persist a few days longer.	elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1525	5	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comment on the draft Bay Delta Conservation Plan: Appendix 2A.23.6. Tricolored blackbird will be considered for possible emergency listing under CESA (California Endangered Species Act) on August 6, 2014 at the Fish and Game Commission meeting in San Diego.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1525	6	I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comment on the draft Bay Delta Conservation Plan: 2A.23.8. Recovery Goals. The Conservation Plan has a conservation target of 750,000 birds, although this may change if the species is listed under CESA (California Endangered Species Act) on August 6, 2014.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1526	1	I'm writing to express my strong support for Bay Delta Conservation Plan Alternative #4, which offers the best solution to protect our water supply while restoring the environment. Without taking action, a single major earthquake in the San Joaquin River Delta could knock out 30 percent of Southern California's drinking water supply for up to a year! Bay Delta Conservation Plan Alternative #4 is the best approach to prevent such catastrophe while	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.

DEIRS Ltr#	Cmt#	Comment	Response
		also creating and saving 1.1 million jobs and restoring and protecting 145,000 acres of habitat for 57 protected species of fish and wildlife. It is vital that this plan move forward, and I appreciate the opportunity to register my strong support.	
1527	1	The City of Sacramento provides a potable water supply primarily from surface waters tributary to the Delta that serves more than 136,000 customer accounts, and approximately 486,000 residents. The City's diversions of surface water are made pursuant to pre-1914 rights, five water right permits, and a permanent water right settlement contract with the U.S. Bureau of Reclamation. In addition, the City provides the following critical services that benefit City residents and businesses as well as the Delta: - Municipal separate stormwater sewer system (MS4) services that include a management program, compliance with the National Pollutant Discharge Elimination System permit (NPDES No. CAS082597, Order No. R5-2008-0142), and participation in the Sacramento Stormwater Quality Partnership (SSQP). The SSQP is a multi-jurisdictional program made up of Sacramento County and the incorporated cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova, to provide education and outreach to reduce pollution and to standardize pollution best management practices for development projects across the region. These programs have supported water quality improvements in local creeks and rivers for more than 25 years. The Stormwater Quality Program includes construction, industrial, illicit discharge, new development, municipal, and public outreach elements that are designed to improve water quality. - A combined sewer system (NPDES No. CA00791ll, Order No. R5-2010-0004) that treats more than 99.5% of stormwater drainage and wastewater from an 11.3 square mile area in the City's Downtown, East Sacramento, and Land Park areas.	The comment does not raise any issues related to the environmental analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. 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 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. For information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. For information on water rights please see Master Response 32.
1527	2	The City of Sacramento values environmental resources and is committed to the protection of our waterways, biological species and habitat, and other environmental resources. Preservation of these environmental resources and maintenance of their quality is not only beneficial to current residents but is crucial to the sustainability of future generations. The City has been a major participant in the Sacramento Area Water Forum, in support of regional water supply reliability and protection of the Lower American River environmental values. The City of Sacramento supports the co-equal goals of restoring the ecological health of the Delta and creating a reliable water supply for all of California.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. For information on the Delta Reform Act please see Master Response 31. For information on the project's purpose and need please see Master Response 3 and Chapter 2 of the Final EIR/EIS.
1527	3	The City of Sacramento is also participating with the North State Water Alliance and the American River Water Agencies in preparing and submitting comments on the BDCP and BDCP DEIR/DEIS. The comments by these two groups largely focus on the deficiencies in both BDCP documents relative to water supply and hydrologic and fisheries analysis, and the City incorporates those comment letters by reference into this comment letter. The Sacramento Stormwater Quality Partnership (SSQP) also is submitting comments on the BDCP and DEIR/EIS, and the City supports the comments made by the SSQP. Sacramento County submitted comments on the BDCP and BDCP DEIR/EIS, which were endorsed by the Sacramento County Board of Supervisors on May 28, 2014. The City also supports the comments submitted by Sacramento County.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. For updated hydrological and fisheries analyses conducted for the new sub alternatives, 2D, 4A, and 5A, please see Chapters 5 (Water Supply) and 11 (Fish and Aquatic Resources) in the FEIR/EIS. Please see Part II, Responses to Comments on the Draft EIR/EIS and RDEIR/SDEIS, of the Final EIR/EIS regarding submitted comments.

DEIRS Ltr#	Cmt#	Comment	Response
1527	4	The City of Sacramento has reviewed the water quality analysis included in the DEIR/EIS and found numerous deficiencies. The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1, which is included and incorporated in our comments: 1. Insufficient Scope of Reasonable Alternatives 2. Inadequate Assessment of impacts to Conservation Measure 1 if Conservation Measures 2 through 22 Not Fully Implemented 3. Insufficient Incorporation of Other Major Programs, Plans, and Projects 4. Insufficient Water Quality Analysis to Support Characterization of Water Quality Impacts 5. Insufficient Mitigation of Adverse and Significant Impacts 6. Insufficient Evaluation of Fiscal Burden on Local Agencies 7. Inconsistent and Inadequate Definition of the Areas of Additional Analysis in Plan Area 8. Technical Errors and Omissions in Evaluation of impacts	For comments pertaining to the development of alternatives, please refer to Master Response 4. The cumulative analysis included within each resource chapter as well as Section 5 of the RDEIR/SDEIS incorporate other major plans, programs and projects into the environmental analysis. For more information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS. Please refer to Chapter 8, Water Quality, of the FEIR/EIS for comments related to the analysis of water quality impacts. Please refer to Chapter 16 of the FEIR/EIS for comments pertaining to socioeconomic impacts. Please note that CEQA and NEPA do not require an evaluation of funding impacts as they are not deemed environmental impacts. For more information regarding cost and funding sources of the BDCP, please see Master Response 5. For comments pertaining to the consistency of the areas of analysis, please review Chapter 3 and 4 of the EIR/EIS.
1527	5	Insufficient scope of reasonable alternatives. The BDCP analysis must include an evaluation of the Portfolio-Based Conceptual Alternative for BDCP, as detailed in the letter dated January 16, 2013 from Natural Resources Defense Council, et al. (Attachment 2.) The DEIR/EIS indicates that the project alternatives selected were based on the Delta Reform Act requirements; however, the scope of alternatives in a DEIR/EIS also must be developed in compliance with CEQA and National Environmental Policy Act (NEPA) requirements. The environmental review process must evaluate reasonable alternatives that avoid or minimize the environmental and economic impacts of the proposed project. Although it is not necessary to consider every conceivable alternative, the analysis must include "a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." [footnote 1: State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3) [Section] 15126.6(a). The California Supreme Court has described the analysis of alternatives and mitigation as "the core of an EIR." Citizens a/ Goleta Valley v. Board of Supe11'isors (1990) 52 Cal.3d 553, 564.] Moreover, the analysis in an EIR should focus on alternatives that can avoid or substantially reduce significant impacts even if they would impede attainment of the project objectives to some degree or be more costly. [footnote 2: State CEQA Guidelines [Section] 15126.6(b).] The range of alternatives considered under NEPA must foster rather than constrain the options available to decision makers. [footnote 3: See, e.g., State Of California v. Block (91 Cir. 1992) 690 F.2d 753.] The alternatives provided in the DEIR/EIS do not meet these standards; therefore, the analysis is incomplete and insufficient. A reasonable range of alternatives would consider storage alternatives and regional independence to minimize or modify exports from the Delta. This evaluation should include other water supply strategies including increased desalination, recycled water use,	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. Please see Master Response 4 for more information regarding alternatives. 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, FEIR/EIS. Please see Master Response 37 regarding why an alternative focused on creating additional storage – surface and groundwater--either in the Delta or elsewhere, was not included in the EIR/EIS. Please see Master Response 7 for a discussion on desalination.

DEIRS Ltr#	Cmt#	Comment	Response
		conservation and conjunctive use. Evaluating only different sizes and configurations of North Delta intakes and conveyance does not provide a reasonable or sufficient assessment of impacts for Conservation Measure I (CM1). The scope of alternatives must be expanded.	
1527	6	Inadequate assessment of impacts to Conservation Measure 1 if Conservation Measures 2 through 22 not fully implemented. The Delta Reform Act, in California Water Code Section 85320(b), states that the BDCP will not be incorporated into the Delta Plan if it does not meet the Delta Reform Act's requirements. The Delta Reform Act requires that construction of a new Delta conveyance facility shall not be initiated until arrangements have been made to pay for the cost of mitigation required for construction, operation, and maintenance of any new Delta conveyance facility. (Water Code Section 85089.) Accordingly, the mitigation measures need to be clearly specified, and linkages to impacts of the proposed project should be plainly identified so that the financial obligations are apparent. The Draft DEIR/EIS fails to address this, as well as other major requirements of the Delta Reform Act. Therefore, the BDCP cannot be incorporated into the Delta Plan unless these flaws are remedied.	Please see Master Response 31 regarding compliance with the Delta Reform Act. The ESA does not require BDCP to guarantee funding. Nearly all HCPs where the permittees are publicly funded agencies cannot guarantee their funding for the duration of the permit term, and are supported by appropriations given on a fiscal year-to-year basis. Failure to provide such funding would likely lead to permit revocation, which provides a strong incentive for permittee agencies to continue to provide needed funding. In fact, there are examples of HCPs that have continually received funding on this basis for a period of decades. See also Master Responses 5 on this point. Mitigation measures are specified in each resource area and its associated impact in the FEIR/EIS. Also see Appendix 3I and Appendix 3J of the Final EIR/EIS.
1527	7	The DEIR/EIS must specifically identify the minimum and expected levels of implementation, the benefits of these levels of implementation, and Conservation Measure 1 operational limitations based on the level of implementation for Conservation Measure 2 through Conservation Measure 22. The DEIR/EIS is a project level analysis for Conservation Measure 1 and refers to the environmental commitments and other BDCP conservation measures (CM2-22) intended to reduce, avoid, or minimize environmental effects of the BDCP and CM1 (page 1-13, lines 3-9). In contrast to CM1, which is the new diversion and delivery facilities themselves [footnote 4: It is not apparent that the new water diversion and delivery facilities are legitimately a Conservation Measure.], these other BDCP Conservation Measures are only evaluated at a program level of review. The DEIR/EIS further acknowledges that these commitments and Conservation Measures will require additional environmental documentation. Also, the BDCP proposes to fund many of the Conservation Measures by State bonds that will need to be approved by the public. There is no current guarantee of full or even partial implementation (permitting and funding) of CM2 through CM22. The DEIR/EIS analysis assumes completion of all of these items and does not account for lack of implementation or partial implementation of any of these commitments or Conservation Measures. There is no analysis included to address impacts to CM1 if any or all of the other supporting CMs are not implemented and how the design, construction, and operation of CM1 may need to be modified accordingly. The Adaptive Monitoring program of the BDCP should include a process for verifying the completion of supporting Conservation Measures and the necessity of revising analyses conducted, if necessary, to modify CM1. Under CEQA, mitigation measures must be enforceable and legally binding, so there is adequate assurance that the measures actually will be implemented. [footnote 5: State CEQA Guidelines Section l 5126.4(a)(2); Federation of Hillside and Canyon Associations v. City of Los Angeles (2000) 83 Cal.App.4'" 1252, 1261.] The environmental commitments and other BDCP Conservation Measures proposed as mitigation for the environmental	See Master Response 5 for an explanation of why CM1 is a conservation measure. The text of CM1 itself (BDCP, Chapter 3, Section 3.4.1) also explains this in detail. Please Master Response 5regarding funding. For more information regarding adaptive management please see Master Response 33 and Chapter 3 of the FEIR/EIS. For information on operational criteria please see Master Response 28. For more information on mitigation please see Master Response 22 and Appendix 3B of the Final EIR/EIS. Regarding permitting please see Master Response 45.

DEIRS Ltr#	Cmt#	Comment	Response
		effects of the BDCP and CM1 do not meet this test.	
1527	8	The 2013 Delta Plan (Chapter 6, Page 230) includes recommendation Water Quality R2 that "Covered actions should identify any significant impacts to water quality." All conservation measures and combinations of their cumulative effects should therefore be evaluated for all impacts. A reasonable evaluation of the implementation schedule for conservation measures, identification of the most critical conservation measures, and an overall assessment of water quality impacts should be performed and clearly presented to meet the Delta Plan recommendations as well as CEQA/NEPA requirements. The DEIR/EIS must provide an assessment of impacts to and by CM1 if CM2 through CM22 are not fully implemented. Attachment 1 provides specific comments related to the assessment of non-implementation of supporting conservation measures. The Adaptive Monitoring program must include a process for verification of completion of supporting conservation measures and a plan for revising analysis if modifications to CM1 are necessary.	Please see response to comment 1527-7. The Conservation Measures are considered components of the project and thus, the water quality assessment considers the potential impacts of their implementation. An analysis of potential water quality impacts that would consider that one or more CMs are not implemented would necessarily involve speculation, and evaluation of a project not meeting the project objectives. For more information on the project's purpose and need please see Master Response 3 and Chapter 2 of the Final EIR/EIS. For more information regarding water quality impacts please see Chapter 8 of the FEIR/EIS and Master Response 14. Cumulative impacts are addressed in the Cumulative Effects section of Chapter 8.
1527	9	Insufficient incorporation of other major programs, plans, and projects: The DEIR/EIS asserts that it has addressed cumulative impacts on the environment as a result of implementation of the BDCP and its conservation measures in combination with other past, present, and reasonably foreseeable projects. However, this analysis is incomplete. Exclusion of some projects inaccurately alters the impact analyses and relative significance of the BDCP. California is working aggressively to plan adaptation and mitigation strategies to address impacts of climate change, and these various activities should be acknowledged and accounted for in the evaluation (page 6-43, lines 3-15). The Department of Water Resources (DWR) System Reoperation Program was authorized under State Bill X2 I in 2008 and includes development of a revised plan of operations for the coordinated State Water Project (SWP)/Central Valley Project (CVP) in order to address flood control, water supply, and ecosystem concerns. The DWR System Reoperation Program includes strategies to address climate change mitigation and adaptation. This program was erroneously omitted from the DEIR/EIS. The No Action Alternative, action alternatives, and the cumulative impact analyses are incomplete and the System Reoperation Program should be described and included as a reasonably foreseeable program. The DEIR/EIS includes the Folsom Dam Safety and Flood Damage Reduction Project in the No Action Alternative and Cumulative Impacts analyses in name only (Attachment 3D-A, page 3D-99), and does not provide any adjustment in operations of Folsom Lake under the new spillway and Water Control Manual operations in the CALSIM II modeling. This project will be operational in 2015 and should have been considered more thoroughly in revised reservoir operations in the modeling analysis. The analysis is incomplete and should be revised to include the current projected revisions to operations. The North Bay Aqueduct Alternative Intake Project is described in the DEIR/EIS as part of Mitigation Measure WQ-5 and an environmental commitment that the project proponents may support. However the design and construction of this facility are specifically excluded from this DEIR/EIS. DWR issued a Notice of Preparation for this project in 2009, but its status is uncertain. It appears that the proposed long-term operation of such an intake was not included in the evaluations and analyses conducted as part of this DEIR/EIS, since	The analyses contained in the Final EIR/EIS reflects and updates made to the cumulative impact analysis including adding projects. Please refer to the cumulative impact analyses in each resource chapter and Appendix 3D, Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions. More information on environmental baselines can also be found in Master Response 1. For information on climate change please see Master Response 19. Adaptive management and operational criteria are discussed in Master Response 33 and Master Response 28, respectively. For information on mitigation please see Master Response 22. Please also see Appendix 6A, BDCP/California WaterFix Coordination with Flood Management Requirements.

DEIRS Ltr#	Cmt#	Comment	Response
		Attachment 3D-A on page 3D-52 indicates that it was not included in the No Action Alternative nor the Cumulative Analysis. If the operation of the intake is intended to be included in this DEIR/EIS, then the flow and quality analyses and evaluations are incomplete and must be expanded. The DWR System Reoperation Program, Folsom Dam Safety and Flood Damage Reduction Project, and the North Bay Aqueduct Alternative Intake Project must be included in the impacts assessment in a manner that adequately characterizes the cumulative impacts and that accounts for simultaneous operation of all project components.	
1527	10	INSUFFICIENT WATER QUALITY ANALYSIS TO SUPPORT CHARACTERIZATION OF WATER QUALITY IMPACTS The DEIR/EIS asserts that is has conducted a comprehensive review and analysis of the effects of the proposed Delta conveyance alternatives on water quality (BDCP DEIR/EIS Highlights, page 5); however, it is incomplete. There are numerous errors and omissions in the evaluation. The focus of the study was largely limited to select locations and did not sufficiently assess the impacts to water quality below the major reservoirs and upstream of the Delta, as well as the areas in the vicinity of the Conservation Measure 1 intakes and CM2 diversion. The water quality impacts described in Chapter 8 of the DEIR/EIS have the following inadequacies: • Insufficient characterization of water quality impacts in the Lower Sacramento River from Veterans Bridge to Emmaton. • Insufficient use of available computational models to assess impacts on constituent concentrations rather than just hydrodynamics. • Insufficient characterization of several key constituents. • Inadequate summaries of water quality impact findings for all alternatives. Adequate water quality assessments must be performed to correct these insufficiencies and inadequacies so that the impacts can be correctly understood, which fundamental to determining whether the proposed mitigation is adequate to minimize impacts to water quality.	Chapter 8 (Water Quality) in the FEIR/EIS describes whether concentrations of various water quality constituents are expected to increase or decrease with the project, relative to existing conditions and the No Action Alternative. To the extent that concentrations of various water quality constituents are expected to increase, Chapter 8 describes whether these increases are expected to result in impacts to beneficial uses of water in the Delta. For constituents for which adverse impacts were expected, mitigation and other commitments, such as additional evaluation and modeling and consultation with water purveyors to identify additional measures to avoid and minimize or offset these impacts, were introduced to address those impacts. For more information regarding water quality please see Master Response 14. Also, note that the EIR/EIS has undergone substantial revisions since the publication of the Public Draft EIR/EIS and now includes new and/or updated analyses in several resource chapters. For the preferred alternative, 4A, several modeling assumptions were modified (relative to Alternative 4) to better reflect conditions under the project in 2025 (early long-term), in addition to shifting the (modeled) D-1641 water quality compliance back to Emmaton to reduce water quality impacts. Please see Chapter 8 for updated information on potential water quality impacts due to implementation of the project alternatives. Please refer to Master Response 30 for information on modeling. More information on modeling can also be found in Appendix 5A of the Final EIR/EIS. Please note that CM2 is no longer considered part of the preferred alternative, but instead a part of the Existing Conditions. For more information on environmental baselines please see Master Response 1 and Appendix 3D of the FEIR/EIS. For information on upstream reservoir effects please see Master Response 25.
1527	11	Sample Locations and Analysis of Impacts The evaluation in Chapter 8 needs to be expanded to provide an accurate and more complete assessment. Chapter 8 primarily bases water quality impact conclusions on a limited number of sample locations and does not perform a detailed analysis of impacts in the area around the proposed north Delta intake on the Sacramento River, specifically between Emmaton and Veterans Bridge.	Please see response to comment 1572-10.
1527	12	Computational Models and Water Quality Evaluation The DEIR/EIS states (page 8-130, lines 28-30) that the analysis is quantitative only where "modeling tools were developed and were available, and qualitatively assesses effects where appropriate modeling tools were unavailable". Many such computational models exist for many of the constituents and river reaches not evaluated in the DEIR/EIS. A project of this scope and potential impact has the resources to develop and utilize these tools	Please see response to comment 1572-10. The water quality assessment evaluated 182 water quality constituents/parameters (p. 8C-1 Appendix 8C of the FEIR/EIS) and addressed those that had the potential to be affected by implementation of the project alternatives.

DEIRS Ltr#	Cmt#	Comment	Response
		necessary for adequate analyses. The water quality evaluation presented in Chapter 8 of the DEIR/EIS, and supported by numerous appendices, was insufficient in several ways: • Inadequate definition of constituents of interest and collection of inadequate data (36 constituents with drinking water standards were not included in the Screening Analysis), • Inadequate assessment of contributions from various sources in the watersheds, • Insufficient representation of all areas impacted by BDCP operations (specifically the areas upstream of the Delta and on the Sacramento River up to all major water intakes), and • Inadequate consideration of impacts of reservoir operations, specifically storage volume, on downstream water quality (related to metals and turbidity). In addition, the water quality analysis methodology utilized inappropriate data evaluation procedures, and the supporting water supply modeling was flawed in numerous assumptions, such as not including the hydrodynamic impacts of Conservation Measure 2 on the water quality of the Lower Sacramento River.	
1527	13	Inadequate Summaries of Water Quality Impact Findings for Baselines and Alternatives DEIR/EIS Section 8.1.6 refers to two different baselines (the CEQA and NEPA baselines), and the evaluation of water quality impacts in 2060 yields information that is extremely difficult to understand or verify. A simple analysis of near term water quality changes from existing ambient water quality is needed to provide the public with understandable information, to provide context/grounding for the long term impacts that are presented, and to allow a proper assessment of compliance with state and federal antidegradation policies. The BDCP Chapter 5 Effects Analysis and its appendices are difficult to review due to organization problems, inconsistencies, and inadequate cross-referencing. For example, Chapter 5 includes many cross-references to other large documents without specific page numbers and sections. It is then a significant effort to review thousands of pages of appendices to try to find the referenced information with little assurance that it is the correct reference. The chapter makes the interpretation of net effects of BDCP implementation difficult at best. The Independent Panel charged with review of the Effects Analysis has stated that it "universally believes that by itself, Chapter 5... inadequately conveys the fully integrated assessment that is needed to draw conclusions about the Plan . . ." [Delta Science Program Independent Review Panel Report (DSP-IRP Report), BDCP Effects Analysis Review, Phase 3, March 2014, page 5]	Please see response to comment 1572-10. Regarding use of Appendices in Chapter 8, Water Quality, this approach is taken to reduce the extensive amounts of modeling data analysis used to support evaluation of potential effects. Use of these appendices is used to streamline the impact analysis as much as possible to improve accessibility and readability of the FEIR/EIS. A similar approach has been taken for the Draft BDCP Effects Analysis. Please also refer to Master Response 38, which addresses the length of the FEIR/EIS.
1527	14	Selected constituents with insufficient or erroneous assessments in BDCP DEIR/EIS. The specific technical issues with the findings for the Preferred Alternative (Number 4) impact assessment on water quality (Chapter 8) for nine constituents, or classes of constituents, is discussed below. Pesticides and Herbicides	The text regarding pesticides and herbicides cited in the comment is intended to provide an overview to demonstrate the importance of these constituents to the assessment and, thus, does not discuss all data sources and findings. Regarding data used to characterize pesticides in the Environmental Setting/Affected Environment section of Chapter 8 of the Final EIR/EIS, please see Master Responses 14. Please also see Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Assessment Type: Qualitative CEQA Assessment Finding for Alternative 4: CM1 (WQ-21)=Less than significant; CM13 (WQ-22)=Significant and Unavoidable Technical issues with finding: Insufficient analysis of sources affecting Delta aquatic life Page 8-83 lists a number of sources to the Delta, but it does not evaluate the relative contribution from these sources and the fate and transport of pesticides and herbicides in the Delta. The Weston, et. Al. research cited in the DEIR/EIS primarily examines urban tributaries and locations near urban runoff outfalls and Publicly Owned Treatment Works effluent. Data collected by the City of Sacramento with the Sacramento Stormwater Quality Partnership show significant concentration decreases of pyrethroids from the source to the Delta, such that river concentrations are lower than !known effect levels. This is also consistent with the Department of Pesticide Regulation (DPR) findings in similar work. [footnote 6: http://www.cdpr.ca.gov/ docs/emon/surfWtr/presentations/ensminger_2014jan_13_pyrethroid_a•ends.pdf] Inaccurate time period characterization: In several instances (page 8-83 line 40, Table 8-23, Table 8-24, Table 8-25, page 8-86 lines 12-19, page 8-164 lines 8-11), organophosphate (OP) pesticides data used for analysis are from samples collected prior to the 2005 California use ban. The use of this data can lead to inaccurate characterization of current concentrations, and more recent data (i.e., 2005-2014) should be used to provide accurate representation of existing conditions. It is not sufficient to state that pyrethroid pesticides will affect aquatic species in the same way as OP pesticides, since it is known that their environmental toxicity, half-life, and transport modes are different.	
1527	15	Inaccurate and insufficient characterization of available data Page 8-85 states that "Limited data and studies are available for characterizing the existing conditions of pesticide concentrations in the study area," which is misleading and inaccurate. This statement is repeated elsewhere and is not substantiated nor investigated fu1iher (page 8-163, lines 35-37, page 8-165 lines 8-9). Data gaps should be clearly stated and prioritized such that they can be addressed through better research or collected as part of the BDCP Adaptive Management. This inaccurate and insufficient characterization is reinforced by the readily available data from a number of public sources. For example, the City of Sacramento collects Sacramento River data through the Coordinated Monitoring Program, U.S. Geological Survey has an active Delta pesticide monitoring program, [footnote 7: http://ca.water.usgs.gov/projects/PFRG/CurrentProjects.html] Department of Pesticide Regulation also has active monitoring programs and available data in and around the Delta [footnote 8: http://www.cdpr.ca.gov/docs/emon/surfwtr/surfcont.html], and areas upstream of the Delta are monitored through the Regional Water Quality Control Board's Irrigated Lands Regulatory Program [footnote 9: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_	Please see response to comment 1527-14.

DEIRS Ltr#	Cmt#	Comment	Response
		monitoring/index.shtml].	
1527	16	Failure to recognize the role of the California Department of Pesticide Regulation and EPA in regulating pesticide usage Page 8-84 lines 23-33 describe Department of Pesticide Regulation activities, but do not recognize that DPR and EPA approve pesticides for usage that local agencies have no legal authority to restrict. State of knowledge regarding pesticide effects on the Pelagic Organism Decline (POD) The DEIR/EIS summary of the Johnson, et. al. report (2010) omitted a key finding regarding contaminants and the Pelagic Organism Decline (POD): Consequently, the results of the six comparisons for chemistry, toxicity, and histological data were placed into a weight of evidence context. The conclusion that is drawn from the analyses is that while contaminants are unlikely to be a major cause of the POD, they cannot be eliminated as a possible contributor to the decline. [footnote 10: http://www.waterboards.ca.gov/rwqcb5/water_issues/delta_water_quality/comprehensive_monitoring_program/contaminant_synthesis_report.pdf] While this conclusion is not specific to pesticides, pesticides were the focus of the evaluation and predominate the robust dataset. Furthermore, it is inaccurate to characterize the state of knowledge on pesticides as insufficient for the purposes of the DEIR/EIS. Certainly, there are adequate data and information to make meaningful and quantitative assessments. Even the "dynamic state of the pesticide market" (page 8-164, line 23) can be well-quantified with detailed use, sales, and application rates that are reported every year.	Please see response to comment 1527-14.
1527	17	Inaccurate and insufficient assessment of impact of SWP and CVP on pesticide use Any changes in the available water for agriculture will change the timing and extent of pesticide application. Moreover, Impact Water Quality-21 (page 8-275 lines 26-29, page 8-463 lines 11-23, etc.) is considered a non-adverse impact though there is no evaluation of how decreases in flow (see Appendix SL, Table 2) in the upstream areas may concentrate pesticides. Insufficient assessment of additive toxicity The assessment also does not evaluate the additive toxicity component of pesticides that is included in current and proposed Total Maximum Daily Loads (TMDLs) and Basin Plan Amendments affecting the Plan and Study areas. [footnote 11: http://www.waterboards.ca.gov/rwgcb5/water_issues/tmdl/central_valley_projects/central_valley_pesticides/20140103_cv_dc_bpa_stfrpt.pdf], [footnote 12: http://www.waterboards.ca.gov/rwqcb5/waterjssues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/index.shtml]	The effects any changes in flow would have on pesticide concentrations is addressed in “Upstream of the Delta” section within Impact WQ-21 in Chapter 8, Water Quality, of the Final EIR/EIS. Please refer to Master Response 14 regarding water quality analysis.
1527	18	Insufficient assessment of Municipal and Domestic Water Supply beneficial use impacts from pesticides Historically, there have been impacts to drinking water supplies from upstream pesticide use in the upper watershed, and these have been successfully addressed through	Please see response to comment 1527-14 and 1527-17. Revisions have been made to the conclusion discussion, where necessary, for Impact PH-2, Exceedances of Water Quality Criteria for Constituents of Concern Such That There Is an Adverse Effect on Public Health as a

DEIRS Ltr#	Cmt#	Comment	Response
		management programs. Reductions of upstream flows may impact source water quality with respect to pesticide detections and concentrations; this may impact drinking water treatment and quality and should be evaluated. The BDCP asserts that drinking water treatment would prevent impacts of source water increases of pesticide levels (page 25-114, lines 20-25 and page 25-189, lines 38-45). This is not an accurate statement or assumption; conventional filtration is not a best available technology for organic constituents, and increased costs may be required to provide additional treatment. The DEIR/EIS must include a quantitative assessment of changes in pesticide concentrations for the baseline and BDCP alternatives. A reasonable range of known pesticides should be considered in the context of additive toxicity as described in the Sacramento River Basin and San Joaquin River Basin Plan (page IV-34.00).	Result of Operation of the Water Conveyance Facilities.
1527	19	Methylmercury (Water Quality-13) Assessment Type: Quantitative (limited to the Delta) CEQA Assessment Finding for Alternative 4: Conservation Measure 1=Less than significant Technical Issues with Finding Insufficient assessment of the effect of reservoir level on methylmercury and mercury concentration Page 8-443, lines 9-15, states that there were not strong correlations between methylmercury concentrations and flow; however, an equally or more relevant relationship is with reservoir stage and/or inputs and operations of wetlands or wetland-like facilities. Since detailed modeling was not performed on the sources, sinks, and fate and transport of methylmercury, a broader range of analysis is required to assess the impacts of the BDCP operations of Conservation Measure 1 as well as other conservation measures. Insufficient assessment of compliance with Delta Methylmercury Total Maximum Daily Loads The DEIR/EIS does not address how CM1 would meet the requirements of the TMDL to decrease methylmercury concentrations in the Delta. Impact WQ-13 must be reevaluated based on other operational relationships (e.g., reservoir stage, turbidity, pH, etc.). Consistency with the TMDL should also be evaluated.	It should be noted that the Central Valley Regional Water Quality Control Board is completing studies to assess the fate and transport of mercury upstream and within the Delta. Therefore, the EIR/EIS focused on existing data related to river flow and concentration data to evaluate correlations; and because the river flows originate from reservoir releases, changes in methylmercury upstream of the Delta focused on whether a relationship between methylmercury concentration and flow exists. Please see Master Response 14 regarding mercury water quality analyses. Please also see Chapter 8, Water Quality, of the Final EIR/EIS.
1527	20	Methylmercury (Water Quality-14) Assessment Type: Quantitative (limited to the Delta) CEQA Assessment Finding for Alternative 4: Conservation Measure 2-CM22=Significant and unavoidable Technical Issues with Finding Insufficient assessment of mitigation measures While several possible control approaches are discussed (page 8-446, lines 24-38), they are not evaluated in sufficient detail to assess the potential benefits or possible other consequences (e.g., reduced flow, discharge of secondary constituents due to chemical	Please refer to Master Response 14 regarding water quality, including methylmercury analysis. Chapter 8 of the FEIR/EIS assesses the effects of CM2-21 on methylmercury. For information on mitigation please see Master Response 22 and Appendix 3B of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		dosing, etc.). Insufficient assessment of compliance with Delta Methylmercury Total Maximum Daily Load The DEIR/EIS does not address how CMs 2 through 22 would meet the requirements of the TMDL to decrease methylmercury concentrations in the Delta or meet subarea wasteload allocations. Additional assessments of mitigation measures must be performed as part of the DEIR/EIS water quality evaluation. Consistency with the TMDL should also be evaluated.	
1527	21	Pathogens (Water Quality-19 and WQ-20) Assessment Type: Qualitative CEQA Assessment Finding for Alternative 4: Conservation Measure 1=Less than significant; CM2-CM22=Less than significant Technical Issues with Finding Insufficient analysis of the effect of temperature increases on pathogen and surrogate concentrations and growth Temperature modeling identified increases in several areas, including the upstream reservoirs and rivers; however, impacts to drinking water intakes were not specifically evaluated. This is a significant omission. Inaccurate and incomplete general statements regarding pathogen decay rates In multiple cases (page 8-208, lines 9-14), it is stated that pathogens may not be historically detected because of rapid "die-off ' - while this may be true for some bacteria, this broad statement does not adequately recognize the significantly lower decay rates of protozoa, such as Giardia and Cryptosporidium. Insufficient analysis of the impact of restoration areas on pathogen concentrations Restoration areas are potential sources of pathogens from wildlife that are not considered and could pose an impact to beneficial uses. The Central Valley Drinking Water Policy (July 2013 Basin Plan Amendment) concluded that current conditions were supportive of the Municipal and Domestic Water Supply beneficial use; however, the trigger values in the Policy could be exceeded with only small increases in observed intake concentrations from the proposed restoration areas. Incomplete analysis of the impact of CM2 on pathogen concentrations CM2 will impact the hydrologic conditions in the Lower Sacramento River and, thus, may impact the concentration of pathogens and surrogates in that area. Additional assessment of pathogens and surrogates related to restoration area impacts, decay rates, the effect of temperature, and the effect of CM2 must be performed as part of the DEIR/EIS water quality evaluation.	Pathogen survival in surface waters is affected by a number of environmental factors (sunlight, pH, dissolved oxygen depending on pathogen), thus making predictions regarding effects of temperatures alone, particularly at the small changes anticipated due to the alternatives, on pathogens speculative, but anticipated to have little effect on pathogen growth. Thus, the focus of the pathogens assessment was source contributions. Regarding die-off, Impact WQ-19 in Chapter 8 has been modified in the RDEIR/SDEIS to clarify, “There may be natural/artificial barriers/processes that limit Cryptosporidium transport to water. Significant die off of those that reach the water may contribute to the low frequency of detection.” The restoration areas have been acknowledged as a potential source of pathogens under the project alternatives. The pathogen assessment considers changes in Sacramento River flows in the Upstream of the Delta portion of Impact WQ-19. Please also refer to Master Response 14, Water Quality.

DEIRS Ltr#	Cmt#	Comment	Response
1527	22	Dissolved Organic Carbon (Water Quality-17 and WQ-18) Assessment Type: Quantitative (limited to the Delta) CEQA Assessment Finding for Alternative 4: Conservation Measure 1=Less than significant; CM4-CM7 and CM10 (with Mitigation Measure WQ-18)=Significant and unavoidable impacts Technical Issues with Finding Insufficient assessment of Conservation Measure 1 effects on Total Organic Carbon based on reservoir operation The DEIR/EIS assumes that the lack of correlation of flows with organic carbon concentrations is a basis to conclude that CM1 will not change organic carbon concentrations (page 8-452, lines 8-14). However, if this correlation approach is used, a broader range of factors and more detailed examinations should be performed in critical areas. In the larger system, certain factors may offset each other, and the timing of effects over the larger system can also make these correlation evaluations less powerful. Insufficient scope of quantitative assessment The quantitative assessment of organic carbon was limited to the Delta and does not provide any meaningful evaluation of impacts to other areas adjacent to the Delta, such as the Lower Sacramento River, that may be significantly impacted by CM1 and CM2. Insufficient assessment of impacts to Municipal and Domestic Water Supply beneficial use The DEIR/EIS projects increases in organic carbon at water intakes (<0.5 mg/L) for the various scenarios (page 8-452, lines 3-8 and 32-34), which increases the frequency of exceeding the various benchmark concentrations of 2.0 mg/L, 3.0 mg/L, and 4.0 mg/L. These increases are significant and may cause impacts to the Municipal and Domestic Water Supply beneficial use, especially when considered cumulatively with bromide concentrations and temperature increases. Mitigation measure WQ-17 is insufficient and vague The proposed mitigation measure (page 8-458, lines 8-38) suggests means to reduce export of organic carbon from restoration areas and then concludes that this may be in conflict with the stated goals of the BDCP. While the BDCP provides limited environmental commitments to upgrade selected water treatment facilities located in the Delta, the assessment should be broader and provide a method to more specifically identify which treatment plants will require upgrades, as well as how this approach is consistent with the Basin Plan and water quality regulations. The Central Valley Drinking Water Policy Workgroup prepared a detailed computational model of organic carbon in the Central Valley and Delta, which may assist with the needed evaluations. Incomplete analysis of the impact of CM2 on organic carbon concentrations CM2 will impact the hydrologic conditions in the Lower Sacramento River and, thus, may impact the concentration of organic carbon in that area. The DEIR/EIS must provide additional assessments of the effects of reservoir operations on	Because the primary effect of CM1 upstream of the Delta would be changes in reservoir operations and, thus, downstream river flows, relationship between organic carbon and flow was determined to be most relevant. For more information on upstream reservoir effects please see Master Response 25. Regarding mitigation please see Master Response 22 and Appendix 3B of the Final EIR/EIS for information on mitigation. Please also see Master Response 14, Water Quality, and Chapter 8 of the Final EIR/EIS. Cumulative impacts to water quality and beneficial uses, including MUN, were addressed in the Draft EIR/EIS beginning on page 8-753, and in the RDEIR/SDEIS in Chapter 8, Section 8.3.3.17. Organic Carbon is also discussed on Appendix 8K of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		organic carbon in localized areas as well as an expansion of the quantitative assessment area. The cumulative effects from CMs1-22 should be evaluated for impacts to MUN beneficial uses. The Central Valley Drinking Water Policy Workgroup developed models of the organic carbon system that should be used as examples of an adequate approach for assessment. That group also evaluated the drinking water treatment requirements based on changes in source water that should be used for assessment of beneficial uses. [footnote 13: http://www.waterboards.ca.gov/centralvalley/water_issues/drinking_water_policy/dwp_trtmnt_eval_rpt.pdf, Chapter 5]	
1527	23	EC, Chloride, and Bromide (Water Quality-5, WQ-6, WQ-7, WQ-8, WQ-11, and WQ-12) Assessment Type: Quantitative (limited to the Delta) CEQA Assessment Finding for Alternative 4: Varies by constituent and Conservation Measure; Less than significant to Significant and Unavoidable with Mitigation Measures Technical Issues with Finding Inappropriate application of long-term averages for these constituents EC, chloride, and bromide are not detectable at high levels in the Sacramento River or its tributaries. These sources have relatively consistent levels of these constituents; however, if reverse flow occurs in the lower reaches of the river, then there could be very episodic and significant increases in these constituents due to saline intrusion. Disinfection by-products in the treated water would be impacted by these increases, and compliance is calculated quarterly; therefore, long-term averages are not representative of the potential impacts to the Municipal and domestic water supply beneficial use. Inaccurate assessment of climate change impacts The BDCP asserts (page 8-184, lines 9-12, page 8-187, lines 19-22, and page 8-194, lines 40-43) that the concentration of these constituents in the Sacramento River would not be impacted by climate change in the No Action Alternative. This is incorrect as EC, chloride, and bromide could all increase in the Sacramento River in the event of sea level rise, increased tidal amplitude, or increased reverse flow events. Chloride, EC and bromide assessments must be revised with shorter-term averaging and account for the potential impacts caused by climate change.	Levels of EC, chloride, and bromide were modeled in the Delta, and averaging periods were used that were appropriate given the limitations of the model and the beneficial use being analyzed. Levels of chloride, bromide, and EC are not expected to change Upstream of the Delta due to climate change and sea level rise. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. For information on climate change please see Master Response 19. EC, Chloride, and Bromide are also discussed in Appendices 8H, 8G, and 8E, respectively.
1527	24	Temperature Assessment Type: Quantitative CEQA Assessment Finding for Alternative 4: Not considered in Chapter 8 water quality impacts Technical Issues with Finding Inaccurate assessment of temperature impacts	Table 8-5 has been updated to reflect water temperature and municipal and domestic water supply beneficial uses. Please refer to Master Response 14 regarding temperature effects on the municipal and domestic water supply beneficial use (MUN). Please also see Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Table 8-5 should indicate that temperature increases can impact drinking water treatment, including increased source water pathogen and algal concentrations, treatability and chemical rates of reaction, and treated water quality (page 8-28). Insufficient assessment of temperature changes on drinking water treatment The analysis focuses on effects to aquatic life and does not include temperature as part of the water quality impact assessment for other beneficial uses, such as Municipal and domestic water supply (page 8-129, lines 17-20). The DEIR/EIS must address the insufficient assessment of' temperature effects on MUN beneficial uses.	
1527	25	Metals (Water Quality-27 and WQ-28) Assessment Type: Qualitative CEQA Assessment Finding for Alternative 4: Conservation Measure 1=Less than significant; CM2-CM22=Less than significant Technical Issues with Finding Insufficient assessment of total metals impact on drinking water intakes Drinking water standards for metals constituents are based on the total fraction, including both dissolved and particulate metals. It is inappropriate to apply the standard to only a portion of the total regulated constituent; therefore, the standard is not accurately applied to a dissolved fraction. The metals analysis needs to be revised to look at impacts to total metals levels because all amounts of metals will be treated; increased metals levels in source water may result in additional treatment requirements and increased treatment and residual management costs to municipal water suppliers. Insufficient assessment of the effect of reservoir level on metals concentrations Page 8-219, lines 34-42, state that there were no strong correlations of dissolved metals concentrations and river flow; however, an equally or more relevant relationship is between the reservoir stage and dissolved metals. This was not adequately evaluated. Metals water qualify impacts must be reevaluated to consider total metals relative to impacts on the Municipal and Domestic Water Supply beneficial use. The DEIR/EIS must evaluate metals concentrations and correlations with other operational parameters, such as reservoir stage, to fully evaluate impacts.	The screening analysis compared both total and dissolved fractions of metals to the lowest applicable criterion, and if the maximum detection of either exceeded the criterion, it was carried forward for analysis, as described in Appendix 8C of the Draft EIR/EIS. Because river flow and concentration data exist from which to evaluate correlations, and because the river flows originate from reservoir releases, changes in trace metals upstream of the Delta focused on whether a relationship between trace metal concentration and flow exists. Reservoir stage may or may not affect the concentration of a particular metal in the water column. A model that would consistently simulate water quality conditions downstream of all reservoirs is not available at this time. Therefore, a methodology to evaluate constituent transport was used. It should be noted that increased metal concentrations in rivers downstream of reservoirs frequently occurs during periods of low storage levels. The potential for those occurrences are presented in Appendix 5A, Section C, of the EIR/EIS. The primary difference in extremely low reservoir levels occurs under the No Action Alternative as compared to the Existing Conditions due to climate change and would occur with or without implementation of the Proposed Project or the action alternatives, and no mitigation is required from the Project. The occurrence of extremely low reservoir levels is slightly increased under the action alternatives as compared to the No Action Alternative (all of these alternatives include the same climate change and sea level rise assumptions). Please see Master Response 14 regarding the water quality analysis and Chapter 8 of the Final EIR/EIS. Trace metals are also discussed in Appendix 8N of the Final EIR/EIS.
1527	26	Aluminum Assessment Type: None CEQA Assessment Finding for Alternative 4: Not evaluated Insufficient assessment of aluminum impacts to beneficial uses Aluminum was not included in the analysis and can sometimes exceed relevant aquatic life and drinking water objectives. This constituent is especially important to drinking water	An analysis of aluminum was included in the Partially Recirculated Draft EIR/EIS and is also included in the Final EIR/EIS in the analysis under Impact WQ-27. Please see Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		treatment since it is a primary coagulant used to remove solids and changes in source water concentrations can impact treatability. Any projects disturbing soil, increasing turbidity, or using coagulants have the potential to increase aluminum concentrations and potentially impact beneficial uses. Aluminum must be evaluated for impacts through available modeling of the BDCP and alternatives.	
1527	27	Selenium (Water Quality-25 and WQ-26) Assessment Type: Quantitative (limited to the Delta) CEQA Assessment Finding for Alternative 4: Conservation Measure 1=Less than significant; CM2-CM22=Less than significant Technical Issues with Finding Insufficient analysis of unknowns and potential increases in selenium The CM2 through CM22 analysis concludes that selenium biotic uptake may be increased by the increased residence time in the restoration areas (8-286 lines 1-3) and then suggests that the restoration areas should be designed and operated as flow-through to minimize impacts. However, such operation may be inconsistent with the wetlands needs and in some cases could result in the increased discharge of methylmercury and organic carbon while minimizing the habitat benefits of the restoration areas. The analyses of CM2 through CM22 in the DEIR/EIS must consider the cumulative impacts on affected constituents and constraints for restoration area operation.	The assessment considers increased residence times and acknowledges constraints associated with restoration area site design. Avoidance and minimization measure 27 includes the development of selenium management and monitoring plans on a site specific basis, which will be developed to address these issues. For more information please see Appendix 3B of the FEIR/EIS. Also see Chapter 8 of the Final EIR/EIS. Please also see Master Response 14.
1527	28	INSUFFICIENT MITIGATION OF ADVERSE AND SIGNIFICANT IMPACTS There are a number of water quality constituents for which significant adverse impacts were determined. There are several additional constituents where the lack of certainty or lack of assimilative capacity should require meaningful mitigation measures. When impacts are significant or cannot be reliably quantified, the mitigation measures should provide meaningful and legally assured actions or programs that will ensure that impacts will not occur, or otherwise the impact should be found unavoidable. There are a number of instances in the DEIR/EIS where impacts are identified but deferred to future evaluation or uncertain mitigation efforts. Moreover, impacts in the key areas near to and upstream of the proposed intakes are not adequately evaluated or mitigated. An EIR must describe feasible mitigation measures that can minimize each significant environmental effect of a project. [footnote 14: State CEQA Guidelines [Section] 15121(a), 15126.4(a). See Environmental Council of Sacramento v. City of Sacramento (2006) 142 Cal.App.4'" 1018, I 039 ("A gloomy forecast of environmental degradation is of little or no value without pragmatic, concrete means to minimize the impacts ....")] As noted above, these mitigation measures must be enforceable and legally binding, so there is adequate assurance that the measures actually will be implemented. Many of the mitigation measure proposed in the DEIR/EIS do not meet this test. For example, for Alternative Number 4, the DEIR/EIS (page 8-447, line 17-22) determined that: "Although the BDCP will implement Conservation Measure 12 with the goal to reduce	Remediation of Delta toxics issues is not a central purpose for the proposed project; it is only treated directly in CM12 and in CM19, neither of which proposes to alter existing regulation with regard to toxins. For more information regarding significant and unavoidable impacts please see Master Response 10. Please refer to Master Response 14 and Chapter 8 of the Final EIR/EIS regarding water quality analysis. For information on mitigation please see Master Response 22.

DEIRS Ltr#	Cmt#	Comment	Response
		this potential effect, the uncertainties related to site specific restoration conditions and the potential for increases in methylmercury concentrations in the Delta result in this potential impact being considered significant. No mitigation measures would be available until specific restoration actions are proposed. Therefore, this programmatic impact is considered significant and unavoidable." In this way, the DEIR/EIS acknowledges significant impacts and the availability of mitigation measures, but fails to provide specifics on the mitigation measures and the potential water quality outcomes. Lack of site-specific information is not sufficient reason for deferring the evaluation of mitigation measures. The DEIR/EIS does not identify or commit to follow-up actions in cases where mitigation measures are not effective or water quality conditions degrade further and cause impacts to beneficial uses. The DEIR/EIS must evaluate a broader range of available mitigation measures and reasonably quantify their performance and ability to prevent methylmercury and other constituents with findings of significant impacts from entering the Delta. The DEIR/EIS should provide follow-up actions if mitigation measures are not effective or water quality conditions degrade further and impact beneficial uses.	
1527	29	INSUFFICIENT EVALUATION OF FISCAL BURDEN ON LOCAL AGENCIES Implementation of the conservation measures to meet the Plan's goals will undoubtedly result in increased costs to local agencies to monitor and assess the effectiveness of the water quality improvement related activities. Local agencies' ability to generate funding to conduct these additional activities is subject to potentially significant limitations, including Proposition 218 and Proposition 26. For example, the operation, maintenance, and improvement of Municipal Separate Storm Sewer Systems typically is funded by storm drainage rates, and under Proposition 218, a local agency can only increase storm drainage rates after (1) conducting a notice and protest process with a protest rate below 50%, and (2) obtaining voter approval for the increase from a majority of the ratepayers subject to the rate or from two-thirds of the electorate. Additional costs imposed on local agencies by Conservation Measure 19 may have potentially significant impacts that should be evaluated as part of the DEIR/EIS water quality assessment (Chapter 8). For example, to the extent that the proposed CM19 places a significant fiscal burden on local agencies, those agencies may be forced to defer or forego other improvements or programs designed to improve water quality or protect the environment. The DEIR/EIS must include evaluation of the potential significant fiscal limitations and burdens that may be imposed on local agencies.	Conservation Measure 19 (CM19) does not impose any requirements or financial burdens on local agencies because it is a grant program for voluntary applicants whose stormwater contributes to Delta waterways under NPDES MS4 stormwater permits. There is no mandate that entities must apply for and/or use funding provided as part of the program. Because CM19 is voluntary and designed to support the conservation requirement of the NCCP (in the BDCP, Alternative 4), funding for CM19 would come only from public statewide or federal sources. The participating state and federal water contractors would not pay for CM19 as part of their mitigation obligations, nor would other local water management agencies. For information on funding please see Master Response 5.
1527	30	Inconsistent and Inadequate Definition of the Areas of Additional Analysis in Plan Area The DEIR/EIS states that the Plan Area includes the statutory Delta as well as Areas of Additional Analysis, where Conservation Measures l-22 would be implemented outside the statutory Delta. The Areas of Additional Analysis specifically include the Yolo Bypass and Suisun Marsh. However, two of the conservation measures (CM2 - Yolo Bypass Fisheries Enhancement and CM19 - Urban Stormwater Treatment) are apparently located outside of the statutory Delta yet were not included in the Areas of Additional Analysis. The DEIR/EIS analysis is incomplete by omitting an evaluation of the impacts to this additional area.	All cited areas are within the Plan Area. For more information on the project area please see Chapter 1 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		The analysis must clearly define the physical area for the Plan Area and the Study Area and perform the assessment on these defined areas.	
1527	31	TECHNICAL ERRORS AND OMISSIONS IN EVALUATION OF IMPACTS The DEIR/EIS has numerous technical errors and omissions in its evaluation of the impacts of the BDCP related to water quality. Incorrect summarization of the drinking water regulatory requirements in California • Incorrect drinking water standards, • Incorrect application of metals drinking water standards to only the dissolved fraction, • Incorrect determination of compliance with drinking water standards, and • Incorrect information and discussion of the regulatory requirements and enforceability of secondary drinking water standards for drinking water agencies. Incorrect technical assumptions on the treatability of various water sources by conventional filtration • Incorrect assumption that temperature is not significant to drinking water treatment, • Incorrect assumption that conventional filtration is not impacted by increased loads of constituents, and • Incorrect use of long-term averages for determination of significance of impact. Inadequate representation of ambient water quality • Insufficient process for selection of pesticides of interest, • Incorrect information and discussion of summarized information on pathogens from outside sources, • Insufficient data query for constituents of interest outside of the Delta, and • Insufficient number of data points to make determination of significance. These errors and omissions must be corrected.	Please see response to comments 1527-10 to 1527-30 regarding response to water quality comments.
1527	32	The City of Sacramento and the Delta would be profoundly affected by the BDCP. The high quality of the American and Sacramento Rivers are the primary reason why the proposed BDCP intakes are located in the Sacramento River downstream from and adjacent to the City. Protection of these water resources is a local and statewide responsibility. While we recognize that a project of this size is complex and resource intensive, we have identified a variety of presumptions, assertions, and conclusions within the BDCP document that are inaccurate or insufficiently supported. These issues will have significant effects on	Please see Master Response 5 for an explanation of the adequacy of the take alternatives in Chapter 9 of the 2013 BDCP Public Draft. Take Alternatives are required under ESA Section 10, and therefore not included in the preferred alternative, 4A. Please see also Master Response 4 for a discussion of the adequacy of alternatives in the FEIR/EIS. For more information regarding BDCP Implementation Structure please see Master Response 5 and Chapter 7 of the 2013 Public Draft. Please see response to comment 1257- 10 for water quality issues. For more information regarding adaptive management please see Master Response 33 and Chapter 3 of the FEIR/EIS. For more information regarding flow evaluation and modeling please see Master Response 30 and Appendix

DEIRS Ltr#	Cmt#	Comment	Response
		the City and our water quality management programs. 1. Insufficient Evaluation of Take Alternatives 2. Lack of Meaningful Role for Local Agencies in BDCP Governance 3. Insufficient Commitments for Adaptive Management and Monitoring Programs to Protect Upstream and Delta Water Quality 4. Insufficient Justification for Conservation Measure 19 5. Insufficient Evaluation of Water Quality Impacts 6. Inadequate Flow Evaluation in the Sacramento River for Conservation Measures 1 and 2 7. Insufficient Incorporation of Climate Change Effects 8. Technical Errors and Omissions	5A of the FEIR/EIS. For more information regarding climate change please see Chapter 29 of the FEIR/EIS and Master Response 19.
1527	33	INSUFFICIENT EVALUATION OF TAKE ALTERNATIVES The BDCP includes a Proposed Action as well as "take" alternatives A through I. However, these alternatives are only variations of the Proposed Action, rather than being true alternatives "to reduce or avoid the take of the covered species." [footnote 15: BDCP, Highlights, page 98, sidebar 1] The BDCP has not provided sufficient alternatives and evaluation to reduce or avoid take of the covered species. The BDCP states that temperature impacts on covered fish species will be significant in the future and that climate change impacts will enhance that impact. [footnote 16: BDCP Chapter 2, 2.3.2.1.5, page 2-18, lines 18-26 and 2.3.3.2, page 2-24, lines 36-43 and page 2-25, lines 1-31] The lack of an alternative that includes seasonally limited export flows to allow increased upstream reservoir storage or Delta outflow is inherently flawed given the purpose of alternatives. One potential way to reduce or mitigate the temperature impacts is to change the operational parameters for upstream reservoirs to allow increased carryover storage. By allowing increased carryover storage, the cold water pool storage will increase, which could lessen projected temperature impacts during the fall period. [footnote 17: BDCP, Appendix 5A, 5.A.2.5.4, page 5A.2-72, lines 30-375] One way that the carryover storage can be increased is to seasonally optimize the export flows. This action should be evaluated to reduce or avoid the take of covered species. Also, in order to maximize water supply availability for all demands, consideration should have been made for balancing water storage throughout the State, including contemplation of existing volumes of surface water storage in Southern California prior to determining the volume of Delta export. Once water is exported from the Delta, there is a reduced ability to meet local water demands in Northern California or Delta outflow requirements. In addition to demonstrating the deficiency of the alternatives, these impacts require identification and evaluation in the BDCP documents. The scope of take alternatives must be expanded to consider additional actions to address temperature and •water supply availability impacts.	Please see Master Response 5 for an explanation of the adequacy of the take alternatives in Chapter 9 of the 2013 BDCP Public Draft. Please see also Master Response 4 for a discussion of the adequacy of alternatives in the EIR/EIS. The preferred alternative is now Alternative 4A, which no longer includes habitat restoration, beyond what is required to mitigate effects of constructing and operating the project. Alternative 4A would not serve as habitat conservation plans/natural community conservation plans (HCPs/NCCPs) under ESA Section 10 and the NCCPA, but rather would achieve incidental take authorization under ESA Section 7 and CESA Section 2081(b). As a result, the Alternatives to Take analysis presented in the draft BDCP and required by Section 10 of the ESA is not applicable to the new preferred alternative, 4A. Regarding the Endangered Species Act and permitting please see Master Response 29 and Master Response 45, respectively. For more information regarding upstream reservoir effects please see Master Response 25. For information on storage please see Master Response 37.

DEIRS Ltr#	Cmt#	Comment	Response
1527	34	LACK OF MEANINGFUL ROLE FOR LOCAL AGENCIES IN BDCP GOVERNANCE The City of Sacramento recognizes and supports the proposal to include a Stakeholder Council for municipal agencies, non-governmental organizations, and the general public (page 7-1, lines 37-39), as this provides outreach and opportunities to respond to decisions by the Program Manager, Adaptive Management Team, and Permit Oversight Group. The City and the rate payers it represents, as well as other north-of- Delta agencies, have a significant financial and natural resource stake in the outcomes of the BDCP. Therefore, local Northern California agencies need to be afforded a more significant role in BDCP implementation and assessments. As noted in the BDCP (page 7-26, lines 5-9), the California Natural Resources Agency is working with counties to develop a program with more significant county involvement in BDCP implementation. The local municipalities have a similar stake as counties in water supply, land use, National Pollutant Discharge Elimination System regulation, and water quality issues and should be included in discussions regarding this implementation role. For example, the BDCP describes the implementation of Conservation Measure 19 for urban runoff treatment through National Pollutant Discharge Elimination System permits (page 3.4-327, lines 17-24), which include comprehensive stormwater management and pollutant reduction programs. However, the BDCP does not provide technical development of a baseline for urban runoff effects on the covered species or a description of how future assessments of effectiveness would be made by the Adaptive Management Team (e.g., quantitative benchmarks, modeling tools, etc.). The far-reaching assertion of "implementation of CM19 through the National Pollutant Discharge Elimination System permits" suggests an active role in permitting by the Implementation Office and direct tie-ins between the BDCP and Municipal Separate Storm Sewer Systems permits. In this scenario, local agencies input of their scientific assessments is limited to their respective NPDES permit renewals, which is potentially well after the Adaptive Management Team has published its effectiveness assessments. Local government must be given a more significant role in management of the BDCP to the extent that the BDCP will impact local water supply, water quality, and land use planning. The role should allow local agencies representation on the adaptive management issues that impact them.	Please see Master Response 40 regarding public outreach. Also see Master Response 41, Transparency. For information on adaptive management please see Master Response 33. For information on governance and implementation please see Master Response 5.
1527	35	Insufficient commitments for Adaptive Management and Monitoring Programs to protect upstream and Delta water quality. The BDCP will be one of the most divisive and resource intensive public policy and infrastructure projects in recent California history. Already, hundreds of millions of dollars have been spent on planning, engineering, and technical assessments. However, the City of Sacramento believes that the BDCP and BDCP DEIR/EIS do not adequately commit, in level of detail or resources, to an ongoing assessment program that will provide quantitative assessments of effectiveness and evaluate the identified uncertainties of the BDCP. The Effects Analysis conducted as part of the BDCP does not compute the baseline effect of the pollutant stressors on covered species that the Conservation Measures are based on; therefore, how will the Adaptive Management Team evaluate future effects and effectiveness of the Conservation Measures, especially Conservation Measure 19? The BDCP admits that the Plan and its Conservation Measures (CMs) have considerable uncertainty with regard to ecosystem benefits and likely outcomes. [footnote 18: BDCP,	The BDCP has been revised to more clearly address the adaptive management process and the integration of monitoring, research, conservation actions, and adaptive management. For more information regarding Adaptive Management please see Master Response 33 and Chapter 3 of the FEIR/EIS. The revisions specify adaptive management programs to evaluate the success of tidal wetland restoration and to develop the information needed to resolve the decision trees. The revisions specify partners in this process; they include all of the major agency and academic programs active in the Plan Area, and provide for shared data, analysis, and financial support for these programs. The revisions address the subject of experimentation by designating different bases for comparison, ranging from traditional controlled experiments through before/after studies, use of reference sites, and use of various modeling approaches. Finally, the revisions address the need for scientific peer review by identifying situations where independent scientific review panels would be formed and by calling for scientific conferences and colloquia to comprehensively review BDCP data and analysis periodically or at crucial milestones during BDCP implementation. These revisions are intended to provide both the administrative structure and the collaborative relationships necessary to implement a robust adaptive management program.

DEIRS Ltr#	Cmt#	Comment	Response
		Chapter 3, 3.4.23, page 3.4-354, lines 8-12] Adaptive management is implemented to allow CM flexibility, and the focus is defined as assessing achievement in meeting the biological goals and objectives. There will be opportunity for revising CMs and biological objectives. [footnote 19: BDCP, Chapter 3, 3.4.23, page 3.4-354, lines 21-27] This places a critical and powerful need for adequate monitoring and assessment of the system. Much of the monitoring and modeling in the BDCP, however, is relegated to a research action; these critical components of adaptive management should instead be discussed explicitly within the Effects Analysis with a mandated schedule. The adaptive management approach should have a transparent and comprehensive monitoring, modeling, and assessment program that can adequately quantify biological and water quality changes due to changes in flows, climate change, contaminant sources, physical changes, and reasonably anticipated beneficial use impacts. This should include verification of the effects analysis and an evaluation of the identified uncertainties. This assessment framework is not provided, even for the evaluation of current conditions, and there is no monetary commitment to provide such tools, data, and resources for the Stakeholder Council. The Science Program should allow bottom-up participation from local agencies; this is important so that joint solutions can be evaluated and implemented, as well as to avoid "serial engineering" by which one 'solution' causes another ecological or public policy problem. Local agencies should have a clear and significant role in BDCP decisions if modifications are considered to the CMs that will impact local agencies. The BDCP must include a clear, expanded description of the Adaptive Management program framework and the monitoring components and tools that will be used to make assessments, address uncertainties, identify unintended consequences of the BDCP, and propose changes to system operations. For example, a decision tree should be developed for interpreting scientific information relative to the management action and evaluating the certainty of the relationships, the benefit to covered species, and information needs and priorities. Within this decision tree, local agencies should have the ability to provide input and make management decisions when the outcomes affect them.	The costs of the monitoring, research and adaptive management program have been revised. The revised costs are higher than previously estimated, partly because of the more robust adaptive management provisions in the revised plan. The costs are not front-loaded because the experience of other plans (e.g., the Everglades) suggests that costs do not decrease over time. As old uncertainties and management challenges are resolved, new ones arise. The history of research in the Delta suggests that this is likely to be the rule in the coming decades, as it has been in the past. Alternative 4 provides for local agency participation as described in BDCP Section 7.1.10 Stakeholder Council. The Stakeholder Council provides the principal means by which stakeholders, including local agencies, will participate in and provide oversight of BDCP. As noted in Table 7-1, the Stakeholder Council provides input on selection of the Program Manager, selection of the Science Manager, oversight of program funding, and indeed almost every aspect of Alt 4implementation, including a major role in the adaptive management program. Numerous comments were received that focused on various elements of the BDCP. For information on the Decision Tree please see Master Response 44. For information on governance and implementation please see Master Response 5.
1527	36	There has not been a clear prioritization of management actions (Conservation Measure) to optimize available resources and mitigate effects to the covered species or other aquatic life impairments. It also is not clear from the BDCP whether Conservation Measure 1 can proceed with or without the other Conservation Measure, if they are not completed or fully funded. Additional information must be provided regarding the minimum number of Conservation Measure that are required to be implemented in order for CM1 to be operated, the course of action if funding is not secured for all the Conservation Measure, and whether CM1 exports can or will be restricted if other Conservation Measure are not successfully implemented.	Please see response to comment 1527- 7. There is no prioritization of the conservation measures because they are not optional. To the extent specified by BDCP's operating permits (which have not yet been issued, but are expected to reflect all commitments stated in the BDCP), the conservation measures must all be implemented. BDCP does not propose to mitigate any effects to covered species. Effects to covered species are beneficial, contributing to the recovery of each of the species, as is required by the Natural Community Conservation Planning Act. Some BDCP activities are likely to harm individuals of covered species, but these effects will be minimized in the manner specified in the Plan, as required by the Endangered Species Act. 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. For more information on conservation measures please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
1527	37	The existing Interagency Ecological Program (IEP) structure is not thoroughly justified in the BDCP. Other BDCP cited documents [footnote 20: Public Policy Institute of California. Stress Relief Prescriptions for a Healthier Delta Ecosystem. April 2013] have suggested formation of a Joint Powers Authority (JPA) that includes local agencies to develop the appropriate Delta science and assessments. For example, page 3.4-329, line 13 states that "The Adaptive Management Team will use results of effectiveness monitoring to determine if reducing stormwater pollution loads results in measurable benefits to covered fish species or their habitat and to identify adjustments to funding levels, control methods, or other related aspects of the program that will improve the biological effectiveness of the program." The form and technical basis for the assessment is not provided, and the means of establishing relationships between contaminant reductions and covered species is not identified. The BDCP must include development of this science JPA to support adaptive management. The BDCP must be updated to include development of the baseline for assessments prior to implementation of all Conservation Measure.	It is not apparent that a non-existent agency (the JPA) must be created as part of BDCP. However, the adaptive management provisions of the BDCP (BDCP Section 3.6) have been revised to identify partnerships with local agencies, programs, and scientific organizations active in research and monitoring within the Delta, and it is likely that formal agreements will be concluded with many of these partners to ensure closer collaboration than currently exists, including sharing of data, analysis, and funding. The environmental baseline for the proposed project is described and defined in many parts of the BDCP document and the EIR/EIS document. Please see Master Response 1 and Appendix 3D of the Final EIR/EIS. In the BDCP, the topic is primarily addressed in Chapter 2 Existing Ecological Conditions, and in Chapter 5 Effects Analysis. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. For information on governance and implementation please see Master Response 5.
1527	38	Insufficient justification for Conservation Measure 19 Conservation Measure 19 is described in seven pages of the BDCP with little detail, numerous inaccuracies on urban runoff contaminants and water quality regulations, and without any evidence that CM19 control measures could provide any measurable benefits to the covered species. Conservation Measure 19 (CM19, BDCP Section 3.4.19) intends to decrease urban runoff contaminant discharge to support Objective L2.4 to provide water quality to "help restore native fish habitat". However, there is no technical analysis demonstrating the potential benefits of CM 19 aside from incomplete descriptions of pyrethroid research in upstream urban tributaries; this research has not demonstrated relevance to impacts on covered species in the Delta. No technical justification is provided for the primary inclusion of urban runoff sources as a Conservation Measure over all other contaminant stressor sources that are described throughout the BDCP and BDCP DEIR/EIS but are absent as Conservation Measures. As proposed, CM19 provides no new benefits to downstream covered species. Furthermore, CM19 proposes measures that are already generally implemented by stormwater management programs and local planning departments with new development requirements.	Chapter 3 provides an overview of CM19, but the effects of CM19 are discussed in Chapter 5 and Appendix 5D of the 2013 BDCP Public Draft. Uncertainty associated with CM19 is recognized, and it is expected that this uncertainty will be reduced through implementation of CM19 and subsequent monitoring to quantify the benefit. CM19 itself provides quantitative standards for performance, based on existing regulation. It is likely that existing monitoring required by local jurisdictions and the regional water quality control boards will be found to produce monitoring data adequate to verify CM19 progress towards relevant biological objectives. More specific assessment tools would be developed only if these existing tools are found to be insufficient. See FEIR/EIS Appendix 3B for clarification of the effectiveness of environmental commitments. The Clean Water Act places a high value upon antidegradation because maintenance of high water quality is desirable for all beneficial usesCM19 provides local authorities with financial incentives to minimize or avoid such discharges. For more information on conservation measures please see Master Response 5. For information on permitting please see Master Response 45. As already noted, the preferred alternative is now Alternative 4A and no longer includes an HCP or Conservation Measure 19.
1527	39	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed Conservation Measure fails to meet a reasonable expectation of beneficial impacts for the following reason: The BDCP and BDCP DEIR/EIS do not provide sufficient detail to reasonably conclude that the CM19 suggested best management practices (BMPs) would have any adverse or beneficial impact on water quality in the Delta. [footnote 21: Delta Stewardship Council. Final Delta Plan. Page 230 recommendations "WQ R2. Identify Covered Action Impacts. Covered actions should identify any significant impacts to water quality. "] Pesticides are identified as the primary "concern for fish" (BDCP page 3.4-327, lines 9-10) and as the basis for the need for CM19. The studies cited in the BDCP (Weston et al. 2005, The et al. 2005) do not show linkages between urban runoff and effects on covered species and therefore should not be used as justification for CM19.	Please see response to comment 1527-38.

DEIRS Ltr#	Cmt#	Comment	Response
		Most urban runoff from the Sacramento region and areas upstream of this region does not directly enter the Delta. As such, the conclusion that actions to reduce the amount of pollution in stormwater runoff entering Delta waterways will be of high benefit to delta smelt, white sturgeon, steelhead, and Chinook salmon (Essex Partnership, 2009) does not consider the fate and transport to points where impacts to covered species are of concern (BDCP page 3.4-332). Even if contaminant load sources are reduced, it is not established that there would be a downstream Delta benefit since contaminant degradation, dilution, adsorption to particulates, and other fate and transport processes would reduce any aquatic life effects (Werner, et al. 2008, page 32), which is consistent with pyrethroid experimental studies downstream. Urban runoff dilutes some pollutants and is only an intermittent exposure during the higher flow wet season.	
1527	40	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: • CM1 9 does not consider pesticide and other contaminant source control by the entities that manufacture, regulate, and control their use in urban and non-urban areas. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) gives the U.S. Environmental Protection Agency (EPA) authority to determine which pesticides can be used in the United States and how they can be used. The application and approval of pesticides are regulated by both the EPA and the California Department of Pesticide Regulation (DPR). Local agencies do not have the authority to limit the use of pesticides when applied according to these rules. If retained, CM19 should propose actions to better regulate and approve pesticide formulations and applications so that they will not have effects on covered species when used legally. The Central Valley Regional Water Quality Board recently adopted Basin Plan amendments that better acknowledge state and federal government responsibility. References to pesticide source control should acknowledge that municipalities are statutorily prohibited from regulating the use of pesticides, and that existing state and federal statutory authority for regulation of pesticides is sufficient only when it is properly exercised to prevent water quality impacts.	Please see response to comment 1527-38. Uncertainty associated with CM19 is recognized, and it is expected that this uncertainty will be reduced through implementation of CM19 and subsequent monitoring to quantify the benefit. BDCP's Steering Committee identified stormwater source control as a viable option for improving aquatic habitat in the Delta, and to date none of the resource agencies involved in the planning process have suggested otherwise. Commenter's statements assert that there are other pollutants of concern entering Delta waters; this is true, and is one reason why other Alternative 4 conservation measures address some of these other pollutants (e.g. CM12 addresses methylmercury, CM14 addresses dissolved oxygen; other CMs have secondary benefits to water quality). However, CM19 is not designed to address all water quality stressors in the Delta, nor does Alternative 4 claim that it does so.
1527	41	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: The BDCP does not acknowledge that the most effective source control approach to control many contaminants in urban runoff is product control by manufacturers and regulators. In particular, lead and pesticides have been controlled through product reformulation or discontinuation. Recent legislation (SB346) will phase out copper in brake pads, a significant contributor to urban runoff loads.	Please see response to comment 1527-38 and response to comment 1527-40.
1527	42	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: The BDCP and BDCP DEIR/EIS do not comprehensively evaluate all sources of contaminants	Please see response to comment 1527-38 and response to comment 1527-40. For information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		and therefore cannot adequately evaluate how to control contaminants through CM19. The BDCP does not present an analysis that evaluates the downstream covered species benefit of any contaminant source controls. As discussed in the DEIR/EIS (Table 5.D.2-1 "Land Use and Typically Associated Containment Issues" (DEIR/EIS page 5.D-2, Line 27), urban runoff is only one source of contaminants in the Delta and is an insignificant source for most of the identified contaminants of concern. However, other sources identified as significant have not been specifically included in the conservation measures. The reference documents refer to a number of other pollutants that are attributed to other sources and for which urban runoff is not known to be a significant contributor. For example, BDCP Table 3.4. 19-2 references dissolved oxygen depression as a water quality impact; however, urban runoff likely does not contribute significantly to the downstream oxygen impairments. Another example is that CM19 is the only conservation measure identified with the Conservation Hatcheries Facilities covered activity for facilities construction (BDCP page 5.2-14); the role that urban stormwater (Municipal Separate Storm Sewer Systems) programs that are part of CM19 would have in mitigating construction of these facilities is not clear in the Effects Analysis and the referenced Appendix (5H). Only considering one of many sources without making direct connections between activities and outcomes is an imbalanced and flawed approach, especially when the relative impact of the selected source is not known or may be insignificant when compared to others. A computational model assessment of the benefits of all source control measures for all sources should be performed to examine the effect of sources on the downstream covered species. This evaluation should be conducted before determining the scope of a conservation measure on contaminant reduction.	
1527	43	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: Contaminant sources, as a whole, and the entities that regulate and control their use and discharge, should be considered so that the most significant and cost-effective removal strategies are prioritized and addressed first. While we agree that continued reductions of discharged urban runoff contaminants is an important environmental effort (which is already underway), it is unrealistic to assume that reductions of one intermittent source would cost-effectively result in significant or even measurable downstream changes. For example, the Central Valley Drinking Water Policy Workgroup evaluated urban and non-urban source control for multiple drinking water constituents of concern. The drinking water constituents of concern were then quantitatively modeled in hypothetical future conditions to evaluate the potential impact on the municipal water supply beneficial use. Hypothetical urbanization of the Central Valley did not cause significant changes to downstream water quality. [footnote 22: Central Valley Drinking Water Policy Workgroup Synthesis Report. February 2012.]	Please see response to comment 1527-38 and response to comment 1527-40. For information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	44	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: The effectiveness of urban runoff Best Management Practices (BMPs) in terms of specific urban runoff quality changes and Delta impacts was not evaluated. For example, typical structural control benefits vary between contaminants, and while a particular BMP may	As described in Chapter 8, Water Quality, the General Construction Permit and the NPDES Stormwater General Permit guide the BMPs. Construction-related activities would be conducted in accordance with the environmental commitment to develop and implement BMPs for all activities that may result in discharge of soil, sediment, or other construction-related contaminants to surface water bodies, and obtain authorization for the construction activities under the State Water Board's NPDES Stormwater General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ/NPDES Permit No. CAS000002). The General Construction NPDES Permit requires the preparation and implementation of SWPPPs, which are the principal plans within the required PRDs that

DEIRS Ltr#	Cmt#	Comment	Response
		decrease urban runoff loading for one contaminant, it may increase the urban runoff loading for another contaminant. In the case of pesticides, a BMP designed to remove sediment bound pesticides might be completely ineffective for removing pesticides that remain in the dissolved phase. The BDCP should evaluate urban runoff BMPs for potential benefits to downstream Delta water quality. Without a sufficient understanding of the downstream benefits, widespread implementation of additional BMPs is not justified.	identify the proposed erosion control and pollution prevention BMPs that would be used to avoid and minimize construction-related erosion and contaminant discharges. The development of the SWPPPs, and applicability of other provisions of this General Construction Permit depends on the "risk" classification for the construction which is determined based on the potential for erosion to occur as well as the susceptibility of the receiving water to potential adverse effects of construction. While the determination of project risk level, and planning and development of the SWPPPs and BMPs to be implemented would be completed as a part of final design and contracting for the work, the responsibility for compliance with the provisions of the General Construction Permit necessitates that BMPs are applied to all disturbance activities. Please see comment response number 38. See response to letter 1527, comment 392, regarding how projects funded under CM19 would be evaluated. An applicant who proposed inappropriate controls would not be expected to receive funding.
1527	45	Conservation Measure [CM] 19 must be removed, because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed CM fails to meet a reasonable expectation of beneficial impacts for the following reasons: The BDCP does not adequately define the physical area of the expected urban land use changes and the spatial extent of CM 19 control strategy implementation. The BDCP refers only to restoration areas outside of the statutory Delta, as included in the Plan Area, and makes no references to the urban areas in the periphery outside of the statutory Delta. The control strategies listed in CM 19 are generally the type of best management practices already included in new urban development, but the CM does not acknowledge the legal and logistical challenges of large-scale changes to already-developed urban areas. The great preponderance of Municipal Separate Storm Sewer Systems drainage property is not municipally owned, and it is unclear how CM 19 intends to implement private land use changes.	There is little debate about the adverse effects of untreated stormwater on salmonid and other fishes. See references cited in the draft BDCP description of CM19. Thus there is little doubt that a reduction in stormwater pollutant loading to Delta waters would have beneficial outcomes for covered fish species. It is uncertain whether those outcomes would be reflected in a measurable population status change, as acknowledged in BDCP Chapter 5, the effects analysis. Since CM19 would be a purely voluntary program making funds available through a grant application process, commenter's assertion that public or private parties would or would not apply for such funding appears speculative. CM19 is not part of the new preferred alternative, Alternative 4A.
1527	46	Conservation Measure CM19 must be removed because it is not justified as an action that would reasonably improve the covered species populations in the Delta. The proposed conservation measure fails to meet a reasonable expectation of beneficial impacts for the following reason: There is no justification provided for the cost estimate for Conservation Measure 19 implementation, maintenance, or monitoring. The BDCP estimates approximately $50 million in CM19 stormwater treatment for all Municipal Separate Storm Sewer Systems programs over the 50 year plan. This level of funding significantly underestimates the scope of urban stormwater treatment that would be necessary to provide detectible downstream benefits. The two rounds of Proposition 84 funding totaled approximately $86 million in stormwater projects covering a much smaller area than the urban areas inside and upstream of the Delta. For a rough comparison, this funding covered several hundred acres of "stormwater treatment", and the urban area in the Delta and tributary watersheds are hundreds of thousands of acres. Moreover, no funding is proposed for the BDCP-required effectiveness monitoring, which also is costly. The BDCP states that CM19 funding would come from existing Proposition 84 or 1E bonds and future water bonds. Because CM19 is inadequately described, it is not possible to accurately evaluate the potential financial liability to local stormwater management agencies. Because the area of CM19 implementation is unclear, it is not possible to accurately estimate its cost. Based on the results of previous Proposition 84 low impact development	The 2013 BDCP in Chapter 8 assumes that $50 million of funding for CM19 (Urban Stormwater Treatment) would begin in Year 3 of Plan implementation and continue until Year 15. Therefore, funding was assumed to last for 12 years. This conservation measure was a voluntary measure proposed by DWR and Reclamation to improve water quality conditions in the Delta for the covered fish. This measure was not required to mitigate for impacts to the covered species, so funding is also not required for the full 50-year permit term. The expectation was that if the program was successful during the first 12 years, DWR and Reclamation would either voluntarily fund the program for a longer period, or find external funding sources to continue to the program. If implemented, an assessment would be conducted to fund the most cost-effective and biologically effective measures with willing recipients. CM19 does not impose any requirements because it is a grant program that requires voluntary applicants whose stormwater contributes to Delta waterways under NPDES MS4 stormwater permits. There is no mandate that entities must apply for and/or use funding provided as part of the program. Because of the voluntary nature of the program, the level of funding needed was highly uncertain. The funding level ($50 million) was determined based on the funding level provided by Proposition 84, not based on an assessment of need. Because of the voluntary nature of the program, such an assessment is not warranted. Because CM19 is voluntary and designed to support the conservation requirement of the NCCP (in the BDCP Alternative), funding for CM19 would come only from statewide or federal sources. The participating state and federal water contractors would not pay for CM19 as part of their mitigation obligations. CM19 is not included in the Proposed Action (Alternative 4A). If Alternative 4A is selected, CM19 would not

DEIRS Ltr#	Cmt#	Comment	Response
		(LID) project funding and known costs of retrofit of existing development, $50 million would only fund improvements for a small fraction of the total urban or municipal area. The Central Valley Drinking Water Policy Workgroup estimated that best management practices (BMP) "treatment" for the entire urban area within the Central Valley would cost $14.9 billion by 2030. [footnote 23: Geosyntec. Urban Runoff Source Control Evaluation/or Central Valley Drinking Water Policy. Prepared for California Urban Water Agencies. March 2011. http://www.waterboards.ca.gov/rwqcb5/water_issues/drinking_water_policy/dwp_urban_sources_study.pdf] The extreme discrepancy in cost and scope is significant and suggests that the proposed CM19 would be insufficient in scope and resources to demonstrate benefits to covered species. This large discrepancy in the uncertainty of benefits and cost to local agencies is indicative of the inadequate evaluation and insufficient justification for CM19. Additional costs imposed on local agencies by CM19 may have potentially significant impacts that should be evaluated as part of the BDCP effects analysis. For example, to the extent that the proposed CM19 places a significant fiscal burden on local agencies, those agencies may be forced to defer or forego other improvements or programs designed to improve water quality or protect the environment.	be implemented. For more information on funding please see Master Response 5.
1527	47	Comprehensive evaluation of contaminant sources and prioritization of contaminant based conservation (control) measures. Conservation Measure 19's focus on urban runoff is not justified. CM19 does not sufficiently address SMART, "specific, measurable, achievable, relevant, and time-bound," biological objectives as stated (BDCP page 3.3-3, lines 3-8). The BDCP provides no means to assess the effectiveness of meeting the goals for CM19. Impacts to covered species from contaminant sources should be sufficiently understood to result in cost effective benefits before implementing control measures. The evaluation of contaminant-based control measures in the BDCP and BDCP DEIR/EIS should include a robust evaluation through a stakeholder process with consideration to the following components: Technical evaluations of all reasonable contaminant control measures for all source categories, implementation methods, and their resulting water quality performance should be performed to characterize benefits and costs. A computational fate and transport model that incorporates the technical source evaluations should be performed to examine the effect of sources and source control on downstream water quality. The evaluation should consider downstream Delta locations of interest to the covered species and the potential water quality impacts of the examined control measures. An appropriate characterization of the impacts and uncertainty of impacts of all contaminant sources on the covered species should be performed. The BDCP chapter identifies pesticides as the contaminant of particular concern (page 3.4-.27, line 11) and bases its general characterization of urban runoff quality and pesticide impacts on pyrethroid pesticide research. The cited Weston research does not demonstrate that upstream urban runoff sources cause Delta covered species toxicity miles downstream from stormwater outfalls, but this research instead shows a decreasing toxicity signal from upstream sources. [footnote 24: Weston DPl, Lydy MJ. Urban and agricultural sources of pyrethroid insecticides to the Sacramento-San Joaquin Delta of California. Environ Sci Technol. 2010 Mar 1;44(5):1833-40. doi: 10.1021/es9035573.] Once the existing and	Please see response to comment 1527- 40 regarding water quality source control. See response to letter 1527, comment 392, regarding how projects funded under CM19 would be evaluated. Commenter misquotes CM19 text, citing one source (Weston et al. 2005) that mentions pesticides, while overlooking all of the other sources cited in the same sentence and addressing other contaminants. For clarity, CM19 states that the contaminants of concern are “sediment, oil and grease, metals, pesticides, and other toxic chemicals” (page 3.4-327, lines 6-7). If commenter wishes to apply for grant monies under CM19, they are welcome to include the results of detailed analysis described in this comment in their grant application. No such analysis has yet been done and its results would be interesting. However, it is not needed in order for CM19 to achieve reductions in stormwater pollutant discharge to Delta waters. Impacts to water quality and fish and aquatic resources for the proposed project are described in Chapter 8 and 11, respectively of the FEIR/EIS. For more information on funding please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		potential water quality conditions are known at the downstream Delta locations of interest, an evaluation of the specific benefits to the covered species should be performed. Following the complete evaluation of contaminant sources and control effects on the covered species, the control measures should be prioritized based on the known benefits and costs of the control measures. This approach would also generate alternative contaminant control measures that could be used to better perform specific evaluations in the BDCP DEIR/EIS. An evaluation of source controls and downstream benefits must be performed prior to including CM19 within the BDCP. The BDCP should designate funding to support stakeholder research, evaluations, and modeling so that any identified contaminant conservation measures can be appropriately evaluated.	
1527	48	Monitoring and Assessment Cost to Local Municipal Separate Storm Sewer Systems Agencies Local agency participation in planning Conservation Measures and other activities is vital to successful collaboration to restore and maintain the ecological health of the Delta. Further, implementation of the Conservation Measures to meet the Plan's goals will undoubtedly result in increased costs to local agencies to monitor and assess the effectiveness of the water quality improvement related activities. Local agencies' ability to generate funding to conduct these additional activities is subject to potentially significant limitations, including Proposition 218 and Proposition 26. For example, the operation, maintenance, and improvement of MS4s typically is funded by storm drainage rates, and under Proposition 218, a local agency can only increase storm drainage rates after (1) conducting a notice and protest process with a protest rate below 50%, and (2) obtaining voter approval for the increase from a majority of the ratepayers subject to the rate or from two-thirds of the electorate. Thus, the BDCP should include developing relationships among agencies, mobilizing the flow of technical information, and providing sufficient funding and resources to support water quality outcomes. The BDCP must commit to participation with, and funding for, the Delta Plan, Delta Science Plan, and the Delta Regional Monitoring Program (RMP) and provision of additional resources (e.g., funding, monitoring, modeling, technical evaluation tools, etc. for local agencies) as a required action (i.e., not an additional action) with a known schedule. Source evaluation and effectiveness monitoring requirements should also be specifically funded by the BDCP, because the assessments are specific to covered species benefits.	For information on conservation measures and on funding please see Master Response 5. See response to letter 1527, comment 392, regarding how projects funded under CM19 would be evaluated. Please also see response to comment 1527-46.
1527	49	INSUFFICIENT EVALUATION OF WATER QUALITY IMPACTS The BDCP evaluation of water quality impacts is insufficient and lacks clear methods and summaries of effects. In particular, there are significant insufficiencies for Conservation Measure 19; however, the evaluation of impacts for other conservation measures and the project as a whole are also insufficient. Several of the key inadequacies in the water quality assessment are described below and in the detailed comments provided in Attachment 3. The inadequacies include failure to consider detailed quantitative impacts for all constituents of concern, failure to consider impacts at locations on the Sacramento River near to and upstream of the proposed CM1 North Delta intakes, and failure to sufficiently evaluate temperature effects on the municipal drinking water (Municipal and Domestic	Please see response to comment 1527- 10. Cumulative water quality effects are addressed in Section 8.3.5.3 of Chapter 8, and concurrent effects of the project alternative components (facilities operations and the conservation measures/environmental commitments) on water quality are addressed in Section 8.3.5.2 of Chapter 8. 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. For more information regarding drinking water quality please see Chapter 8 of the FEIR/EIS and Master Response 14. For more information regarding project versus program level planning please see Master Response 2.

DEIRS Ltr#	Cmt#	Comment	Response
		Water Supply) supply beneficial use. In general, the presentation of the Chapter 5 effects is highly fragmented and is based on cross-references to appendices. This inefficient organization makes it difficult to interpret results. The BDCP is not consistent with Water Quality Recommendation 2 of the Delta Plan: covered actions should identify any specific impacts to water quality. Insufficient evaluations are provided in the BDCP and the BDCP DEIR/EIS on the potential significant impacts to water quality from the BDCP, especially impacts that may impact MUN beneficial use upstream of the proposed new intakes. The BDCP fails to assess water quality impacts on other beneficial uses (e.g., domestic and municipal drinking water) at areas just outside the Plan Area that will be impacted by CM1, CM2, and the related operational modifications to upstream reservoirs. In addition, the BDCP also fails to assess the impacts of operational modifications to upstream reservoirs, including water storage and release patterns. Water storage and release patterns have a great impact on the river hydrology and Delta outflow [footnote 25: BDCP, Chapter 2, 2.3.3.3.1, page 2-26, lines 18-20]. Furthermore, they can have a significant effect on the quality of the water discharged to the downstream rivers (such as the Lower American River and Lower Sacramento River), as has been identified by the BDCP [footnote 26: BDCP, Appendix 5C, 5C.0, page 5C.0-1, lines 4-11] and by Watershed Sanitary Surveys for those water bodies. Impacts to these downstream rivers are evident in the BDCP temperature model runs of the project and alternatives, and they are projected to be even more significant in the future due to climate change impacts. The BDCP alternatives could also affect clarity (turbidity), organic carbon, metals, nutrients, pathogens, and fate and transport impacts on other organics like pesticides [footnote 27: Sacramento River Watershed Sanitary Survey 2010 Update, Section 3]. The BDCP did not conduct an assessment of contaminant sources to prioritize where conservation measures would be best implemented. Finally, there was no apparent evaluation of cumulative impacts and synergistic effects of water quality constituents acting simultaneously. These inadequacies must be addressed before implementation of the BDCP. The BDCP water quality evaluation must be expanded to include areas outside of the Plan Area that will be impacted by CM1 and CM2, a broader scope of water quality constituents of interest, an assessment of all non-negligible sources of contamination, and an evaluation of cumulative and synergistic effects on water quality.	For information on adaptive management and operational criteria please see Master Response 33 and Master Response 28, respectively. For information on upstream reservoir effects please see Master Response 25. For information on climate change please see Master Response 19.
1527	50	Lack of Quantitative Water Quality Assessments There was a very limited water quality evaluation conducted as part of the BDCP. Temperature evaluations focused on species survival with no consideration of other beneficial uses, such as drinking water [disinfection by-product (DBP) formation in treated water] [footnote 28: BDCP, Attachment 5.C.C.] Salinity, dissolved oxygen, and turbidity [footnote 29: BDCP, Attachment 5.C.D.] were evaluated as well as other constituents related to survival of the impacted species, including mercury, selenium, ammonia; however these constituents were only evaluated in the Delta. [footnote 30: BDCP, Appendix 5D] The BDCP does not adequately evaluate the water quality impacts of the BDCP in the action area, [footnote 31: BDCP, Chapter 1, 1.4.l, page 1-21, lines 21-25] especially in the reach of the Sacramento River from Emmaton to Veterans Bridge. Computational watershed and surface water quality modeling for all constituents of concern should be performed to quantify potential changes. The modeling would also provide vital information to assist in establishing a monitoring program that can detect changes below impact or effect levels. An	All constituents, including salinity, dissolved oxygen, turbidity, mercury, selenium, and ammonia, were fully assessed throughout the action area, including areas Upstream of the Delta. Please see Master Response 14 and Chapter 8 of the Final EIR/EIS and related appendices. For information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		understanding of diversions, exports, and upstream sources and their relative contribution to downstream ecological issues is lacking. Modeling of sources and system dynamics, as was done in the Central Valley Drinking Water Policy, should be supported and further developed; this is essential information for planning any activities and evaluating impacts and controls of stressors. The BDCP must use more robust and widely accepted assessment tools to assess the potential impacts and evaluate performance of conservation measures through the permit term. These tools should be made available for use by all stakeholders.	
1527	51	Incomplete Analysis in Areas Adjacent to Conservation Measure 1 and CM2 The BDCP does not substantially evaluate the effects of CM1 and CM2 in the "near-field" action area where these projects are proposed, specifically the Lower Sacramento River between Fremont Weir and the northern boundary of the statutory Delta. The BDCP concludes that the evaluated starting operations (ESO) water operations will have few to no effects on contaminants in the Delta (page 5.D-53). However, the evaluation should consider the impact of removing higher quality Sacramento River water and the increased contribution from lower quality San Joaquin River water into the Delta, especially in the areas adjacent to the proposed north Delta intakes and diversions. The area-specific impacts of the increased influence of the San Joaquin River on the Delta and effects near to the proposed BDCP north Delta intakes on the Sacramento River should be considered. The BDCP must be revised to include a more detailed water quality assessment of the impacts of CM1 and CM2 on the Lower Sacramento River and the north Delta.	San Joaquin river influence is not predicted to reach the vicinity of the north Delta intakes, or north of these to the Fremont Weir. To the extent that San Joaquin River influence increases and Sacramento River influence decreases, the modeling presented in the water quality analysis assesses these impacts throughout the Delta. For more information on water quality please see Chapter 8 of the Final EIR/EIS and Master Response 14. For a discussion on conservation measures please see Master Response 5.
1527	52	Temperature Effects and Impacts on Drinking Water Supply Changes in water temperature due to the BDCP alone will be significant and were either not evaluated in key locations (the Lower Sacramento River downstream from the Feather and American Rivers) or were considered non-significant. In fact, even small changes in water temperature can impact municipal water supply beneficial uses by changing source water quality (such as increasing pathogen or algal growth), changing treated water quality (such as accelerating disinfection byproduct formation), and impacting treatment facilities (such as altering existing processes or potentially requiring additional processes). Temperature modeling on the Sacramento River was conducted using the Sacramento River Water Quality Model, but the modeling only evaluated locations between Shasta and Knights Landing/Hamilton City. [footnote 32: BDCP, Appendix 5C, 5C.4, page 5C.4-6, Table 5C.4-2] No temperature evaluation was presented on the Lower Sacramento River between Hamilton City and the Delta [footnote 33: BDCP, Appendix 5A, 5.A.2.5.2, page 5A.2-53 through 5A.2-55], which is included as part of the Study Area. [footnote 34: BDCP, Chapter 5, 5.2.1, page 5.2-1, lines 23-28] The temperature modeling on the Trinity, Feather, and American Rivers was conducted using the Recreation Temperature Model. [footnote 35: BDCP, Appendix 5C, 5C.4, page 5C.4-S, Table 5C.4-2] The lack of temperature modeling on the Lower Sacramento River is especially concerning, because Oroville Reservoir [footnote 36: BDCP, Chapter 5, 5.3.1, page 5.3-3, lines 15-17], which contributes to the Sacramento River via the Feather River in this stretch of the river, is the only reservoir that was determined to have significant impacts to flow and temperature in warm months. Projections of temperature increases on the Sacramento River in the vicinity of the City's Sacramento River Water Treatment Plant (WTP) are not available, as the BDCP did not	Please refer to Master Response 14 for a discussion of effects on drinking water and Chapter 8 of the Final EIR/EIS. Please see Master Response 30 for more information regarding modeling. Modeling is also discussed in Appendix 5A of the Final EIR/EIS. For information on upstream reservoir effects please see Master Response 25.

DEIRS Ltr#	Cmt#	Comment	Response
		conduct an evaluation downstream of the Feather River confluence. Due to the shallow depth of Folsom Reservoir, the most profound temperature impacts occur at this reservoir and the downstream Lower American River. [footnote 37: BDCP, Appendix 5A, 5.A.2.5.4, page 5.A.2-73, lines 21-23] Also, since Folsom Reservoir is much smaller than all the other upstream reservoirs and is located furthest south in the system, it is projected to have greater impacts from climate change than all the other reservoirs [footnote 38: BDCP, Ibid, lines 30-32]. Mean monthly water temperature increases on the Lower American River were calculated by the Recreation Temperature Model. The temperature at Watt Avenue in September will vary based on reservoir storage. For storage less than 300,000 acre-feet, the temperatures are generally greater than 70 degrees F for all future cases without the BDCP [Existing Biological Conditions (EBC) 2, EBC2_Early Long Term (ELT), EBC2_Late Long Term (LLT)]. [footnote 39: BDCP, Appendix 5A, 5A.2.5.4, page 5.A.2-76, Figure 5.A.2.5-24] Storage above 300,000 acre-feet ranges between 65 and 70 degrees F [footnote 40: BDCP, Appendix 5A, 5A.2.5.4, page 5.A.2-76, Figure 5.A.2.5-24]. Implementation of Evaluated Starting Operations (ESO), Low-outflow Scenario (LOS), and High-outflow Scenario (HOS) BDCP operational scenarios further increase these projected temperatures. These are significant increases from current levels and would impact drinking water treatability and treated water quality. The BDCP or DEIR/EIS must identify and evaluate the significance of the BDCP's temperature impacts on drinking water use.	
1527	53	Total Maximum Daily Load (TMDL) Compliance The BDCP does not specifically evaluate compliance with the Delta Methylmercury TMDL, which specifies load allocations for subareas of the Delta. Several of the proposed conservation measures (2, 3, 4, 5, 7, 8, 9, 10, and 11) are restoration or habitat enhancement activities that have the potential to increase methylmercury concentrations within or tributary to the TMDL area. The BDCP does not propose how these activities will affect the subarea load allocations or the allocations for wetlands in the TMDL. Other TMDLs, such as those for pesticides, are also not specifically addressed when activities may not support the TMDL goals. The BDCP effects analysis must make specific evaluations and clear statements of compliance or non- compliance with TMDLs, the associated wasteload allocations, and water quality regulations. The evaluation must also consider whether the BDCP will change the TMDL compliance timeline, including the expected date of compliance with the TMDL wasteload allocations for each subarea or reach.	Please refer to Master Response 14 for a description of the Methylmercury analysis. Also see Chapter 8 of the Final EIR/EIS. For information on permitting please see Master Response 45.
1527	54	Salinity, Clarity, and Other Constituents Salinity, clarity, and all other constituents were only evaluated in the Delta. [footnote 41: BDCP, Chapter 5, 5.3.2] The BDCP did not look at upstream impacts related to flow changes, especially those just outside of the Plan Area (such as the City of Sacramento's drinking water treatment plant intakes on the Lower Sacramento and Lower American Rivers), which may be impacted by propagation of intrusion/reverse flow caused by operation of Conservation Measure 1 and CM2 or from revised upstream reservoir operations to meet the BDCP biological goals and objectives. The BDCP should not be constrained by lack of assessment tools or data. The BDCP should	The impact analysis concluded there would be less than significant impacts to water quality in the upstream of Delta region. Although additional scientific input and data exists (such as from local agencies), the analysis incorporated and relied upon a wide range of scientific data as was determined applicable to the proposed alternatives. Please refer to the Methods of Analysis (Section 8.3.1) of Chapter 8, Water Quality, for a broader discussion of the methodology used to complete the analysis. Please also see Master Response 14 for more information on Water Quality. Regarding modeling please see Master Response 30. For information on upstream reservoir effects please see Master Response 25.

DEIRS Ltr#	Cmt#	Comment	Response
		comprehensively identify the known science shortcomings and propose a means to fill these data gaps. Subsequently, an evaluation can be performed to determine whether such unknowns can be feasibly resolved. It is insufficient to determine that there are no significant BDCP impacts simply because the tools and data do not exist. As the system management failed in the past to protect the covered species, the BDCP should identify the critical science uncertainties. Moreover, the discussion suggests that a wide base of science inputs was used, but the list of contributors does not include local agencies. [footnote 42: BDCP, page 5.l-l, lines 31-36] The BDCP describes the science that was considered, but it does not include science developed by local agencies. For example, the City participated in the Central Valley Drinking Water Policy Workgroup to evaluate the effects of expected long-term urban growth and hypothetical contaminant controls. The Workgroup used computational models to examine differences between alternatives on the entire Delta watershed area downstream from dams. The BDCP must conduct a wider evaluation of water quality impacts in the area upstream of the Delta, which could be impacted by operational changes to the system. The BDCP should develop appropriate evaluation tools, utilize a wide base of science inputs, identify critical science uncertainties and data needs, and provide a plan for obtaining additional necessary data.	
1527	55	Inadequate flow evaluation in the Sacramento River for Conservation Measures 1 and 2 The BDCP flow evaluations did not adequately present nor assess consideration of changes in flow in the Sacramento River near to and upstream of the Conservation Measure 1 north Delta intakes and the CM2 diversions at the Fremont and Sacramento Weirs. Within these areas, there are a number of municipal drinking water intakes and permitted discharges that would be affected by small changes in the volume and direction of flow or influence of tides. While climate change may also have significant effects, the CM1 and CM2 effects should also be evaluated without consideration of climate change to better isolate and understand the BDCP effects. The BDCP must evaluate the flow impacts on the Lower Sacramento River in the vicinity of Sacramento River Water Treatment Plant including increases in sea level and tidal amplitude combined with reduced Sacramento River flows from CM1 and CM2. This evaluation must include reverse flow, not just as a velocity, but also as a particle tracking assessment in order to see water movement and backwater effects.	Changes in surface water elevations along the Sacramento River at Freeport are presented in Tables C-29-1 through C-29-25 in Appendix 5A, Section C, Modeling Results, in the FEIR/EIS. Results of particle tracking related to water from the Freeport area are presented in Section 5.C.A.8 of Appendix 5.C, Flow, Passage, Salinity, and Turbidity, of the Draft BDCP (incorporated by reference in the EIR/EIS).
1527	56	Conservation Measure 1 - Reverse Flow Evaluation on the Sacramento River The BDCP states that the Sacramento River at Freeport is unidirectional; [footnote 43: BDCP, Appendix 5C, 5C.5.3.13.1.11, page 5C.5.3-378, lines 19-21] however, modeling and data review conducted by Sacramento County Water Agency as part of its planning for its Freeport diversion shows that this is not true at all times. [footnote 44: Volume 3: Modeling Technical Appendix to the Draft Environmental Impact Report/Environmental Impact Statement, Freeport Regional Water Project; Attachment A -Results of Preliminary Modeling of "Worst-Case" Reverse Flow Events. Flow Science. July 23, 2002.] The BDCP model runs to simulate Sacramento River flows at the North Delta Intake show that there can be negative velocities in the vicinity as well [footnote 45: BDCP, Attachment 5C.A,	The existing operation of the SWP and CVP pumps in the south Delta can contribute to reversals in river flows, potentially altering salmon migratory patterns. 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 may 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).

DEIRS Ltr#	Cmt#	Comment	Response
		5C.A.6.3.1, page 5C.A-217, lines 20-44]. This statement must be revised to indicate that this is generally, or most commonly, unidirectional but can have periods of reverse flow during low Sacramento River flows combined with high tidal events. In the future, if sea level rise is as significant as projected in the BDCP [footnote 46: BDCP, Chapter 5, 5.2.4, page 5.2-11, lines 11-12], then reverse flow and backwater effects may further propagate upstream. The BDCP did not evaluate outside of the Plan Area for reverse flow potential or backwater propagation. The only flow assessment was related to the Sacramento River flows near Georgiana Slough. [footnote 47: BDCP, Appendix 5C, 5C.4.3.2.6, pages 5C .4-90 through 5C.4-96] Also, the salinity evaluation was only conducted for Delta locations, [footnote 48: BDCP, Chapter 5, 4.3.2.4, page 5.3-25 , lines] and no particle-tracking was performed in the Sacramento River outside of the Delta. The Conservation Strategy listed in Chapter 3 of the BDCP includes an operational constraint to manage the north Delta iIntakes (CM1) to avoid increasing the magnitude, frequency, or duration of flow reversals in Georgiana Slough, [footnote 49: BDCP, Chapter 3, 3.4.1.4.1 , page 3.4-13, lines 22-23] but it makes no mention of those events on the main stem of the Sacramento River. The flow evaluations presented in Appendix 5C of the BDCP are focused on the reverse flow occurring only at Georgiana Slough, and they do not provide any effects analysis of that flow upstream of this point on the Sacramento River [footnote 50: BDCP, Appendix 5C, 5C.4.3.2.6, pages 5C.4-90 through 5C.4-96]. Upstream effects could include reverse and zero- flow scenarios, which could also result in upstream propagation of backwater effects, not just a net negative flow in the river. Attachment 5C.A of the BDCP presents additional information on the flow analysis and indicates that future conditions without the BDCP could result in a two foot elevation increase of the Sacramento River at Hood, but that the BDCP CMs (3-22) could almost eliminate that impact [footnote 51: BDCP, Attachment 5C.A, 5C.A.6.2, page 5C.A-216, Figure 5C.A-93]. One of the key uncertainties identified for CM1 to be addressed includes an investigation of the impacts of tidal effects and diversions on flows in the vicinity of the proposed intakes [footnote 52: BDCP, Chapter 3, 3.4.1.5.l, page 3.4-32, Table 3.4.1-5]. The combined impacts of sea level rise and tidal amplitude increase with reduced Sacramento River flows due to CMs 1 and 2 must be evaluated and this study should be expanded to see how far upstream on the Sacramento River these impacts are possible. Finally, when determining the X2 location and Delta outflow requirements, which support export diversions and upstream reservoir releases, the BDCP models used a median value for X2. [footnote 53: BDCP, Appendix 5A, 5A.2.6.2, page 5.A.2-91, lines 34-37] Based on Figure S.A.2.6-8, the model predicted that the median of two kilometers upstream could be half of the peak daily value. [footnote 54: BDCP, Appendix 5A, 5A.2.6.2, page 5.A.2-97] Since the location of X2 is used in the evaluations to determine the Delta outflow requirements, it seems that the model predictions may underestimate flow requirements since it was based on median location and not the maximum. [footnote 55: BDCP, Chapter 5, 5.3.2.4, page 5.3-26 , lines 5-11] This could result in either significant upstream propagation of tidal influences or increased reservoir releases to maintain the X2 location downstream. The BDCP must be evaluated using a more frequent occurrence of the X2 location, such as the 75th percentile or higher, to identify the range of potential operational requirements	The CALSIM II and DSM2 models include the tidal conditions along the Sacramento River at Freeport. The text referred to in this comment is included in the BDCP which is incorporated by reference in the EIR/EIS; and the text referring to "unidirectional" flow is incorrect in the BDCP is technically correct for the example given in that section (August 1–15, 2012), although it is acknowledged that flow reversals do occur in that area at other times of less flow. Focus on a flow assessment in the Sacramento River at Georgiana Slough was to evaluate the potential for conditions that could result in increased entry of juvenile salmonids into the low-survival interior Delta; effects from changes in flows in other locations were provided with tools such as the Delta Passage Model. Although the commenter is correct that the BDCP's Conservation Strategy, Chapter 3, 3.4.1.4.1 , page 3.4-13, lines 22-23 states that "Operations will be managed at all times to avoid increasing the magnitude, frequency, or duration of flow reversals in Georgiana Slough", which is incorrect, p. 3.4-17 (lines 14-16) states the correct locations: "…bypass flows are sufficient to prevent any increase in duration, magnitude, or frequency of reverse flows at two points of control: Sacramento River upstream of Sutter Slough and Sacramento River downstream of Georgiana Slough." For more information regarding modeling please see Appendix 5A of the FEIR/EIS and Master Response 30.

DEIRS Ltr#	Cmt#	Comment	Response
		for the CVP/SWP system.	
1527	57	Conservation Measure 2 - Flow Directional Evaluation for the Lower American River The BDCP states that Sacramento River flow into the Yolo Bypass at the Fremont Weir currently occurs when main stem flows exceed 55,000 cubic feet per second (cfs) in about 70 percent of years. [footnote 56: BDCP, Chapter 3, 3.4.2.2.1, page 3.4-43, lines 28-33] It further states that during major storm events additional water enters the Yolo Bypass from the Sacramento Weir, which includes flows from the Sacramento and American Rivers. [footnote 57: BDCP, Chapter 3, 3.4.2.2.1 , page 3.4-44, lines 11-13] The Sacramento Weir flows when Sacramento River flows at Freeport exceed 80,000 cfs (contributed by Sacramento and American Rivers). [footnote 58: BDCP, Attachment 5C.A, 5C.A.3.4.4, page C.A-30, Figure 5.C.A-68] Both of these weirs are located on the Sacramento River, upstream of the confluence with the American River. The BDCP documents that there is potential upstream movement of American River water toward these diversions during high flow events. The CALSIM model for the BDCP only examined volumes of water and did not assess direction or particle tracking in the reach around the Fremont and Sacramento Weirs near the confluence of the Sacramento and American Rivers. The passage evaluation of the Yolo Bypass flows did not evaluate the flow impacts to the main stem of the Sacramento River [footnote 59: BDCP, Appendix 5C , 5C.5.3.12, page 5C.5.3-341, lines 5-8]. The Sacramento River flows were evaluated between Keswick and Verona [footnote 60: BDCP, Appendix 5C, 5C.5.3.13.2, page 5C.5.3-382 through page 5C.5.3-397] and then at Fremont Weir [footnote 61: BDCP, Attachment 5C.A.3.4.3, page 5C.A-57]. There does not appear to be any evaluation of the flow conditions between Verona and Freeport. CM2 has not been fully developed, and a Yolo Bypass Fisheries Enhancement Plan (YBFEP) will be developed separately, along with a DEIR/EIS, by Year Four of the project [footnote 62: BDCP, Chapter 3, 3.4.2.3.2, page 3.4-48, lines 21-22]. This CM is expected to include a variety of phased options to improve Yolo Bypass, including 20 potential components. Three of those potential components may result in physical changes, which could change the flow diversions from the Sacramento River: components 8, 15, and 20 [footnote 63: BDCP, Chapter 3, 3.4.2.3.3, page 3.4-5l , lines 41-42 and page 3.4-52, lines 1-2, page 3.4-53, lines 1-22, and page 3.4-54, lines 19-27]. The BDCP needs to clarify if the model evaluations included all the potential parts of the YBFEP or if they only included component 15 (the gated notch). If all potential parts were not included, the evaluation should be revised to include the full scope of CM2. Component 15 (gated notch at Fremont Weir to increase flows to Yolo Bypass) will be achieved by lowering a portion of the Fremont Weir so that diversions from the Sacramento River will begin at lower flow rates (15,000 cfs). [footnote 64: BDCP, Attachment 5C.A, 5C.A.3.4.4, page 5C.A-58, lines 10-11] This will significantly increase the number of days per year that it will operate, from 25 to 81 days per year, and extend the season (September through June vs. December through April) [footnote 65: Ibid, page 5C.A-58, lines 43-44 through page 5C.A-59 , lines 1-2] [footnote 66: BDCP, Appendix 5C, 5C.5.3.2, page 5C.5.3-33, Table 5C.5.3-17]. The flow will also have a significant increase, particularly from December through Apri1 [footnote 67: Ibid, page 5C.5.3-35 , Table 5C.5.3-18]. This could have a significant impact on the quality of the City's Sacramento River Water Treatment Plant source water, since American River water could be siphoned upstream to the weirs and would not be available as a major component of the source water for the City's diversions	It should be noted that changes to Fremont Weir and habitat restoration actions in Yolo Bypass are only considered in a programmatic manner in this EIR/EIS, and subsequent engineering and environmental documentation would be completed prior to implementation. As described in Chapter 3 of the FEIR/EIS, the Yolo Bypass improvements are currently being defined under the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Implementation Plan being completed by DWR and Reclamation, and a separate flood management programs being completed by DWR and regional flood management agencies. As described in the Final EIR/EIS, diversions from the Sacramento River into the Yolo Bypass through an operable gate at Fremont Weir would occur under the No Action Alternative and the action alternatives. The same basic assumptions related to diversions into the Yolo Bypass at ELT were included in the Final EIR/EIS for the No Action Alternative and proposed project for the purpose of generalized hydrologic modeling analyses only for a programmatic analyses of the Yolo Bypass operations. These alternatives did not include any changes in Sacramento Weir or structural or habitat modifications within the Yolo Bypass. Separate engineering and environmental documentation will be completed for improvements to the Yolo Bypass, which would require separate permits and approvals by the USACE, USFWS, NMFS, and State Water Resources Control Board and would analyze changes in flows due to action alternatives to modify the Fremont Weir and/or Sacramento Weir. For more information regarding project versus program level planning please see Master Response 2. For more information regarding modeling please see Master Response 30 and Appendix 5A.

DEIRS Ltr#	Cmt#	Comment	Response
		downstream of the confluence of the American and Sacramento Rivers. Adequate modeling of the impact of CM1 and CM2 on the Sacramento and American River confluence area was not conducted. Additional flow directional evaluation must be conducted prior to completion of the BDCP planning.	
1527	58	INSUFFICIENT INCORPORATION OF CLIMATE CHANGE EFFECTS The BDCP predicts that the most significant climate change impacts will be related to changes in precipitation type and pattern, which would then in turn impact reservoir inflow and outflow as well as sea level rise and potential tidal amplitude. In addition to changes in hydrology, there are anticipated changes to human activities due to climate change. For example, an increase in air temperature is expected to increase the demand for power. Much of the upstream reservoir system is used for hydropower generation. There could be planned/expected changes to the hydropower facilities, which may additionally impact CVP/SWP reservoir inflow or operations for outflow. The hydropower changes were not accounted for in the modeling nor identified as an uncertainty for future evaluation through the Adaptive Management program. It is noted in the BDCP that Adaptive Management must be used to address the uncertainty associated with climate change projections and the ecological responses. [footnote 68: BDCP, Appendix 5A.2, 5.A.2.0, page 5A.2.0-3, lines 3-4] Yet, the only monitoring programs listed are those related to ecological responses, not the climate change variables like water quality, sea-level rise, and hydrology. [footnote 69: Ibid, lines 7-13] These impacts could change the inflow projections into project reservoirs, such as Folsom Reservoir [footnote 70: BDCP, Appendix 5A, 5.A.2.4.6, page 5.A.2-34, lines 4-6] since it is highly dominated by upstream reservoir releases that are related to power generation. The BDCP must reconsider other impacts caused by climate change that are not specifically included in the current evaluation to determine their significance and ability to affect the impacts analysis.	The BDCP and Draft EIR/EIS climate change analysis are not required to, nor would it be possible to analyze all potential future conditions that are possible as the climate changes. The 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 BDCP and Draft EIR/EIS use a central tendency projection that is considered a reasonably foreseeable future condition as described in Draft EIR/EIS Appendix 5A. The No Action Alternative and the action alternatives were compared the Existing Conditions which included a "0 percent reduction" Delta outflow condition. Also, during the preparation of the Draft 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 Alternative 1 under the five climate change scenarios. 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. The analysis incorporated a shift in the monthly precipitation pattern, as fully described in Chapter 29 (and appendices). The action alternatives were evaluated for the 2025 and 2060 timeframes (including separate CALSIM cases) to allow the likely changes in reservoir operations and Delta conditions that might result from these expected climate change effects; the project operations would shift accordingly. The energy effects from these calculated shifts in reservoir operations and delta exports were included in Chapter 21; the north Delta pumping and the export pumping for each alternative was reduced for the 2060 timeframe compared to the 2025 timeframe. This is an adequate evaluation of the likely effects of climate change on energy resources. For more information regarding upstream reservoir effects please see Master Response 25. For more information regarding adaptive management please see Master Response 33. Operational criteria are discussed in Master Response 28. More information on climate change can also be found in Master Response 19.
1527	59	The NEPA baseline analysis is required to account for changes in patterns, but should also include known/planned change in operations. The BDCP notes that reservoir operations are impacted by numerous factors, including flood control requirements from the US Army Corps of Engineer's Water Control Manuals for each reservoir [footnote 71: BDCP, Attachment 5.C.A, 5.C.A.3.4.1, page 5C.A-52, lines 39-44]. There will be a significant change on the Lower American River due to the US Anny Corps of Engineer's Joint Federal Project at Folsom Dam and changes in the Water Control Manual for Folsom Reservoir, expected to be completed in 2017 [footnote 72: American River Watershed Sanitary Survey 2013 Update, pages 4-108 - 4-109]. In addition, DWR is completing a System Reoperation Program in response to Senate Bill X2 1, which is reassessing reservoir operations and will include climate change adaptation and mitigation opportunities. [footnote 73: Ibid, pages 4-94 -4-95] The CALSIM II Modeling Assumptions listed in Table C.A-1 of Attachment 5C.A [footnote 74: BDCP Attachment 5C.A, page 5C.A-9, table row 7] include Operations Criteria,	The future conditions analysis necessarily uses existing operational characteristics. Operational changes that could potentially materialize as a result of the revision to the US Army Corps of Engineer's Water Control Manual for the Folsom Dam, any reoperation of SWP or CVP system components as a result of reoperations studies, or any other potential future change in operations are unknown at this time. Any attempt to predict or make assumptions about future operations would be highly speculative and would likely be no more accurate than the assumption that no change in operation will occur. Further, the use of historical/current operations characteristics in the modeling of future conditions allows for a more "apples-to-apples" comparison between historical and future performance of the system not convoluted with assumptions and speculations about future operational changes that may or may not occur. For more information about environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS. For more information regarding upstream reservoir effects please see Master Response 25. For information on climate change please see response to comment 1527-58. Regarding drought and California WaterFix

DEIRS Ltr#	Cmt#	Comment	Response
		which state that all future model evaluations were conducted using existing conditions. Given the status of both of the above projects, these should have been more accurately included in the future analyses. In addition, the BDCP's approach to climate change does not appear to anticipate or include any CVP/SWP operational changes likely to occur in response to the predicted climate change impacts, which is unrealistic and difficult to support, particularly in light of this year's experience in responding to ongoing drought conditions. The future conditions analyses must be revised to include known/planned efforts, as well as realistic projections of future operational changes, that will be implemented to adapt to or mitigate impacts from climate change.	please see Master Response 47.
1527	60	Appendix 5.C presents the CALSIM model results for projections of reservoir storage and flows in the downstream rivers. There was significant uncertainty associated with the CALSIM modeling related to reservoir operations, especially related to climate change predictions. These uncertainties need to be verified in the future by the BDCP to determine if the assumptions made in the effects analysis are valid or need to be revised, potentially impacting the results and subsequent operational conditions. The BDCP must develop an outline of the information needed to improve the climate change assumptions used in the modeling evaluations in the future as part of the Adaptive Management program.	Please see response to comment 1527-58.
1527	61	Technical errors and omissions: The BDCP inaccurately characterizes several issues as general knowledge. Characterization of urban runoff and its impacts on the Delta, the use of outdated orthophosphate (OP) pesticide data, and the ambiguity around the Plan Area are three issues that necessitate better clarity and justification. Characterization of Urban Runoff On page 3.4.327, the BDCP states that "Stormwater runoff is a leading source of water pollution in the United States and is a large contributor to toxic loads present in the Delta (Weston et al. 2005; Amweg et al. 2006; Werner et al. 2008). The Weston, et. al. and Amweg studies neither evaluate the pesticide loading to the Delta nor conclude that stormwater is a "leading source of water pollution". On page 3.4.327, it is stated that "Pyrethroid chemicals used as pesticides on suburban lawns are of particular concern, and are delivered to the Delta system by runoff." These Weston and Amweg studies evaluated upstream creek sediments, primarily outside of the Delta. Additional studies by the same researchers that evaluated instream water column concentrations did not find the same toxicity signal in the downstream Delta, which is consistent with the City's assessment through the Sacramento Stormwater Quality Partnership (SSQP) and Coordinated Monitoring Program (CMP). To date, the connection between Sacramento urban runoff pyrethroid concentrations and toxicity in the Delta has not been established. It is an unfounded technical leap to assume that urban runoff is a large contributor to toxic loads in the Delta. In addition, this also ignores the significant benefits of water quality management programs upstream of the Delta, as noted at the beginning of these comments. The 2004 Environmental Protection Agency (EPA) 305(b) (EPA 2009) report, which is likely	The BDCP correctly sites monitoring studies conducted by Weston et al. 2005, Amweg et al. 2006, and Werner et al. 2008, showing that stormwater runoff is a leading source of water pollution in the United States and within the Delta. Research cited was conducted across a range of waterbodies, including tributaries to the Delta and water bodies within the Cache Slough Complex. As such, no changes were made to the cited section. For information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. For information on permitting please see Master Response 45.

DEIRS Ltr#	Cmt#	Comment	Response
		the basis for the assertion that stormwater runoff is a leading source, though it is not specifically cited, is inappropriately used. That report does not show urban stormwater runoff as the leading source for any of the receiving water types. The assessments in this document are primarily based on 303(d) impairment listing causes, which can be biased by more frequent sample collection and targeted source sample collection. The BDCP must provide more specific (e.g., primary source, page number, etc.) references to the general statements regarding urban runoff as a water quality issue and provide a more balanced evaluation of the benefits of existing municipal stormwater management programs and their impacts on downstream covered species.	
1527	62	Historic Organophosphate (OP) Pesticide Data Not Relevant Data from 2006 and before are consistently used through the analysis and discussion to draw conclusions on pesticides. Page 5.D-48 the BDCP states: Surface water data indicate that concentrations are high/or both diazinon and chlorpyrifos in back sloughs and small upland drainages, and concentrations are lower in both the main channels and main inputs to the Delta. High concentrations of chlorpyrifos also are found in Delta island drains, but concentrations of diazinon remain low in the same drains (McClure et al. 2006). In the past, elevated concentrations of diazinon and chlorpyrifos have been detected in the Sacramento and San Joaquin Rivers and in the Delta during particularly wet springs and after winter storm events (McClure et al. 2006). This could suggest that increased flow with accompanying increased suspended loads will result in increased mobilization of both diazinon and chlorpyrifos. Alternatively, the elevated concentrations may be attributable to irrigation or stormwater runoff from late winter/early spring dormant season spraying of orchard crops. Characterization of OP pesticides based on data collected prior to 2005 should not be considered as representative of current conditions due to the fact that the urban use bans have been in effect since 2005. Numerous studies have characterized the lack of urban sources and absence of aquatic life effects from urban source OP pesticides. More recent data is readily available and should be referenced. The pesticide evaluation must be performed with a more recent data set that reflects current conditions. The BDCP and DEIR/EIS must use robust datasets and evaluations that are available from DPR, U.S. Geological Survey, local agencies, and regional partnerships.	The text cited by this comment is describing relative pesticide levels and sources beyond urban contributions. Therefore, no text change is needed in response to this comment. Please see comment response 1527-14. For an updated description of pesticides and herbicides occurring within the plan area please see Chapter 8 of the FEIR/EIS.
1527	63	Definition of the Plan Area and Inclusion of Conservation Measure Areas The scope of the Plan Area is ambiguous with regard to areas directly impacted by conservation measures, and it is unclear if the omission of most of the urban Sacramento area is intentional. On page 1-3, the BDCP Plan Area is defined as covering "the Sacramento-San Joaquin Delta, as defined by California Water Cod e Section 12220 (statutory Delta), as well as certain areas in which conservation measures will be implemented such as Suisun Marsh and the Yolo Bypass" (Sect ion 1.4.1, Geographic Scope of the BDCP and Figure 1-1). The referenced map does not identify significant upstream areas, but the use of "such as" implies "but not limited to." This statement and Figure 1-1 confine the Plan Area to the legal Delta area and some restoration areas and suggests that the urban areas used for stormwater treatment in CM19 and the Lower Sacramento River downstream of Fremont Weir (CM2) are not included in the Plan Area.	The project area for the actions evaluated in this FEIR/EIS is larger than the proposed project Plan Area because some of the effects of implementing the project would extend beyond the boundaries of this region. The project area consists of the following three geographic regions (boundaries can be seen in Figure 1-4). 1. Upstream of the Delta region. 2. Delta Region (referred to hereinafter as the Plan Area, and distinct from the larger Delta region considered for some areas, which consists generally of the statutory Delta, the Yolo Bypass north of the statutory Delta, and Suisun Marsh, as well as the Areas of Additional Analysis, which apply to several EIR/EIS alternatives). 3. SWP and CVP Export Service Areas.

DEIRS Ltr#	Cmt#	Comment	Response
		The description of the Plan Area should clearly define the actual areas or describe the implication to areas not within the Delta, but included in conservation measures or other BDCP actions. The BDCP must provide precise definitions of the Plan Area and justification for inclusion of the areas selected for the Plan Area.	Study areas were specifically defined for each resource (refer to Chapters 5–30 for definitions of the study area particular to each resource topic). Under CM19, the BDCP Implementation Office would oversee a program to provide funding grants to entities such as the Sacramento Stormwater Quality Partnership and/or counties and cities whose stormwater contributes to Delta waterways under NPDES Municipal Separate Storm Sewer System (MS4) stormwater permits, to implement actions from and in addition to their respective stormwater management plans. For more information regarding project versus program level planning please see Master Response 2.
1527	64	Other Errors and Omissions The City of Sacramento understands that a document the size and scope of the BDCP would have technical and editorial errors. Various errors and omissions are identified and need to be reviewed and addressed.	For information on the documents length and complexity please see Master Response 38.
1527	65	[ATT 1: Attachment 1. Table of City of Sacramento specific comments on Bay Delta Conservation Plan Environmental Impact Report and Environmental Impact Statement.]	Please see response to comments 1527-66 to 1527-363 regarding the comments contained in this attachment.
1527	66	[From ATT 1:] Section: Highlights Page 5 Type: WQ, WS Key Document Text: "The environmental review process has the following key objectives: Identify environmental impacts. Identify economic impacts. Evaluate reasonable alternatives that could avoid or minimize those impacts. Develop mitigation (ways to reduce or avoid environmental impacts). Provide information for public review and comment. Disclose to decision makers the project impacts, mitigation, and public comments." Comment: The BDCP asserts that the environmental review process has identified environmental and economic impacts; however, this is not provided in the EIR/EIS. Also, it states that it has evaluated reasonable alternatives to avoid or minimize those impacts or provided mitigation, which is also not provided in the EIR/EIS.	See EIR/EIS Chapter 16, Socioeconomics, for a description of the socioeconomics effects in the Delta region as a result of implementing the action alternatives. The study area for the socioeconomics analysis comprises Sacramento, San Joaquin, Yolo, Solano, and Contra Costa Counties, collectively referred to as the Delta region. The discussion of the Delta region describes the existing socioeconomic conditions of the statutory Delta and the surrounding Delta counties. Potential effects related to changes in SWP and CVP deliveries are also described for those hydrologic regions that receive water from the Delta: San Francisco Bay, Sacramento River, San Joaquin River, Central Coast, South Coast, Tulare Lake, South Lahontan, and Colorado River. See the other resource area chapters in the EIR/EIS for a description of environmental impacts as a result of implementing the action alternatives. See Chapter 3, Description of Alternatives, Section 3.2, Alternatives Development Process, for a description of the development and screening of the alternatives to be analyzed in the FEIR/EIS. For information on mitigation please see Master Response 22. For information on public comments please see Master Response 42. Regarding public outreach and transparency please see Master Response 40 and Master Response 41, respectively.
1527	67	[From ATT 1:] Section: Highlights Page: 5 Type: WQ, WS Key Document Text: "Provided a comprehensive review and analysis of the following: … The effects of Delta conveyance alternatives on water quality." Comment: The BDCP asserts that the water quality review was comprehensive. However, there are many errors and omissions in the data assessment and a complete focus on Delta	The water quality analysis fully assessed both upstream of the Delta and in the Delta. The RDEIR/SDEIS includes assessment of effects on San Francisco Bay. The water quality assessment addressed impacts in surface waters upstream of the Delta and concluded they would be less than significant; thus, no mitigation is required. For more information regarding impacts to water quality and its associated mitigation measures please see Chapter 8 of the FEIR/EIS and Master Response 14. Please see Master Response 30 for additional information regarding modeling.

DEIRS Ltr#	Cmt#	Comment	Response
		water quality for exporters, with very limited evaluation of upstream of Delta.	
1527	68	[From ATT 1:] Section: Highlights Page: 14 Type: WS Key Document Text: "The Draft EIR/EIS also addresses cumulative impacts on the environment that could result from implementation of a BDCP alternative in combination with other past, present, and reasonably foreseeable projects." Comment: The BDCP asserts that it has addressed cumulative impacts on the environment. Yet it has not included State and Federal plans for climate change adaptation and mitigation strategies in the future conditions assessments.	Both the state and federal governments are taking steps to curb GHG emissions (mitigation) and adapt to future changes. In terms of GHG mitigation, these plans need to be placed in the context of global GHG emissions. GHG reductions by the US or California will aide in reducing global GHG emissions but constitute a small portion of the emissions reductions that must be made. The project's climate change modeling does include an ensemble of model projections that contains multiple simulations of future scenarios in which globally the growth in GHG emissions tapers off and stabilizes by the end of the century (which is considered a fairly optimistic outcome). In terms of adaptation, it is not clear what concrete adaptation strategies the commenter is referring to that would meet the bar of reasonably foreseeable and that would have a substantive impact on the performance of the project alternatives. For more information regarding existing conditions, no action alternative, no project alternative, and cumulative impact conditions please see Appendix 3D of the FEIR/EIS. Please also see Master Response 1, Environmental Baselines.
1527	69	[From ATT 1:] Section: ES Page: 1 Line: 19-21 Type: WQ, CM19 Key Document Text: "The BDCP EIR/EIS has been prepared for the purpose of analyzing and disclosing the potential environmental effects and effects on the human environment associated with the alternatives and to identify potentially feasible ways to avoid, minimize, or mitigate adverse effects." Comment: While there are options available to manage stormwater (e.g., pollutant source control, runoff treatment, and maintenance of conveyance systems), some elements are beyond local agencies' control, including the timing, duration, and magnitude of rainfall or the air deposition of pollutants, such as mercury and some pesticides. Furthermore, some best management practices are effective on only some pollutants. Identifying a local management program as a mitigation for the BDCP provides the potential for inconsistent goals between the regulatory programs and those of CM19, which are focused on protection of the two smelt species of fish and green sturgeon by generally reducing stormwater loading.	Please see response to comment 1527-38 and response to comment 1527-40. For information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. For information on permitting please see Master Response 45. For information on BMPs please see response to comment 1527-44.
1527	70	[From ATT 1:] Section: ES Page: 1 Line: 26-27 Type: WQ, WS	For information on the project's purpose and need please see Master Response 3 and Chapter 2 of the Final EIR/EIS. For information on the beneficial use of water please see Master response 34.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "The conservation strategy is designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework." Comment: The EIR/EIS states that the conservation strategy is to restore and protect water quality. Water quality should be protected upstream of the proposed north Delta intake, including all beneficial uses.	
1527	71	[From ATT 1:] Section: ES Page: 1,3 Line: 19-21, 3-5 Type: WQ, CM19, WS Key Document Text: "The BDCP EIR/EIS has been prepared for the purpose of analyzing and disclosing the potential environmental effects and effects on the human environment associated with the alternatives and to identify potentially feasible ways to avoid, minimize, or mitigate adverse effects. Impacts on human, physical, and biological resource areas (see Section ES.8.1 for a list of resource areas/topics included in the evaluation) are presented in the document." Comment: The EIR/EIS has significant omissions on analysis and disclosure of the potential environmental effects and the effects on the human environment, and on identification of potentially feasible ways to avoid, minimize, or mitigate adverse effects.	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. The Draft EIR/EIS discloses over 600 separate impacts for 15 alternatives. All of the resource topics required under CEQA and NEPA are addressed. The RDEIR/SDEIS further presents an additional No Action Alternative and three action alternatives including the preferred alternative (Alternative 4A).
1527	72	[From ATT 1:] Section: ES.1.1 Page: 3 Line: 37-40 Type: LOCAL, CM19 Key Document Text: "For BDCP CM2-CM22, the EIR/EIS intends to present a program-level analysis consistent with the level of detail provided in the BDCP. Therefore, for CM2-CM22, the potential exists for additional CEQA/NEPA environmental review and associated permit actions to be required prior to implementing these conservation measures." Comment: The BDCP unfairly shifts environmental documentation costs to agencies performing conservation measures. As a program-level analysis, the BDCP should evaluate these costs and develop funding plans.	For information on funding please see Master Response 5. For information on project level versus program level analysis please see Master Response 2.
1527	73	[From ATT 1:] Section: ES.1.1 Page: 4	Please see response to comment 1527-38 and 1527-40.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 8-9 Type: LOCAL, CM19 Key Document Text: "The degree of specificity in a program EIR's impact analysis need only to be as detailed as the description of the elements in the program (State CEQA Guidelines Section 15146)." Comment: The EIR/EIS insufficiently assesses the impacts CM19. Examples of stormwater treatment are specific, but omit a number of current preferred means of managing stormwater. A detailed assessment would quantitatively evaluate the benefits and impacts of CM19 for a wide range of constituents and conditions.	
1527	74	[From ATT 1:] Section: ES.1.1 Page: 4 Line: 14-16, 17-24 Type: WQ, CM19, WS Key Document Text: "NEPA and the CEQ's regulations for implementing NEPA (40 CFR 1502.14) require federal agencies to prepare an EIS for major federal actions that could significantly affect the quality of the human environment. The EIS must rigorously explore and objectively evaluate (CEQ 40 questions) the environmental effects of an action, including a range of reasonable alternatives, and identify mitigation measures to minimize adverse effects for the range of impacts of the proposal when they propose to carry out, approve, or fund a project that may have a significant effect on the environment. To ensure environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed and the EIS and Record of Decision should indicate the likelihood that such measures will be adopted or enforced, and when they might be available (40 CFR 1502.16[h] and 1505.2)." Comment: The EIR/EIS has significant omissions for the proposed actions that could significantly affect the quality of the human environment, the environmental effects of an action (including a range of reasonable alternatives), and identification of mitigation measures to minimize adverse effects for the range of impacts. The EIR/EIS should have a clear discussion of the means of compliance with these statutory requirements, including an assessment of the likelihood of implementation of each conservation measure and how the project would be modified if a conservation measure is not implemented.	Section 1502.16(h) of the CEQ NEPA Regulations requires that the means to mitigate adverse environmental impacts be presented in impact discussions. The EIR/EIS presents a comprehensive discussion of the potential environmental effects of the project and alternatives and provides mitigation measures where effects are determined to be adverse. The Mitigation Monitoring and Reporting Program provided with this Final EIR/EIS includes more detail about how mitigation measures, environmental commitments, avoidance and minimization measures and conservation measures would be implemented. In addition, Reclamations Record of Decision will also include a discussion of whether all practicable means to avoid or minimize environmental harm from the alternatives selected have been adopted, and if not why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation (CEQA NEPA Regulations Section 1505.2). For more information regarding alternatives development please see Master Response 4. For more information on mitigation please see Master Response 22 and Appendix 3B of the Final EIR/EIS. For a discussion on funding please see Master Response 5.
1527	75	[From ATT 1:] Section: ES.2.2.2.1 Page: 10-11 Line: 37-41, 1-2	Please see response to comment 1527-61.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ, CM19 Key Document Text: "In addition, urban development, large upstream dams and storage reservoirs, water diversions, hydraulic mining, and the development of a managed network of navigation, flood control, and irrigation canals have all affected water flow patterns and altered fish and wildlife habitat availability. These changes, coupled with higher water exports, declines in water quality from urban and agricultural discharges, and changes in the dilution capacity from managed inflows and diversions, have led to a decline in ecological productivity in the Delta." Comment: This broad statement is misleading and not entirely correct. Urban runoff quality has improved since the implementation of municipal stormwater management programs as demonstrated by the Sacramento Stormwater Quality Partnership. Agricultural interests could likely make the same assertion based on improved control measures. Moreover, the Central Valley Drinking Water Policy modeling, as summarized in a variety of reports suggests that urban development actually has a net benefit on a number of water quality constituents. The statement should be revised to match conclusions from other groups, including the Contaminant Synthesis Report (http://www.swrcb.ca.gov/centralvalley/water_issues/delta_water _quality/comprehensive_monitoring_program/contaminant_synthe sis_report.pdf) and the Delta Science Program.	
1527	76	[From ATT 1:] Section: ES.2.2.2.2 Page: 11 Line: 15-16 Type: WQ, WS Key Document Text: "Regulations for the combined SWP and CVP Operations are intended to protect the beneficial uses of Delta water." Comment: The City of Sacramento's Sacramento River Water Treatment Plant intake is within legal definition of Delta. Potential water quality impacts (Municipal and Domestic Water Supply) to Sacramento River source water quality for the City's residents or mitigation measures were not specifically addressed in the BDCP or BDCP EIR/EIS.	Please see response to comment 1527-67.
1527	77	[From ATT 1:] Section: ES.2.2.2.2 Page: 11 Line: 19-24 Type: WQ,WS Key Document Text: "The water rights of the SWP and CVP are conditioned by the State	Water quality impacts of the project are fully considered in Chapter 8 of the FEIR/EIS. Also see Master Response 14. For information on water rights please see Master Response 32. For information on the beneficial use of water please see Master Response 34. Operational criteria and adaptive management are discussed in Master Response 28 and Master Response 33, respectively.

DEIRS Ltr#	Cmt#	Comment	Response
		Water Board to protect the beneficial uses of water within the Delta under each respective project's water rights. In addition, under the COA, SWP- and CVP-coordinated reservoir releases and Delta exports enable each water project to achieve benefit from their water supplies and to operate in a manner protective of beneficial uses. It is the responsibility of the SWP and CVP to meet these beneficial uses regardless of hydrologic conditions." Comment: Hydrologic and reservoir conditions are intrinsically related to water quality conditions. Water quality impacts from the proposed diversion and related reservoir operation must be carefully considered so that health risk and cost are not placed on local water agencies.	
1527	78	[From ATT 1:] Section: ES.3.1 Page: 12-13 Line: 35-36, 1 Type: WQ, WS Key Document Text: "For the purposes of the EIR/EIS, the Delta Region--or Plan Area and Areas of Additional Analysis (Figure ES-2)--encompasses the statutory Delta, as well as the areas where Conservation Measure CM1-CM22 would be implemented outside the statutory Delta." Comment: The Delta Region includes the Plan Area (statutory Delta) and areas where CM1-22 would be implemented. CM2 includes diversions at Fremont Weir, and yet the reach of the Sacramento River between Fremont Weir and the northern boundary of the Delta are not included. This decision seems inconsistent with the definition of the Delta Region. The reach of the Sacramento River between Fremont Weir and the northern boundary of the Delta should be included in the analysis.	Please see response to comment 1527-67. For more information on the project area please see Chapter 1 of the Final EIR/EIS.
1527	79	[From ATT 1:] Section: ES.4.4 Page: 17 Line: 20 Type: CM19 Key Document Text: "Provide, where feasible, quantitative targets and timeframes for achieving the desired outcomes" Comment: There are insufficient quantitative targets in CM19. The grant program should provide funding where there is most benefit for reducing contaminant related impacts to the specific species.	CM19 itself provides quantitative standards for performance, based on existing regulation. Please see response to comment 1527-38, 40, and 44 for more information on CM19. Please see comment response number 67 regarding funding.
1527	80	[From ATT 1:]	Please see response to comment 1527-38 and response to comment 1527-40 regarding CM 19. CM19 itself provides quantitative standards for performance, based on existing regulation.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: ES.4.4 Page: 17 Line: 23-25 Type: CM19 Key Document Text: "Provide metrics for the monitoring program by which to evaluate the effectiveness of the Conservation Measures and, if necessary, provide a basis to adjust the Conservation Measures to achieve the desired outcomes." Comment: There are insufficient metrics for effectiveness and basis for adjustments in CM19.	
1527	81	[From ATT 1:] Section: ES.4.5 Page: 18 Line: 26-28 Type: WQ, CM19 Key Document Text: "Species. Species-specific conservation measures are designed to reduce the adverse effects of various stressors on one or more covered species. These include measures addressing toxic contaminants, nonnative predators, illegal harvest, and genetic threats." Comment: CM19 should be more specific in addressing the sources of the contaminants impacting the specific covered species affected by urban runoff. It is not appropriate to include CM19 to generally see if reducing stormwater pollutant loading will help the two species or their habitats. A detailed assessment of the benefits of control measures to covered species from a range of source types should be performed before implementation of any contaminant-based control measure. This evaluation should prioritize actions and consider the cost of the control measure compared to the established benefit to the covered species.	Please see response to comment 1527-38 and response to comment 1527-40 regarding CM 19.
1527	82	[From ATT 1:] Section: ES.4.5 Page: 18 Line: 34-36 Type: WQ, CM19 Key Document Text: "The remaining Conservation Measures, CM12-CM21, are intended to reduce the adverse effects of various stressors, including but not limited to, environmental contaminants, nonnative predators, and illegal harvest on covered species."	Please see comment response number 12 and 40. Analysis of the effects of the CM's referenced in this comment has been evaluated at a programmatic level in the Draft EIR/EIS to reflect their level of development in the Plan. Please refer also to Master Response 2, which addresses the project and program level analysis presented in the Draft EIR/EIS. For more information on conservation measures please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: The evaluations provided in the BDCP and EIR/EIS are insufficient. Environmental contaminant reduction should look at all sources and prioritize efforts and resources where there will be most benefit.	
1527	83	[From ATT 1:] Section: ES.5 Page: 21 Line: 5-6 Type: SCOPE, WQ, WS Key Document Text: "CEQA and NEPA require that an EIR and EIS include a detailed analysis of a reasonable range of alternatives to a proposed project." Comment: An insufficient range of alternatives is provided. There are other alternatives besides just multiple alignments of conveyance that may have less impact on the Delta, such as regional independence, offline storage, and a wider portfolio of tools. This wider range of alternatives should be evaluated.	Please see response to comment 1527-5.
1527	84	[From ATT 1:] Section: ES.5 Page: 21 Line: 6-11 Type: WQ, WS Key Document Text: "CEQA requires that an EIR evaluate alternatives to the proposed project that are potentially feasible and would achieve most of the basic project objectives while avoiding or substantially reducing project impacts. NEPA requires that a reasonable range of alternatives that meet the purpose and need of the proposed federal action be analyzed in an EIS at an equivalent level of detail to that of the proposed action. Under NEPA, a range of reasonable alternatives is analyzed to define the issues and provide a clear basis for choice among the options." Comment: There has been an insufficient review of water quality impacts upstream of North diversion. No mitigation is provided for such potential impacts to beneficial uses.	For information on the project's purpose and need please see Master Response 3 and Chapter 2 of the Final EIR/EIS. Regarding the development of alternatives please see Master Response 4 and response to comment 1527-5. For a discussion on project level versus program level analysis please see Master Response 2. Regarding water quality please see response to comment 1527-67. Water quality is also discussed in Master Response 14 and Chapter 8 of the Final EIR/EIS. Master Response 25 discusses upstream reservoir effects. Mitigation is discussed in Master Response 22.
1527	85	[From ATT 1:] Section: ES.5 Page: 21 Line: 18-20 Type: SCOPE, WQ, WS	Please see response to comment 1527-5.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "Alternative 4 was refined and improved to identify a form of the proposed BDCP (Proposed Project) that is grounded in solid science and reaches what DWR considers to be an optimal balance between ecological and water supply objectives." Comment: An insufficient range of alternatives is provided. The Alternate Portfolio should be evaluated as it would have less environmental and human impacts.	
1527	86	[From ATT 1:] Section: ES.5 Page: 21 Line: 20-27 Type: SCOPE, WQ, WS Key Document Text: "Notably, identification of Alternative 4 as the preferred CEQA alternative is tentative, and is subject to change as DWR and its partner lead and responsible agencies receive and consider public and agency input on the EIR/EIS. It is therefore possible that the final version of the BDCP may differ from Alternative 4 as described herein, either because Alternative 4 itself was further refined, because another alternative was determined to be preferable, or because the Lead Agencies, in response to input, developed a new alternative with some features from some existing alternatives and other features from other existing alternatives." Comment: A wider range of alternatives should be developed that are consistent with the California Water Plan, ensure reliable water supply for all of California, and protect all beneficial uses.	Please see response to comment 1527-5.
1527	87	[From ATT 1:] Section: ES.5.2.2 Page: 32 Line: 30-38 Type: WQ, WS Key Document Text: "While meeting biological goals and objectives of the Plan, the applicable Delta operational rules evaluated for BDCP alternatives are intended to address how much of the Delta inflow can be exported at the south Delta CVP and SWP pumping plants; how much of the Delta inflow can be exported at the BDCP north Delta intakes; and how much of the inflow is needed for Delta outflow. Addressing these three factors requires determining the most limiting (lowest) objective for south Delta exports, the most limiting (lowest) objective for north Delta intakes, and the most limiting (highest) objective for outflow. Because each alternative has a slightly different set of applicable rules with varying north Delta intake capacities, each BDCP alternative would have different Delta operations in many months." Comment: Within the determination of exports and outflows, there does not appear to be	Regarding alternatives development please see response to comment 1527-5. The allocation methodologies do consider storage in the SWP and CVP reservoirs, as calculated in the CALSIM II model runs. See Appendix 5A, Section B, CALSIM II and DSM2 Model Simulations and Assumptions, in the FEIR/EIS. The proposed project alternatives were developed to only affect SWP and CVP water contract deliveries and improve Delta ecosystem conditions. For more information regarding upstream reservoir effects please see Master Response 25. For information on water rights please see Master Response 32. Are of origin is discussed in Master Response 26. For information on operational criteria and adaptive management please see Master Response 28 and 33, respectively.

DEIRS Ltr#	Cmt#	Comment	Response
		any consideration for the volume of storage remaining in the upstream reservoirs. Since the volume of storage is critical to water supply and water quality in the upstream of the Delta area, as well as the ability to meet future outflows and exports, it seems that this factor should be considered in the rule and operational scenario development. Since all the model runs used reservoir storage as a parameter based on federal and state requirements (Section 5.3.1.1), it should be possible to evaluate the impacts.	
1527	88	[From ATT 1:] Section: ES.5.9.1.5 Page: 53 Line: 25-29 Type: WS Key Document Text: "Fremont Weir overtops when the combined flow of Sutter Bypass and the Sacramento and Feather Rivers surpasses 55,000 cubic feet second as measured at Verona; flows through an operable gate could begin when Sacramento River flow at Verona is more than 23,100 cfs. The additional flows to the Yolo Bypass would be limited to 6,000 cfs and would reduce the Sacramento River flow at Freeport by this same amount." Comment: This summary of the Fremont Weir operations is inconsistent with the summary provided in the BDCP Document, Chapter 3 (3.6.4.2 on page 3-187), and some of the modeling appendices. This data should be reviewed and revised as appropriate in the various documents.	The Executive Summary has been updated since the DEIR/S to match the Biological Assessment. For information on operational criteria please see Master Response 28. For information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	89	[From ATT 1:] Section: ES.8.3.2 Page: 48 Line: 35-38 Type: CM19 Key Document Text: "In general, mitigation related to restoration and other activities in CM3-CM22 will be the responsibility of a larger group of agencies as set forth in relevant portions of the BDCP. Responsibilities for particular measures will be described in the Mitigation Monitoring and Reporting Program to be issued in connection with the Final EIR/EIS." Comment: The mitigation, monitoring, and reporting details are critical pieces that local agencies should have a chance to review. The cost of these activities is potentially significant. The BDCP proponents and the State should fund these efforts, not local agencies. The benefit of these studies is to evaluate the success with regard to covered species, which is a direct benefit to the BDCP proponents and the State and is not a direct benefit to the local agency ratepayers.	Please see response to comment 1527-74. For a discussion on funding please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
1527	90	[From ATT 1:] Section: 1.5.1 Page: 1-12 Type: SCOPE Key Document Text: "1.5.1 Upstream of the Delta Region The Upstream of the Delta region is shown in Figures 1-5 through 1-8. This region comprises those areas in the SWP and CVP system upstream of the Delta. Operational changes at SWP facilities in this area may be necessary to move fresh water through and/or around the Delta consistent with operations of CM1." Comment: The project area does not consider the land area tributary to the Plan Area or Project Area affected by the BDCP. In particular, the communities where CM19 is performed and upstream watersheds need to be addressed.	Please see response to comment 1527-63 and response to comment 1527-67.
1527	91	[From ATT 1:] Section: 1.5.1 Page: 1-12 Line: 2-5 Type: WQ, WS Key Document Text: "The Upstream of the Delta region is shown in Figures 1-5 through 1-8. This region comprises those areas in the SWP and CVP system upstream of the Delta. Operational changes at SWP facilities in this area may be necessary to move fresh water through and/or around the Delta consistent with operations of CM1." Comment: This statement indicates that upstream reservoir operations are expected to be changed under the BDCP. Subsequent downstream river flows and water quality changes need to be assessed in the reaches between the upstream reservoirs and the Delta.	Please see response to comment 1527-63 and response to comment 1527-67. For information on upstream reservoir effects please see Master Response 25. For information on operational criteria please see Master Response 28. Regarding water quality, please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	92	[From ATT 1:] Section: 1.5.1 Page: Figure 1-7 Type: SCOPE Key Document Text: "Project Area definition" Comment: The project area does not consider the land area tributary to the Plan Area or Project Area affected by the BDCP Conservation Measures. The Plan Area and Study area are not sufficiently described in the EIR/EIS. Areas should be defined with specific boundaries.	Please see response to comment 1527-63.

DEIRS Ltr#	Cmt#	Comment	Response
1527	93	[From ATT 1:] Section: 1.6 Page: 1-13 Line: 3-9 Type: WQ, WS Key Document Text: "In assessing environmental effects associated with CM1, the EIR/EIS also refers to environmental commitments and other BDCP onservation Measures that are intended to reduce, avoid, or minimize these effects. Additional site-specific environmental compliance documents, however, will likely be required for implementation of some conservation measures (including, for example, wetland permitting actions by the Corps of Engineers). Additional information and/or documentation may be necessary during consideration of related permit application and decision- making processes." Comment: This statement indicates that the overall assessment of CM1 was completed assuming implementation of the other environmental commitments and CMs. It is unclear how CM1 can get project- level approval without the guaranteed implementation of the supporting Conservation Measures. If the other commitments and CMs are not implemented, the assessment environmental effects of CM1 will not be accurate and would need to be re-evaluated.	For a discussion on conversation measures please see Master Response 5. Mitigation and environmental commitments are discussed in Master Response 22 and Appendix 3B of the Final EIR/EIS. For more information regarding project and program level analysis please see Master Response 2. For information on permitting please see Master Response 45.
1527	94	[From ATT 1:] Section: 1.7 Page: 1-28 Line: 1-14 Type: WQ, WS Key Document Text: "Water Supply, Surface Water Resources, and Water Quality. Water supply and surface water resources—key drivers for development of the BDCP—remain controversial issues for a wide array of stakeholders (e.g., agricultural interests, hunting and fishing interests, water agencies, local jurisdictions) because of the changes in water operations, surface water flow conditions, and diversions that could occur with changes to the SWP and CVP systems. Water quality is an issue of concern because of uncertainties regarding activities associated with conveyance facilities and their operations and restored habitat that could lead to discharge of sediment, possible changes in salinity patterns, and water quality changes that could result from modifications to existing flow regimes." Comment: The BDCP states that water quality is an uncertain impact of great significance that was documented as a concern in the public scoping. Yet, the water quality evaluation was very limited geographically as well as limited in relation to constituents of interest for key beneficial uses just outside of the Delta boundary.	Please see response to comment 1527-67. Also see Master Response 14 and Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
1527	95	[From ATT 1:] Section: 3.1 Page: 3-2 Line: 37-46 Type: SCOPE Key Document Text: "With respect to particular components of the BDCP that must be implemented separately through individual permit actions or other discretionary decisions, the EIR/EIS intends to provide a mixture of project- and program-level components. Specifically, the EIR/EIS is intended to provide project-level assessment of the potential effects of modified and/or new conveyance facilities (CM1), including project-specific mitigation. All other Conservation Measures are presented and analyzed at a program level, with the expectation that more detailed, site-specific analysis and associated site-specific environmental documents will be prepared later, prior to implementation of specific projects, as the BDCP (or an alternative) is implemented over time, as appropriate. (See Chapter 4, Approach to the Environmental Analysis, for more detail on agency decision making related to project- and program-level approvals using this EIR/EIS.)" Comment: There are a number of actions within the BDCP that should be considered on a project level approach, such as any specific diversion or additional intake. The EIR/EIS assessment could better evaluate these details since they are known in much detail. Sufficient detail is needed for a sufficient evaluation of interactions and cumulative impacts.	For more information regarding project and program level analysis please see Master Response 2.
1527	96	[From ATT 1:] Section: 3.2 Page: 3-4, 3-5 Line: 31-2 Type: SCOPE Key Document Text: "Under these principles, the EIR needs to describe and evaluate only those alternatives necessary to permit a reasonable choice and "to foster meaningful public participation and informed decision making" (State CEQA Guidelines Section 15126.6[f]). Consideration of alternatives focuses on those that can either eliminate significant adverse environmental impacts or substantially reduce them; alternatives considered in this context may include those that are more costly and those that could impede to some degree the attainment of the project objectives (Section 15126.6[b]). CEQA does not require the alternatives to be evaluated at the same level of detail as the proposed project." Comment: A wider range of alternatives would be more meaningful, especially broader options such as offline storage and regionally independent supplies.	Please see response to comment 1527-5.
1527	97	[From ATT 1:]	The 2013 BDCP Public Draft, Chapter 4, clearly states that all conservation measures are covered activities. Any future changes in covered activities that entail adding new activities that have incidental take potential, or that entail an increase in incidental take potential beyond that authorized by permits issued for BDCP,

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 3.3.1 Page: 3-17 Line: Table 3-2 Type: SCOPE Key Document Text: "BDCP Covered Activities" Comment: Please clarify why some conservation measures are not considered covered actions or activities and if there are future implications if a particular conservation measure was found to have an impact on covered species.	would require amendment of the BDCP. See BDCP Section 6.5 Changes to the Plan or Permits for further details on that process. As stated in EIR/EIS Section 3.3.1, "the covered activities (Table 3-2) consist of activities in the Plan Area associated with the conveyance and export of water supplies from the SWP's Delta facilities and with implementation of the BDCP conservation strategy," which includes all conservation measures. Please see Master Response 5 for additional detail on the BDCP and the alternatives involving an HCP component.
1527	98	[From ATT 1:] Section: 3.3.1 Page: 3-18 Line: 8-12 Type: SCOPE Key Document Text: "Consequently, the project area encompasses a larger geographic area than the Plan Area, comprising three defined regions: the Upstream of the Delta Region, the Delta Region (as defined in Chapter 1, Section 1.5, BDCP EIR/EIS Project Area—generally referred to as the Plan Area), and the SWP and CVP Export Service Areas (Figure 1-4)." Comment: The definition and justification for the Plan Area are insufficient. Some areas affected by the BDCP directly or indirectly through conservation measures are not included.	AS already stated, the project area for the actions evaluated in this FEIR/EIS is larger than the proposed project Plan Area because some of the effects of implementing the project would extend beyond the boundaries of this region. The project area consists of the following three geographic regions (boundaries can be seen in Figure 1-4). 1. Upstream of the Delta region. 2. Delta Region (referred to hereinafter as the Plan Area, and distinct from the larger Delta region considered for some areas, which consists generally of the statutory Delta, the Yolo Bypass north of the statutory Delta, and Suisun Marsh, as well as the Areas of Additional Analysis, which apply to several EIR/EIS alternatives). 3. SWP and CVP Export Service Areas. Study areas were specifically defined for each resource (refer to Chapters 5–30 for definitions of the study area particular to each resource topic).
1527	99	[From ATT 1:] Section: 3.3.2 Page: 3-18 Line: 38-40 Type: SCOPE Key Document Text: "The covered activities outlined in Table 3-2 are included in the conservation measures (Table 3-3) and are discussed in detail in Section 3.6, Components of the Alternatives: Details." Comment: There is an unclear correspondence between covered actions and the conservation measures; however, it is implied that all conservation measures are covered actions.	Please see response to comment 1527-97.
1527	100	[From ATT 1:]	Please see response to comment 1527-97.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 3.4.3 Page: 3-39 Line: 29-31 Type: SCOPE Key Document Text: "BDCP will implement measures intended to address the effects of other stressors (CM12-CM21; Tables 3-3 and 3-4) under all alternatives except the No Action Alternative. Section 3.6.3 provides a detailed description of these components." Comment: It is not clear if these Conservation Measures are considered "covered actions". Urban stormwater treatment, in particular, is not in the referenced table (Table 2 3-2).	
1527	101	[From ATT 1:] Section: 3.5.9.3 Page: 3-68 Line: 38-41 Type: CM19, SCOPE Key Document Text: "Urban Stormwater Treatment (CM19) - Under this conservation measure, the BDCP Implementation Office would provide a mechanism, through funding, for implementing stormwater treatment measures in urban areas that would result in decreased discharge of contaminants to the Delta." Comment: The proposed action does not specify the area nor location where it would take place. It is not possible to adequately evaluate the benefit, impacts, or costs of the alternative without a clear specification of the intended scope of the action.	Please see responses to comments 1527- 38, 40, 46, and 63.
1527	102	[From ATT 1:] Section: 3.6.3.8 Page: 3-162 Line: 30-31 Type: CM19 Key Document Text: "Reducing pyrethroids and other chemicals from urban areas and stormwater, which would improve the health of covered fish species." Comment: It is not an established fact that urban runoff pyrethroids have effects outside of localized locations near to outfalls. In fact, the research cited in the BDCP documents by Weston and Lydy confirmed these localized effects. The benefits of "reducing the amount of pollution in stormwater runoff entering Delta waterways" need to be better understood before implementation of CM19 or any contaminant reduction strategy.	Please see response to comment 1527-38.

DEIRS Ltr#	Cmt#	Comment	Response
1527	103	[From ATT 1:] Section: 3.6.3.8 Page: 3-162 Line: 40-41 Type: CM19 Key Document Text: "This conservation measure would be in effect over the 50-year BDCP period." Comment: The BDCP does not clearly state that CM19 would be in effect for the 50-year period, but it provides funding for only the first ten years. The EIR/EIS should clearly state if the benefits claimed for the EIR/EIS are based on this initial 10 years of funding or continued efforts for the entire 50 years, and who would then fund these continued efforts. Before implementation of any contaminant control measures, a detailed assessment on control of all types of sources and their benefit to the covered species should be performed. This evaluation should consider costs relative to benefits and prioritize any control measure recommendations.	Please see responses to comments 1527- 38 and 46.
1527	104	[From ATT 1:] Section: 3.6.3.8 Page: 3-163 Line: 29-34 Type: CM19 Key Document Text: "Implementation of this conservation measure will be informed through compliance and effectiveness monitoring and adaptive management, as described in Chapter 3, Conservation Strategy, (Section 3.4.19) of the BDCP. The BDCP Implementation Office, in coordination with the fish and wildlife agencies, may discontinue effectiveness monitoring for this measure in future years if monitoring results indicate a strong correlation between reduction in stormwater pollution loads entering the Delta and responses of covered fish species." Comment: It is insufficient to assess effectiveness with correlations when so many other factors contribute to covered species health. Better assessment tools are needed to be developed and agreed upon before developing the conservation measures.	Please see response to comment 1527-38.
1527	105	[From ATT 1:] Section: 3B.1.13 Page: 3B-28 Line: 23-27	Component projects under CM2 will require multiple permits and related authorizations before they may be constructed. These will include, for instance, NEPA and CEQA processes and permit applications to the USACE and the State Water Board. These processes will afford the City ample opportunity to express their concerns with potential impacts from each of the CM2 component projects. For information on permitting please see Master Response 45.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ, WS Key Document Text: "In the event of an accidental spill, personnel will identify and secure the source of the discharge and contain the discharge with sorbents, sandbags, or other material from spill kits and will contact appropriate regulatory authorities (e.g., National Response Center will be contacted if the spill threatens navigable waters of the United States or adjoining shorelines, as well as other appropriate response personnel)." Comment: Due to the proximity of the Fremont Weir to the Sacramento River Water Treatment Plant and the limited amount of response time, the City of Sacramento would like to request direct notification of any spills or impacts to source water quality from construction activities related to CM2. Contact information can be provided upon request.	
1527	106	[From ATT 1:] Section: 3B.1.20 Page: 3B-40 Line: 6-7 Type: WQ, WS Key Document Text: "Provide Notification of Maintenance Activities in Waterways" Comment: If any maintenance activities result in impacts to source water quality, the City of Sacramento would like to request direct notification. Contact information can be provided upon request.	The City of Sacramento will continue to be on the project mailing list for updates and information. The MMRP provides additional information regarding notifications of maintenance activities in waterways.
1527	107	[From ATT 1:] Section: 3B.2.1 Page: 3B-42 Line: 27-36 Type: WS Key Document Text: "The BDCP proponents commit to assisting in-Delta municipal, industrial, and agricultural water purveyors that will be subject to significant water quality effects from operation of Conservation Measure 1 (CM1) and effects on dissolved organic carbon (DOC) due to implementation of Conservation Measures 2-22 (CM2-22). This commitment shall apply specifically to those purveyors affected by significant increases in bromide, electrical conductivity, chloride, and DOC concentrations such that the purveyors will bear increased financial costs in order to continue to treat or otherwise supply water to acceptable standards. The assistance provided by the BDCP proponents is intended to fully offset any increased treatment or delivery costs attributable to CM1, or for DOC attributable to CM2-22 and may take the form of financial contributions, technical contributions, or partnerships." Comment: This commitment addresses potential impacts from chloride/electrical	Please see response to comment 1527-63.Regarding geographic scope, please see Master Response 8, Lead Agencies Analyzed the Project as a Whole. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		conductivity, bromide, and organic carbon, but is limited to in-Delta purveyors. Some Municipal and Domestic Water Supply users are just beyond the limit of the Delta, but could potentially be impacted by operations changes from CM1 and CM2. This commitment should be reevaluated to consider an expanded geographic area with specific conditions.	
1527	108	[From ATT 1:] Section: 3D.2.2 Page: 3D-3 Line: 12-16 Type: AM, WQ Key Document Text: "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 U.S. Fish and Wildlife Service and 2009 National Marine Fisheries Service Biological Opinions and other relevant plans and projects that would likely occur in the absence of BDCP actions and which are well-defined enough to allow for meaningful analysis." Comment: As per this definition, it seems that the DWR Reoperation Program should have been included as a relevant plan that would likely occur. The climate change analysis should have considered the potential operational adaptation and mitigation strategies in development. http://www.water.ca.gov/system_reop/	The reoperation study is an investigation in to potential ways that SWP and CVP infrastructure could potentially be operated differently to provide improved benefits. No decision has been reached about what specific operations could be beneficial, nor has a decision been made to implement any change to operation of the system. Thus, simulation of future conditions with changed operational characteristics would be speculative at this time. Please also see response to comment 1527-59.
1527	109	[From ATT 1:] Section: 3D.3.2.1 Page: 3D-15 Line: 13-14 Type: ERROR, SCOPE Key Document Text: "Table 3D-4" Comment: This table does include reference to the Folsom Dam Safety Project, but additional comment is provided on Table 3D-A regarding its inclusion. Also, there is no inclusion of the DWR Reoperation Program, which needs to be considered in the analysis. http://www.water.ca.gov/system_reop/	Please see response to comment 1527-59. For more information regarding existing conditions please see Appendix 3D of the FEIR/EIS, which includes the Folsom Dam Safety and Flood Damage Reduction Project. Environmental baselines are also discussed in Master Response 1.
1527	110	[From ATT 1:] Section: 3D.3.4 Page: 3D-24 Line: 1-2	For more information regarding existing conditions please see Appendix 3D of the FEIR/EIS, which includes the Folsom Dam Safety and Flood Damage Reduction Project. Also see Master Response 1, Environmental Baselines. Alternative 4 covered activity includes the operation, not construction, of the North Bay Aqueduct Alternate Intake Project. The preferred alternative does not include the NBA AIP.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: ERROR, SCOPE Key Document Text: "Table 3D-6" Comment: This table does include reference to the Folsom Dam Safety Project, but additional comment is provided on Table 3D-A regarding its inclusion. It is unclear if the North Bay Aqueduct Alternative Intake Project, which has a Notice of Preparation submitted, has been included in this assessment. http://www.water.ca.gov/engineering/Projects/Current/NBA/. Also, there is no inclusion of the DWR Reoperation Program which needs to be considered in the analysis. http://www.water.ca.gov/system_reop/	
1527	111	[From ATT 1:] Section: 3D.A Page: 3D-46 Type: ERROR, SCOPE Key Document Text: "Table 3D-A" Comment: The DWR Reoperation Program should have been included in this table and identified as included as "Yes" in the No Action Alternative and Cumulative Impact assessments. The DWR North Bay Aqueduct Alternate Intake Project should also be identified here and specifically clarified if included in the BDCP or separately.	Please see response to comment 1527-59 and 1527-110.
1527	112	[From ATT 1:] Section: 3D.A Page: 3D-99 Type: ERROR, SCOPE Key Document Text: "Table 3D-A" Comment: The Folsom Dam Flood Safety Project (Joint Federal Project) is included in the table and the assessments for No Action and Cumulative Impacts. However, the text description seems to indicate that no operational modifications were included in the assessments until a revised Water Control Manual is finalized. This needs to be modified and updated to reflect the current conditions of the WCM development. http://www.spk.usace.army.mil/Missions/CivilWorks/FolsomDamAuxiliarySpillway.aspx	The future conditions analysis necessarily uses existing operational characteristics. Operational changes that could potentially materialize as a result of the revision to the US Army Corps of Engineer's Water Control Manual for the Folsom Dam, any reoperation of SWP or CVP system components as a result of reoperations studies, or any other potential future change in operations are unknown at this time. Any attempt to predict or make assumptions about future operations would be highly speculative and would likely be no more accurate than the assumption that no change in operation will occur. Further, the use of historical/current operations characteristics in the modeling of future conditions allows for a more "apples-to-apples" comparison between historical and future performance of the system not convoluted with assumptions and speculations about future operational changes that may or may not occur. For more information regarding upstream reservoir effects please see Master Response 25. For information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS.
1527	113	[From ATT 1:] Section: 3E.3.2.1 Page: 3E-19 Line: 33-34	It is understood that during major rainfall events, substantial amounts of rainfall occur in the Delta watershed downstream of the SWP and CVP reservoirs. The CALSIM II hydrology includes the precipitation that occurs downstream of the reservoirs in the calculated values. For more information regarding water supply please see Chapter 5 of the FEIR/EIS. Regarding upstream reservoir effects please see Master Response 25.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WS, ERROR Key Document Text: "Delta inflows are mainly driven by precipitation and runoff in the vast watershed that drains into the Delta (not by precipitation falling on the Delta itself)." Comment: This statement is incorrect. Delta inflows are significantly influenced by upstream reservoir releases, and the text should be revised to reflect contribution from both sources.	
1527	114	[From ATT 1:] Section: 5.3.1 Page: 5-43 Line: 26-33 Type: WS Key Document Text: "The water supply analysis addresses changes to water supply to SWP and CVP water users in the Delta region, upstream of the Delta Region, and Export Service Areas due to implementation of BDCP conveyance facilities (CM1) and other conservation measures, specifically tidal marsh habitat restoration (CM4). The alternatives would modify the operations of the SWP and CVP facilities but would not modify the operations of water resources facilities owned and/or operated by other water rights holders. Therefore, the water supply analysis addresses impacts to DWR, Reclamation, and SWP and CVP contractors, as opposed to other water rights holders, as the BDCP does not include any regulatory actions that would affect any such water rights holders." Comment: The water supply analysis is limited to the impacts on the BDCP proponents, and it is assumed that these actions do not impact the water supply of other users. Since operation of the upstream reservoir greatly influence the availability of water, as well as the quality of that water, it does not seem to be reasonable to assume that analysis should not have included other users.	This statement is associated with the assumptions in the CALSIM II model that the water diversions by senior water rights holders are the same under the Existing Conditions, No Action Alternative, and action alternatives in the Final EIR/EIS. Changes in surface water elevations and water quality in the Delta that could affect water diversion intakes are discussed in the Final EIR/EIS in Appendix 5A, Section C, and Chapter 14; and Chapter 8, respectively. Regarding water rights please see Master Response 32.
1527	115	[From ATT 1:] Section: 5.3.1.1 Page: 5-49 Line: 37-40 Type: WS Key Document Text: "If sea level rise and climate change do not occur or occur differently than modeled for these analyses, water supply conditions under the alternatives will be different from the results presented in this section. Time will tell whether current predictions of conditions in 2060, though based on the best science currently available, will prove to be too optimistic or too pessimistic." Comment: Given the uncertainty of the information used in the modeling, it is warranted to	Some of the alternatives that involve implementing an HCP/NCCP included consideration of an interim results check that could be used to re-assess progress towards meeting the biological goals and objectives of the conservation strategy. Since the time of the Draft EIR/EIS, a new preferred CEQA and NEPA alternative has been identified that does not propose an HCP/NCCP and 50 year permit. Climate change assumptions for this alternatives assumes changes through 2025. For more information on climate change please see Master Response 19.

DEIRS Ltr#	Cmt#	Comment	Response
		plan to include a reassessment of conditions at specified periods during the term of the permit to assess (particularly 2025) the climate change impacts and how those may affect the operational scenarios of the BDCP.	
1527	116	[From ATT 1:] Section: 5.3.3.1 Page: 5-57 Line: 7-9 Type: WS Key Document Text: "Effects and Mitigation Approaches for No Action Alternative" Comment: DWR is currently developing a System Reoperation Program that is developing alternative operations scenarios for the CVP/SWP system that will include adaptation and mitigation strategies to address projected climate change conditions. This should have been addressed somewhere in the BDCP as a reasonably foreseeable condition. http://www.water.ca.gov/system_reop/	The operational assumptions for the No Action Alternative do include "Near Term Future Projects" or "Other Future Projects" included in the 2008 BA that comply with the No Action Alternative definition presented in Appendix 3D, Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions. Attachment 3D-A, Descriptions of Programs, Projects, and Policies considered for Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Analysis for the EIR/EIS lists DWR's System Reoperation Program as one that is considered as part of the, Existing Conditions, No Action Alternative and the cumulative analysis. The cumulative analysis for Chapter 5, Water Supply, is provided in section 5.3.5 of the Final EIR/EIS. For more information regarding climate change and GHGs please see Master Response 19.
1527	117	[From ATT 1:] Section: 5.3.3.1 Page: 5-58 Line: 12-13 Type: WS Key Document Text: "Table 5-3" Comment: This table should have included the Joint Federal Project at Folsom Dam and revised Water Control Manual which are expected to be operational in 2015. http://www.spk.usace.army.mil/Missions/CivilWorks/FolsomDamAu xiliarySpillway.aspx	Please see response to comment 1527-59.
1527	118	[From ATT 1:] Section: 5.3.3.1 Page: 5-61 Line: 8-15 Type: WS Key Document Text: "The frequency of Trinity, Shasta, and Folsom Lakes dropping to dead pool storage would increase by about 10% under the No Action Alternative as compared to Existing Conditions. These changes in storage would reduce the ability of the CVP and SWP to meet system water demands and environmental water needs. Adaption measures would need to be implemented on upstream operations to manage coldwater pool storage levels	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. The EIR/EIS analysis considers changes between the frequency of dead pool conditions under the alternatives and the No Action Alternative (both with the same climate change assumptions) to determine if the changes are adverse or beneficial. The results are presented in the tables with end-of-month storage for the SWP and CVP reservoirs in Appendix 5A, Section C, Modeling Results, in the FEIR/EIS. Climate change adaption strategies have not been identified at this time and were not considered in the No

DEIRS Ltr#	Cmt#	Comment	Response
		under future sea level rise and climate change conditions. As described in the methods section, model results when storages are at or near dead pool may not be representative of actual future conditions because changes in assumed operations may be implemented to avoid these conditions." Comment: This text supports the likely change in system operations to address climate change impacts, which were not included in the No Action Alternative evaluation. By not including these adaptation and mitigation efforts, the impacts of climate change have been presented to show a worst case scenario. This may minimize the perceived, or relative, impact of the BDCP.	Action Alternative or Alternatives 1 through 9. Future changes in the SWP and CVP operations to respond to climate change and sea level rise would require separate engineering environmental analyses under CEQA and NEPA. For more information on climate change please see Master Response 19. For information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS.
1527	119	[From ATT 1:] Section: 5A.A.2.1 Page: 5A-A5 Line: 22-23 Type: WQ, WS, SCOPE Key Document Text: "A brief description of the hydrologic, hydrodynamic, water quality, particle transport, reservoir and river temperature modeling tools used in the analytical framework is provided below." Comment: The Lower Sacramento River was excluded from a temperature evaluation. This is a significant flaw since this is a large stretch of river, from Knights Landing to Freeport, where there are numerous beneficial uses. Also, there are projected to be significant impacts on the temperature of the Feather and American rivers downstream of the major reservoirs that could cause compound impact to the Lower Sacramento River. This reach needs to be evaluated.	The locations evaluated in this analysis were limited to the output locations provided in the best available tool at the time, the Sacramento River Water Quality Model. This model included multiple output locations from Keswick to Knights Landing only. This is because water temperatures below Knights Landing are largely in thermal equilibrium with atmospheric conditions and not strongly influenced by flow changes that would occur due to reservoir releases associated with implementation of the action alternatives. For information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	120	[From ATT 1:] Section: 5A.A.3.3 Page: 5A-A21 Line: 8-10 Type: WQ, WS Key Document Text: "The amount of spill over the Fremont Weir or the notch is computed using the daily patterned Sacramento River flow at Verona and the rating curves included in the model." Comment: The evaluation of flows at the Fremont Weir should have included an investigation of the increase in potential for American River flows being drafted upstream rather than normal discharge downstream on the Sacramento River.	The operation of the operable gates at Fremont Weir were based upon preliminary assumptions developed during preparation of this EIR/EIS. However, the implementation of the operable gates at Fremont Weir and associated habitat restoration in Yolo Bypass to increase the extent and duration of inundation of Yolo Bypass in accordance with the 2009 NMFS biological opinion is being developed in a separate engineering and environmental documents. The assumptions in the CALSIM II model are generalized and are included in the No Action Alternative and the proposed project.
1527	121	[From ATT 1:]	See response to comment 1527-59. Climate change adaption strategies have not been identified at this time and were not considered in the No Action Alternative or Alternatives 1 through 9. Future changes in the SWP

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 5A.A.3.3 Page: 5A-A23 Line: 26-32 Type: WQ, WS Key Document Text: "The CALSIM II simulations do not consider future climate change adaptation which may manage the SWP and CVP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the BDCP. Thus, the CALSIM II BDCP results represent the risks to operations, water users, and the environment in the absence of dynamic adaptation for climate change." Comment: The lack of inclusion of adaptation and mitigation strategies to address climate change is an inappropriate assumption. The DWR Reoperation Program is coordinating state and federal agencies on this specific issue, and this needs to be addressed as part of the BDCP. The system will be operated differently to address climate change impacts; therefore, the results of those conditions presented in this assessment will likely not represent future conditions and therefore should not be used for comparison.	and CVP operations to respond to climate change and sea level rise would require separate engineering environmental analyses under CEQA and NEPA. For more information on climate change please see Master Response 19.
1527	122	[From ATT 1:] Section: 5A.B.5.5 Page: 5A-B67 Type: SCOPE, ERROR Key Document Text: "Table B-8, Operations Criteria: River-Specific, American River Folsom Dam flood control" Comment: The No Action Alternative Assumption is the same as the Existing Conditions Assumptions. This is incorrect because it does not account for the Joint Federal Project and Revised Water Control Manual that will be in place in 2015. This condition needs to be revised to reflect the dam modifications, as well as the revisions to operations.	Please see response to comment 1527- 59. For information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS.
1527	123	[From ATT 1:] Section: 5A.B.5.5 Page: 5A-B102 Type: ERROR Key Document Text: "Table B-13 - Fremont Weir/Yolo Bypass" Comment: The description of this item does not match all other sections of the BDCP and the EIR/EIS. This should be evaluated and confirmed, and all sections should be revised to reflect the actual proposed conditions and modeled scenarios.	The information in Table B-13 is specific to Alternative 4 operations, and is consistent with Scenario H operations description in Chapter 3, Description of Alternatives.

DEIRS Ltr#	Cmt#	Comment	Response
1527	124	[From ATT 1:] Section: 5A.D.4 Page: 5A-D97 Line: 5-8 Type: WQ, WS Key Document Text: "The derived rating curves are used directly in the CALSIM II model to define the monthly and daily spills over the Fremont Weir and Sacramento Weir when integrated with the system operations and other components of the BDCP Alternatives." Comment: This analysis should have been expanded to look at the direction of flow of the American River under this new operational condition; this is important to see if the river is drafted upstream under any range of combined flows on the Lower Sacramento and American rivers to identify operational conditions to prevent that upstream flow from occurring.	Please see response to comment 1527-120. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	125	[From ATT 1:] Section: 5A.D.7 Page: 5A-D133 Line: 5-7 Type: WQ, WS Key Document Text: "For the selected sea level rise scenarios, three-dimensional UnTRIM Bay-Delta model was simulated to evaluate the Delta hydrodynamic and salinity conditions under historical conditions." Comment: This evaluation should have been expanded to see how far upstream the projected effects of sea level rise extends, to determine if there is an increase in reverse flow impacts or an increase in the reach of the upstream of the Delta area that could be affected by reverse flows or backwater effects.	As noted in the Appendix 5A, Section A, Modeling Methodology, of the FEIR/EIS, the methodology used to consider the effects of projected sea level rise on the Delta hydrodynamics and water quality, included simulating the three-dimensional UNTRIM model and using the results to train (or corroborate) one-dimensional DSM2 model, and using the corroborated DSM2 model to study the EIR/EIS No Action Alternative and the action alternatives. UNTRIM model results for different sea level rise scenarios is presented in the FEIR/EIS Appendix 5A, Section D Attachment 3, Evaluation of Sea Level Rise Effects using UNTRIM San Francisco Bay-Delta Model. The results shown in Figures 4.1-1 to 4.1-26 and 4.3-1 to 4.3-26 (in Appendix 5A, Section D, Attachment 3) indicate negligible change in salinity upstream of Cache Slough confluence on the Sacramento River under the 15cm and 45cm sea level rise cases. Even though there is no specific analysis performed on the changes to reverse flows due to the sea level rise, these salinity results indicate that there would likely be a negligible change in the upstream transport due to the sea level rise. Further, as shown in several analyses included in the EIR/EIS, which relied on the corroborated DSM2 model, indirectly demonstrate that the effects of the sea level rise by themselves are minimal on the upstream transport and backwater effects. For instance, FEIR/EIS Table C-29-2-1 in Appendix 5A, Section C, Modeling Results, which compares Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation under the No Action Alternative at LLT (includes 45cm sea level rise) and Existing Conditions (no sea level rise), show that the minimum elevations will be higher with increased sea level. For more information on climate change please see Master Response 19.
1527	126	[From ATT 1:] Section: 5A.D.10.2 Page: 5A-D157 Line: 9-14 Type: WQ Key Document Text: "The results show that the effects on the upstream operations are primarily due to the climate change effect on the reservoir inflows, river temperatures, and	Appendix 5A, Section D.10.2, Incremental Effects of Climate Change, Sea Level Rise, and Restoration on Operations, in the FEIR/EIS presents a sensitivity analysis of model results by sequentially adding the major assumptions to the modeling. The model starts with the Existing Conditions plus projected increased water demands in the Delta watershed. Then, sea level rise, climate change, Fall X2, and tidal restoration are sequentially added to identify the sensitivity of each component on specific water operations. For information on upstream reservoir effects please see Master Response 25. For information on climate change please see Master response 19.

DEIRS Ltr#	Cmt#	Comment	Response
		the increased salinity intrusion in the Delta due to the projected sea level rise. The proposed BDCP operations did not impact the upstream reservoir conditions, both at end-of-May and end-of-September, because of the increased flexibility in the system. The proposed restoration under BDCP has limited effect on the overall system operations." Comment: The information presented in this section is unclear and difficult to review. The data cannot be reviewed to confirm the conclusion stated by the BDCP. This section should be revised to allow better review of the information.	
1527	127	[From ATT 1:] Section: 5A.D.10.3 Page: 5A-D167 Line: 8-11 Type: WQ Key Document Text: "The incremental changes between the No Action Alternative and the BDCP Alternative without considering the projected changes in climate and sea level were found to be similar to the results presented in the EIR/EIS, which included the climate change and sea level rise effects." Comment: The information presented in this section is unclear and difficult to review. The data cannot be reviewed to confirm the conclusion stated by the BDCP. This section should be revised to allow better review of the information.	The effects of implementation of the proposed project as compared to the effects under the Existing Conditions present the changes under the alternatives and the changes under climate change and sea level rise. For more information regarding climate change please see Chapter 29 of the FEIR/EIS and Master Response 19.
1527	128	[From ATT 1:] Section: 5B.B.2.2 Page: 5A-B14 Line: 17-23 Type: WQ, WS Key Document Text: "CALSIM II simulation for the No Action Alternative Late Long-Term, does not consider any adaptation measures for future climate change, which may result in managing the SWP and CVP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the BDCP." Comment: See comment on Appendix 5 A regarding lack of inclusion of adaptation and mitigation strategies.	Please see response to comment 1527-116. For information on BDCP/California WaterFix Coordination with Flood Management Requirements please see Appendix 6A of the Final EIR/EIS. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	129	[From ATT 1:] Section: 6.1.2.3	Tidal influence extends along the Sacramento River upstream of Freeport. The analysis of the tidal influence of the proposed project (Alternative 4A) does not need to be considered upstream of the Delta. North Delta intake operational criteria 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,

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 6-7 Line: 3-30 Type: WS Key Document Text: "Influence of Delta Tidal Flows" Comment: This section describes the variability in tidal flows on shorter-term basis, defined as daily, and indicates that the riverine conditions in the Sacramento River at Freeport can be influenced by tides related to flow, velocity, and elevation. This supports the need to extend the reverse flow evaluation upstream to define the extent of the impact as well as associated backwater effects.	Section B). Therefore, tidal flows in the Sacramento River would be similar under the action alternatives and the No Action Alternative.
1527	130	[From ATT 1:] Section: 6.1.3.3 Page: 6-16 Line: 7-10 Type: WS Key Document Text: "Because of its relative proximity to the Delta, and because the American River provides a large flow contribution, Folsom Dam's operation also can influence on Delta flood management and can increase flows in the Sacramento Bypass, which diverts water into the Yolo Bypass." Comment: This statement indicates that American River flows can influence flows on the Sacramento River, toward Yolo Bypass, and that this should have been evaluated further as part of the modeling exercise. Changes in flow direction of the Sacramento River and related impacts to water quality are significant potential impacts to beneficial uses; this issue should be evaluated and mitigated.	The Existing Conditions, No Action Alternative, and proposed project and the other action alternatives assume the same operations criteria of the Sacramento Bypass (Sacramento Weir which diverts water from the Sacramento River into the Yolo Bypass). The Sacramento Area Flood Control Agency and USACE are considering modifications to the Sacramento Weir under separate engineering and environmental documents which will occur with or without this project. However, it would be speculative to project future changes to the Sacramento Bypass. For information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. Regarding water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	131	[From ATT 1:] Section: 6.3.1.2 Page: 6-43 Line: 3-15 Type: WS Key Document Text: "Existing Conditions precipitation assumptions are consistent with historical patterns. These historical patterns have been used by USACE and DWR to develop reservoir storage criteria to reduce flood potential in the watersheds. The assumptions for snowfall and rainfall patterns for the alternatives have been modified to reflect climate change that is anticipated to increase surface water runoff from rainfall in the winter and early spring and to decrease runoff from snowmelt in the late spring and early summer, as described in Chapter 5, Water Supply. However, the flood management criteria for maintaining adequate flood storage space in the reservoirs (as defined by the USACE and	Please see response to comment 1527-116. For information on the project's purpose and need please see Master Response 3 and Chapter 2 of the Final EIR/EIS. Regarding modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. Operational criteria are discussed in Master Response 28. For information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		DWR for flood control release criteria) were not modified to adapt to the changes in runoff due to climate change. No changes in monthly allowable storage values related to CALSIM II model assumptions were included because these changes were not defined under the alternatives to achieve the project objectives or purpose and need for the BDCP. If USACE and DWR modify allowable storage values in the future in response to climate change, it is anticipated that the surface water flows and related water supply and water quality conditions would change." Comment: This statement clarifies that although future hydrologic conditions were modified for project climate change impacts, there were no parallel modifications to the operations of the reservoirs to mitigate those impacts. This is an unreasonable assumption because the state and federal management agencies are developing a System Reoperation Program (led by DWR) to address this specific issue. As noted in the final sentence, the proposed modifications will have an impact on water supply and water quality, thus making the No Action Alternative an incomplete assessment. The model for the No Action Alternative and Action Alternatives should have included some modifications to the reservoir operational requirements to address climate change mitigation and adaptation.	
1527	132	[From ATT 1:] Section: 6.3.1.2 Page: 6-43 Line: 16-25 Type: WS Key Document Text: "For this EIR/EIS analysis, it was determined that estimating peak flows in a sub-monthly time step based on monthly flows simulated in CALSIM II would not be reliable for flood risk analysis because CALSIM's flood control considerations are limited to maximum allowable end of month storage. Even weekly or daily time steps would likely be unable to reflect the actual conditions faced by reservoir operators, who, based on policy decisions, could operate in a different way under severe conditions in response to circumstances as they arise in order to try to avoid catastrophic outcomes. Detailed quantitative hydraulic analysis models are currently being improved by U.S. Army Corps of Engineers, DWR, and Central Valley Flood Protection Board. Those models are not currently completed and not available for use in this EIR/EIS. Therefore monthly CALSIM II outputs are used to provide only an indication of consistently high storages or flows that may or may not result in flood conditions." Comment: This statement indicates that the model results are not sufficiently robust to make a determination of Less Than Significant related to Impacts SW-1 and SW-2, related to flood control. This should be identified by the BDCP as a key uncertainty that needs to be reassessed when the referenced hydraulic models are available, as part of the Adaptive Management program.	As described in Sections 6.1.5 and 6.2.2 of Chapter 6, Surface Water, the Central Valley Flood Protection Board exercises jurisdiction over the State Plan of Flood Control, including Sacramento River Flood Control Project and flood control projects in the Sacramento River and San Joaquin River watersheds. Facilities constructed under Alternatives 1 through 9 will be located within the reaches of the Sacramento River addressed in the State Plan of Flood Control. As described in Section 3.6.1.1 of Chapter 3, Description of Alternatives, both facilities constructed under action alternatives and operations of the project facilities must provide flood neutrality during construction and operations as compared to conditions under the No Action Alternative. During the design phase, additional topographic and bathymetric surveying would be completed and final design plans would be reviewed by State and federal flood management agencies, as discussed in Chapter 3. Please see Appendix 6A for information on BDCP/California WaterFix Coordination with Flood Management Requirements. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	133	[From ATT 1:] Section: 6.3.4	See response to comment 1527-59 and 1527-116.

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 6-154 Line: 16-17 Type: WS Key Document Text: "Table 6-9" Comment: This table should have included the Joint Federal Project at Folsom Dam and revised Water Control Manual, which are expected to be operational in 2015, as well as some consideration of the DWR Reoperation Study related to climate change mitigation/adaptation strategies for the CVP/SWP.	
1527	134	[From ATT 1:] Section: 6.3.4 Page: 6-157 Line: 5-9 Type: WS Key Document Text: "The State Water Resources Control Board is conducting a concurrent program to update the Bay- Delta Water Quality Control Plan. This project is still under development, and the potential outcomes are not known at this time. Changes to surface water resources due to this project could result in changes in Delta outflow and Delta outflow patterns (increases and decreases depending on the time of the year for different scenarios) and water quality in the Delta watershed." Comment: Since this project could have a significant impact on flow patterns and therefore impact the water quality, it should be identified as a key uncertainty and added to the Adaptive Management program for reassessment once it is finalized.	As described in Section 6.3.4 of Chapter 6, Surface Water, of the FEIR/EIS, the State Water Resources Control Board is conducting a current program to update the Bay-Delta Water Quality Control Plan. Since this program is still under development and the potential outcomes are not known at this time, this program is not included in the analysis. Following completion of the updated Bay-Delta Water Quality Control Plan, SWP and CVP operations would need to be reviewed to determine if the operations continued to comply with the new regulations. For information on adaptive management and operational criteria please see Master Response 33 and Master Response 28, respectively.
1527	135	[From ATT 1:] Section: 8.1 Page: 8-1 Line: 4-5 Type: WQ Key Document Text: "Chapter 8, Water Quality, describes the environmental setting and potential impacts of the BDCP on water quality in and upstream of the Sacramento-San Joaquin Delta." Comment: The BDCP purports that this Chapter describes impacts on water quality upstream of the Delta. Yet there is very little data evaluation to support such evaluation. This Chapter needs to be expanded to provide a complete evaluation of water quality upstream of the Delta in accordance with this statement.	Please see response to comment 1527-67. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
1527	136	[From ATT 1:] Section: 8.1.5 Page: 8-3 Line: 37-43 Type: SCOPE Key Document Text: "Potential impacts resulting from water operations and maintenance of Conservation Measure 1 (Conservation Measure 1 provides for the development and operation of a new water conveyance infrastructure and the establishment of operational parameters associated with both existing and new facilities). For the purposes of the assessment, the study area was divided into the three regions which are discussed separately for each constituent for Conservation Measure 1: - Upstream of the Delta (including the Sacramento and San Joaquin River watersheds)." Comment: The water quality assessment are stated to cover watershed area, but are not adequately covered. This conflicts with Section 1.5.1 descriptions.	Please see response to comment 1527-67. The water quality assessment adequately covered these watersheds. Only parts of the watershed that had the potential to be impacted by the project were discussed in detail. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	137	[From ATT 1:] Section: 8.1.6 Page: 8-5 Line: 8-18 Type: SCOPE Key Document Text: "In some instances, the NEPA and CEQA discussions differ for a particular impact discussion because NEPA and CEQA have different points of comparison (or "baselines" in CEQA terms). The NEPA point of comparison for each alternative is based on the comparison of the action alternative (Alternatives 1A through 9) at 2060, with the no action alternative which supposes conditions at 2060 in the absence of the proposed project. The CEQA baseline is based on the comparison of the action alternative (Alternatives 1A through 9) at 2060 with existing conditions. Consistent with this, the NEPA point of comparison accounts for anticipated climate change conditions at 2060, whereas the CEQA baseline is assumed to occur during existing climate conditions. Therefore, differences in model outputs between the CEQA baseline and the action alternative (Alternatives 1A through 9) are due primarily to both the impacts of proposed alternative as well as future climate change conditions (sea level rise and altered precipitation patterns)." Comment: The alternatives examined are insufficient and do not constitute a reasonable range. The alternatives should look at a broader range of alternatives for water quality in addition to the Delta Reform Act covered species-focused activities. Because the baseline is considered continued operation of the existing facilities, additional alternatives that support regionally independent solutions and less conveyance should be required for an adequate evaluation.	Please see response to comment 1527-5. For more information regarding environmental baselines please see Master Response 1. For more information regarding BDCP compliance with the Delta Reform Act and 4A consistency with the Delta Plan please see Appendix 3I and 3J of the FEIR/EIS. Also see Master Response 31.

DEIRS Ltr#	Cmt#	Comment	Response
1527	138	[From ATT 1:] Section: 8.2 Page: 8-5 Line: 20-26 Type: SCOPE Key Document Text: "This section defines the environmental setting/affected environment for surface water quality, reviews the environmental and regulatory setting with respect to water quality, and provides an assessment of existing water quality conditions in the study area (the area in which impacts may occur), shown in Figure 1-4, which includes the Plan Area (the area covered by the BDCP), upstream of the Delta, and the State Water Project/Central Valley Project (SWP/CVP) Export Service Areas. Water quality conditions refer to the chemical and physical properties of the surface water in the study area. setting/affected environment for surface water quality, reviews the environmental and regulatory setting with respect to water quality, and provides an assessment of existing water quality conditions in the study area (the area in which impacts may occur), shown in Figure 1-4, which includes the Plan Area (the area covered by the BDCP), upstream of the Delta, and the State Water Project/Central Valley Project (SWP/CVP) Export Service Areas. Water quality conditions refer to the chemical and physical properties of the surface water in the study area." Comment: Earlier in Section 8.1.5, the text states that the tributary "watersheds" are covered in the assessment. In this section, it is stated that Figure 1-4 defines the study area. However, Figure 1-4 and the previous discussion include only the upstream waterways, but not the tributary watersheds, which would add a significantly larger area and is more accurate.	The study area is as defined as shown in Figure 1-4.
1527	139	[From ATT 1:] Section: 8.2 Page: 8-5 Line: 33-35 Type: ERROR Key Document Text: "The term nonpoint source is defined to mean any source of water pollution that does not meet the legal definition of point source in Section 502(14) of the Clean Water Act and includes urban and irrigation runoff." Comment: Stormwater covered National Pollutant Discharge Elimination System permits (Municipal Separate Storm Sewer System) is considered a point source within Section 502(14), which does not apply to agricultural "stormwater". Clean Water Act amendments in 1987 clarified this categorization.	Urban runoff is widely considered to be a nonpoint source (e.g., by USEPA and the State Water Resources Control Board). Although some of the urban runoff is captured and funneled to individual storm drains in some locations, not all locations have such drains, and some of the urban runoff itself is not captured and enters waterways directly. For information on permitting please see Master Response 45.
1527	140	[From ATT 1:]	Please refer to Master Response 14 for a discussion on temperature effects on drinking water.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.2 Page: 8-6 Line: 2-4 Type: WQ Key Document Text: "Because the primary concern of water temperature is effects on fish and aquatic organisms, temperature is addressed in Chapter 11, Fish and Aquatic Resources." Comment: This assumption is incorrect. Temperature is one of the key general characteristics of drinking water that impacts many aspects of treatability and treated water quality. This is especially evident in the development of disinfection by-products. Higher temperatures significantly increase the rate of reaction and development of both Trihalomethanes and haloacetic acids in treated water, as documented in the 2013 Update to the American River Watershed Sanitary Survey (pages 3-39 to 3-43). This constituent needs to be included in Chapter 8 for its potential impacts to overall water quality.	
1527	141	[From ATT 1:] Section: 8.2.1 Page: 8-6 Line: 16-17 Type: WQ, ERROR Key Document Text: "Finally, water quality data from selected monitoring stations were reviewed for specific constituents in Section 8.1.3." Comment: This section reference is incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	142	[From ATT 1:] Section: 8.2.1 Page: 8-6 Line: 20-22 Type: SCOPE, WQ Key Document Text: "The Delta environment is much more complex and dynamic than the rest of the study area and requires a more detailed approach. Hence, the water quality conditions in the Delta were reviewed at a greater level of detail." Comment: The detailed assessment should occur in the areas where there are effects. While tidal influence adds complexity to the modeling, the higher level of detail is necessary upstream of the selected water quality locations (e.g., up to Veterans Bridge, etc.).	Please see response to comment 1527-67. The analysis of the tidal influence of the proposed project (Alternative 4A) does not need to be considered upstream of the Delta. North Delta intake operational criteria 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. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. For a discussion on project level versus program level analysis please see Master Response 2.

DEIRS Ltr#	Cmt#	Comment	Response
1527	143	[From ATT 1:] Section: 8.2.1.1 Page: 8-6 Line: 39-40 Type: WQ, ERROR Key Document Text: "The following sections (Sections 8.1.1.2 through 8.1.3.17) describe the Existing Conditions in the study area with respect to surface water quality and are organized in the following sequence." Comment: These section references are incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	144	[From ATT 1:] Section: 8.2.1.1 Page: 8-7 Line: 28-29 Type:ERROR Key Document Text: "Section 8.1.2, Selection of Monitoring Stations for Characterization of Water Quality, includes detailed discussions of the selected water quality constituents of concern in the study area." Comment: Incorrect reference to previous section.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	145	[From ATT 1:] Section: 8.2.1.3 Page: 8-10 Line: 27-29 Type: WS Key Document Text: "The management of the SWP and CVP systems to meet water supply, flood management, and environmental obligations has a substantial effect on the quantity and timing of inflows to the Delta and on water quality in the study area." Comment: We agree with this statement. It supports the need for more significant evaluation of reservoir operations in relation to downstream water quality impacts.	Please refer to Master Response 30 regarding adequacy of qualitative assessment approach for the upstream of Delta region. For information on operational criteria and adaptive management please see Master Response 28 and Master Response 33, respectively. Water quality is discussed in Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	146	[From ATT 1:] Section: 8.2.1.4	Please see response to comment 1527-139.

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-13 Line: 22-23 Type: ERROR Key Document Text: "Figure 8-6 shows land uses and major point sources (consisting primarily of municipal Water Treatment Plants) and nonpoint sources (e.g., urban storm water runoff) of pollutants." Comment: Urban stormwater is considered a point source.	
1527	147	[From ATT 1:] Section: 8.2.1.4 Page: 8-14 Line: 14-23 Type: WQ, WS Key Document Text: "Both variations in watershed hydrology and SWP and CVP operations affect the variability of water quality in the study area; also both SWP/CVP and non-SWP/CVP water diversions reduce the amount of water available for dilution and assimilation of contaminant inputs and hydrodynamic conditions associated with channel flows and tidal action in the Delta. Water quality can vary seasonally in response to winter-spring runoff and summer-fall lower-flow periods or seasonal agricultural practices and cropping; water quality also can vary from year to year as a result of precipitation and snowpack levels in the upper watersheds and the resulting releases from upstream reservoirs for water supply, flood management, and environmental obligations (e.g., fish flows, Delta water quality objective compliance), operations of the Delta Cross Channel, and seasonal and annual variations in SWP and CVP pumping rates." Comment: This text displays the wide variability in source water quality and supports the need to evaluate constituents for short term impacts. The use of long term averages in the water quality assessment in this chapter needs to be reconsidered, and the data should be reevaluated for shorter term impacts, such as the periods applicable for drinking water regulations.	The potential water quality impacts are evaluated in consideration of both short-term and long-term timeframes. In particular, the majority of the impact assessments are based on the results of the DSM2 modeling which provides monthly average changes in constituent concentrations. It is not clear to what periods applicable for drinking water regulations the commenter is referring. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	148	[From ATT 1:] Section: 8.2.1.4 Page: 8-13, 8-14 Line: 16-40,1-13 Type: WQ Key Document Text: "Primary Factors Affecting Water Quality" Comment: This section presents a summary of some of the potential sources of	Section 8.2.1.4 is an introductory section for Chapter 8. Section 8.2.3 provides more detailed discussions of water quality conditions in the affected environment.

DEIRS Ltr#	Cmt#	Comment	Response
		contamination in the watershed that could impact water quality and the associated constituents of concern. This section is not comprehensive and does not provide any relative comparison or assessment of the specific sources' ability to impact source water quality. Text should be added to qualify the discussion and discuss the presence of additional sources and constituents of interest, especially at more local levels.	
1527	149	[From ATT 1:] Section: 8.2.1.5 Page: 8-14 Line: 24 Type: WQ, WS Key Document Text: "Beneficial Uses" Comment: This text needs to be modified to include the State Water Board's Sources of Drinking Water Policy (Resolution 88-63) in addition to the Tributary Rule. Both apply to the Central Valley and indicate where the Municipal and Domestic Water Supply beneficial use shall be assigned.	The Sources of Drinking Water Policy is described in section 8.3.2.7 of Chapter 8 (p. 8-119) in the FEIR/EIS.
1527	150	[From ATT 1:] Section: 8.2.1.6 Page: 8-21 Line: 20-37 Type: ERROR Key Document Text: "Omission" Comment: This section on other Water Quality Plans does not identify several critical water quality planning efforts that are relevant, including Central Valley Salinity Alternatives for Long-Term Sustainability, salt and boron, pesticide and other Total Maximum Daily Loads, Delta nutrient objective development, and the Central Valley Drinking Water Policy.	Section 8.2.1.6 regards regulations that establish numerical water quality objectives for use in the assessment of potential impacts of project implementation. Many of the cited policies and regulations are described in Section 8.3 of Chapter 8.
1527	151	[From ATT 1:] Section: 8.2.1.6 Page: 8-21 Line: 41-43 Type: WQ, WS, ERROR Key Document Text: "The incorporation of the Maximum Contaminant Levels, which apply to treated drinking water systems regulated by Department of Public Health, makes the MCLs also applicable to ambient receiving water with respect to the regulatory programs	The identified section has been modified to indicate the enforceability of secondary MCLs. The change does not alter the conclusions of the water quality impact analysis, as secondary MCLs were used for the purposes of evaluating the potential of project actions to exceed a threshold of significance in cases where they were the lowest concentration objective.

DEIRS Ltr#	Cmt#	Comment	Response
		administered by the Regional Water Boards." Comment: This text is incorrect and must be revised. Maximum Contaminant Levels are not always applied to treated water and can vary between water systems. The specific regulations in Title 22 indicate whether compliance is based on raw or treated water (Sections 64431/64432, 64442/64443, 64444/64445, 64449). In addition, a water system must continue the compliance location based on historical sites (raw vs. treated) so that may be the controlling factor. MCLs apply at varying locations and the text should reflect those conditions. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook /dwregulations-2013-07-01.pdf	
1527	152	[From ATT 1:] Section: 8.2.1.7 Page: 8-23 Line: Table 8-2 Type: ERROR Key Document Text: "Omission" Comment: The table title should include Sacramento and San Joaquin River tributaries that are referenced in table. It is unclear when the EIR/EIS evaluation is including these watershed reaches.	This table is a presentation of the Clean Water Act section 303(d) listed pollutants within the Delta only; not upstream tributaries. The identification of the Sacramento River and San Joaquin Rivers in the table is because portions of these water bodies are within the Delta. No change was made to the table title.
1527	153	[From ATT 1:] Section: 8.2.1.7 Page: 8-24 Line: Table 8-3 Type: ERROR Key Document Text: "Omission" Comment: Delta Methylmercury Total Maximum Daily Load adoption status should be included.	The Delta TMDL is included in Table 8.3. The model used to develop this TMDL is used in the methylmercury analysis presented in Appendix 8I, Mercury, in the Final EIR/EIS.
1527	154	[From ATT 1:] Section: 8.2.1.8 Page: 8-26 Line: 34-36 Type: WQ, WS, ERROR	Section numbering was incorrect and has been revised in this Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "In light of these issues, the constituents of concern identified in Table 8-5 are addressed in detail for the purposes of characterizing existing water quality in the study area (Section 8.1.3, Existing Water Quality) and to support the water quality impact assessments." Comment: This section reference is incorrect, needs to be reviewed and revised.	
1527	155	[From ATT 1:] Section: 8.2.1.8 Page: 8-26 Line: 39-42 Type: WQ, WS, ERROR Key Document Text: "The constituent-specific sections described subsequently (Section 8.1.3) characterize the potential effects on beneficial uses and various receptors, including known information regarding specific locations in the Delta most affected by the constituents." Comment: Reference to Section 8.1.3 appears in error.This section reference is incorrect, needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	156	[From ATT 1:] Section: 8.2.1.8 Page: 8-29 Type: WQ, WS, ERROR Key Document Text: "Table 8-5" Comment: For the Municipal and Domestic Water Supply beneficial use temperature should have an "X", and the evaluation should be presented in this chapter. Also, the trace metals, others category should be further expanded or footnoted to show all of interest to the MUN use.	Please refer to Master Response 14 regarding temperature effects on the municipal and domestic water supply beneficial use (MUN). Table 8-5 has been updated per the first part of this comment. Regarding trace metals, MUN is identified as a beneficial use affected by other trace metals in the table. More information on specific trace metals and their effects on the MUN beneficial use are provided in Sections 8.2.3.16 and 8.4.1.7 of the Draft EIR/EIS (Sections 8.1.3.16 and 8.3.1.7 of the Final EIR/EIS), and in the assessment of trace metals as part of Impacts WQ-27 and WQ-28 in the Draft and Final EIR/EIS (See Chapter 8).
1527	157	[From ATT 1:] Section: 8.2.2.1 Page: 8-27 Line: 4-32 Type: SCOPE, WQ Key Document Text: "Omission" Comment: Section should provide a table or appendix of tables that describe the sources of	The sources of data relied upon for characterization of water quality in the Environmental Setting/Affected Environment section of Chapter 8 are listed in Section 8.2.2.1. Please refer to Master Response 14 for additional response regarding data sets used for the Environmental Setting/Affected Environment.

DEIRS Ltr#	Cmt#	Comment	Response
		data for the constituents considered. At a minimum, the table(s) should provide a summary of the year range, reporting limits, type of sample, locations, and number of samples. Also, the database used should be made available for use and review.	
1527	158	[From ATT 1:] Section: 8.2.2.2 Page: 8-27 Line: 34-36 Type: WQ, WS Key Document Text: "Based on data availability, data continuity, and geographic location, a total of 20 water quality monitoring stations were selected to characterize the water quality conditions in the study area (Figure 8-7)." Comment: Limiting data collection to those sets easily accessed through DWR likely precluded a comprehensive data evaluation in the areas upstream of the Delta. These sites should have been supplemented with reputable local programs, such as current Municipal and Domestic Water Supply users regulatory compliance monitoring data, to ensure a sufficient number of data points. http://www.cdph.ca.gov/certlic/drinkingwater/Pages/EDTlibrary.as px. Moreover there are a number of active data collection efforts by California Department of Pesticide Regulation, the Coordinated Monitoring Program (SSQP permit required river monitoring), and others.	Please see response to comment 1527-67. Please refer to Master Response 14 regarding presentation and use of data in the Environmental Setting section of Chapter 8.
1527	159	[From ATT 1:] Section: 8.2.2.2 Page: 8-31 Line: Table 8-6 Type: SCOPE, WQ Key Document Text: "Delta Source Water Locations" Comment: Selection of Sacramento River at Hood over the legislative definition of the Delta is inconsistent with the 'boundary' approach and excludes the upstream reach where a number of existing and proposed municipal drinking water intakes are located. The reach from I Street (or further upstream) to Hood should be evaluated in more detail as this is the area of increased impact from the BDCP intakes and other existing proposed intakes in the vicinity. Certainly, immediately upstream and downstream of the Conservation Measure 1 intakes should be evaluated.	The water quality data for the Sacramento River at Hood is presented to characterize the river prior to entering the Delta for the environmental setting. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	160	[From ATT 1:] Section: 8.2.2.2 Page: 8-31	More specific references are included in subsequent tables where the data is summarized (for example, Table 8-7 includes the reference as DWR 2009b.) The full reference is in the references section at the end of the chapter.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 1 Type: WQ, WS Key Document Text: "Table 8-6" Comment: For the four north of Delta locations the data source is listed as DWR, but this is insufficient reference to identify which monitoring program and time period the data represents. A footnote needs to be added to further clarify the source.	
1527	161	[From ATT 1:] Section: 8.2.2.3 Page: 8-32 Line: 20-38 Type: SCOPE, WQ Key Document Text: "However, these locations generally represent the water quality occurring at these perimeter locations in the Delta." Comment: Immediately upstream and downstream of the BDCP intakes should be evaluated in greater detail to understand with higher resolution the effects on water quality in this critical area. Hood is much further downstream than the I Street Bridge.	Although Hood is downstream of the I Street Bridge, both locations are virtually always made up of 100% Sacramento River water, and thus have similar water quality for most constituents. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	162	[From ATT 1:] Section: 8.2.3 Page: 8-31 Line: 30-33 Type: WQ, ERROR Key Document Text: "The CEQA baseline, Existing Conditions, is defined in Appendix 3D and for the purposes of quantitative water quality assessments (as described in Section 8.3.4, Effects and Mitigation Approaches) is represented by Existing Conditions modeling runs, not historical water quality monitoring data as presented below." Comment: This section reference is incorrect, and needs to be reviewed and revised. Also, it is unclear why the basis for existing conditions of the water quality are not based on real data results instead of model runs - which were not available for many of the constituents of interest.	An editorial error caused all internal section referencing in Chapter 8 of the Draft EIR/EIS to be incorrect. Section references have been corrected throughout the document. The primary reasons why historical water quality data are not used to define existing conditions for quantitative constituents are: 1) the SWP and CVP system operates differently in the past couple of years than it did in the past, due to court decisions and Biological Opinions, and 2) there is not a sufficiently long period of time since the SWP and CVP system have been operated under the rules in place today to characterize water quality under the range of hydrologic conditions expected. Modeling allows simulation of current operational constraints and rules over the full range of expected hydrology, thus providing a better description of true "Existing Conditions" against which to compare modeled project conditions for quantitative constituents. Thus, the use of CALSIM and DSM2, and associated models, is considered to be the best available method to assess water quality conditions under baseline conditions and conditions with a set of proposed changes in physical facilities and operations for those constituents. For constituents assessed qualitatively, Existing Conditions is defined according to historical monitoring data and a qualitative understanding of the environment as it existed at the time of the Notice of Preparation. Chapter 8 of the FEIR/EIS has been updated to include the above explanation for why Existing Conditions were defined according to model results for quantitative constituents. These models are calibrated using real data before model runs They also receive peer review for accuracy. The models have been used for data analysis for State Water Board WQ programs. A sensitivity analysis has also been performed on modeling results. Appendix 3D, Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions, in the Draft EIR/EIS does describe the basis for developing the Existing Conditions assumptions. Additional information is presented in Appendix 5A, Sections A through B. The modeling output was used instead of real data to provide a basis of comparison

DEIRS Ltr#	Cmt#	Comment	Response
			for the No Action Alternative and the action alternatives under a range of hydrologic conditions with the same water demand and operational assumptions. Historical real data represents differing hydrologic conditions with differing demands and operational assumptions. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS. For more information on environmental baselines please see Master Response 1 and Appendix 3D of the Final EIR/EIS.
1527	163	[From ATT 1:] Section: 8.2.3 Page: 8-34 Line: 33-34 Type: ERROR Key Document Text: "For more information on the comparisons made to the Existing Conditions modeling run for assessment purposes, see Section 8.3.3.2, Comparisons." Comment: This section reference is incorrect, needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	164	[From ATT 1:] Section: 8.2.3.8 Page: 8-58 Line: 35-37 Type: WQ Key Document Text: "Data for most Endocrine-disrupting compounds, Pharmaceutical and personal care products, and nitrosamines in the Delta and the north- and south-of-Delta locations are very sparse because most compounds are not typically part of water quality sampling programs." Comment: The previously mentioned water quality monitoring programs (DWR, Bay Delta and Tributaries Project, Water Data Library) do not have significant data on these constituents, but there is data available in the watershed from USGS, MUN users, as well as some industrial dischargers (such as Aerojet on the American River). This data should have been collected to contribute to a more thoughtful evaluation of these constituents. References to studies outside of the Project Area are not technically supported due to the site specific nature of the sources. http://www.cdph.ca.gov/certlic/drinkingwater/Pages/EDTlibrary.aspx, http://cida.usgs.gov/nawqa_public/apex/f?p=136:1:0, https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=esmrAnalytical, http://www.ceden.us/AdvancedQueryTool	Please refer to Master Response 14 regarding presentation and use of data in the Environmental Setting section of Chapter 8. Please also see Chapter 8, Water Quality.
1527	165	[From ATT 1:]	Please see response to comment 1527-164.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.2.3.9 Page: 8-63 Line: Table 8-14 Type: SCOPE, WQ Key Document Text: "Omission" Comment: Data used is limited. However, significantly more data are available at the locations.	
1527	166	[From ATT 1:] Section: 8.2.3.10 Page: 8-69 Line: 33-37 Type: WQ Key Document Text: "The beneficial uses most directly affected by nutrient concentrations include those relevant to aquatic organisms (cold freshwater habitat, warm freshwater habitat, and estuarine habitat), drinking water supplies (municipal and domestic supply), and recreational activities (water contact recreation, noncontact water recreation), which can be indirectly affected by the nuisance eutrophication effects of nutrients (Table 8-1)." Comment: The indirect effects of increased nutrients contributing to algal growth on the Municipal and Domestic Water Supply use should be presented here as well, including taste and odor, interference with operations, increased levels of organic carbon, and the potential for algal toxins.	Section 8.2.3.10 is within the "Environmental Setting/Affected Environment" section of Chapter 8 and provides background information for nutrients. The potential for nutrient concentration changes to indirectly affect municipal beneficial uses is described on p. 8-70/71 of the Draft EIR/EIS. For more information on water quality please see Master Response 14.
1527	167	[From ATT 1:] Section: 8.2.3.11 Page: 8-77 Line: 8-9 Type: WQ, ERROR Key Document Text: "Peak concentrations are important to municipal drinking water purveyors because of regulations that require advanced treatment depending on Total Organic Carbon concentrations." Comment: This statement is incorrect. Regulations are based on quarterly and annual running averages. Operations are adjusted for system performance.	This paragraph cited by this text is referring to ambient concentrations of TOC and water purveyors concerns with seasonal spikes, not regulatory compliance averaging periods.
1527	168	[From ATT 1:]	Please see response to comment 1527-167.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.2.3.11 Page: 8-77 Line: 8-9 Type: ERROR, WQ Key Document Text: "Peak concentrations are important to municipal drinking water purveyors because of regulations that require advanced treatment depending on TOC concentrations." Comment: It is stated elsewhere in the document that drinking water purveyors are concerned about annual averages of Total Organic Carbon, not peak concentrations. The median concentrations are most relevant to facility operation.	
1527	169	[From ATT 1:] Section: 8.2.3.11 Page: 8-77 Line: Table 8-20 Type: ERROR Key Document Text: "Omission" Comment: The table does not indicate the Sacramento River site location.	The footnote for this line indicates that the site is Hood/Greene's Landing.
1527	170	[From ATT 1:] Section: 8.2.3.11 Page: 8-78 Line: 1-13 Type: WQ, ERROR Key Document Text: "Dissolved Organic Carbon measured in the Sacramento River shows a trend of gradually increasing DOC with distance from Shasta Dam, where median concentrations of about 1 to 1.5 mg/L increase to about 1.5 mg/L to 2 mg/L at Hood (CALFED Bay-Delta Program 2007b:5-58). Major tributaries such as the Feather and American Rivers contain relatively low DOC as well, with median measured concentrations of 1.5 mg/L-2 mg/L. DOC on the lower San Joaquin River is comparatively greater but generally decreases with downstream distance, where median concentrations at Stevinson are nearly 6 mg/L and median concentrations at Vernalis are about 3 mg/L (CALFED Bay-Delta Program 2007b:5-49). This decrease in DOC can be attributed to inputs from tributaries such as the Merced, Tuolumne, and Stanislaus Rivers, with median DOC concentrations of 2 mg/L. Mean values for the north-of-Delta area during water years 2001-2006 ranged from 1.5 mg/L at the Feather River at Oroville to 2.0 mg/L at the Sacramento River at Veterans Bridge (Table 8-21). South-of-Delta mean values were higher	The discussion here is intended to provide a general characterization of dissolved organic carbon levels in different source waters in the setting, not to imply quality of water as a drinking water source. Also please refer to Master Response 14 regarding presentation and use of data in the Environmental Setting section of Chapter 8. Also see Chapter 8 of the Final EIR/EIS. For information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		than north- of-Delta stations examined (3.2 to 3.4 mg/L), and comparable to the mean at the Banks headworks (3.3 mg/L, Figure 8-38)." Comment: The discussion is confusing in its characterization of concentrations in various waters and the implied quality of the water as a drinking source. A maximum value is discussed as the critical assessment at first; however, mean values are then used. There exist many conceptual models which better explain the sources, relative loadings from tributaries, and the general organic carbon discussion. We recommend revising this paragraph to more accurately describe the high quality of the Sacramento River so that it is more consistent with the Drinking Water Policy Workgroup conclusions on organic carbon.	
1527	171	[From ATT 1:] Section: 8.2.3.11 Page: 8-78 Line: 22-23 Type: ERROR Key Document Text: "The lowest observed mean concentrations of Total Organic Carbon in the Delta during the water years 2001-2006 ranged from 2.7 to 3.0 mg/L, occurring at the Sacramento River at Hood" Comment: It is not clear if the range of mean values at Hood is seasonal mean, annual mean, etc. It does not seem to match the median value shown in Table 8-20.	The sentence has been revised to state that the lowest mean total organic carbon concentrations shown in Figure 8-41 are for the Sacramento River at Hood and Mallard Island. The mean in Figure 8-41, and discussed in the sentence addressed in this comment, refers to the mean of the data from 2001–2006, not a seasonal or annual mean. It does not match the median value in Table 8-20, because one value is a mean and the other is a median, and because the statistics presented in Table 8-20 are for the period 1998–2006.
1527	172	[From ATT 1:] Section: 8.2.3.11 Page: 8-78 Line: Figure 8-42 Type: ERROR Key Document Text: "Presentation" Comment: In presenting side-by-side plots from different sites, it would be useful to use the same scale, especially if the intent is comparison. More information should be provided on whether monitoring programs have sample collection targets. For example, Sacramento River at Veterans Bridge is known to be biased to wet weather events.	The information presented is for background informational purposes. Maps included provide the best means of comparison between stations. The time series plots are not meant to be compared side by side, but are presented to understand temporal dynamics at a given station. Because the data is provided as a means to understand the environmental setting, and not necessarily to specifically inform the assessment, whether or not individual monitoring programs target certain kinds of events was not considered relevant for this section.
1527	173	[From ATT 1:] Section: 8.2.3.11 Page: 8-78, 8-79 Line: 19-20, 4-5	The data in Tables 8-21 and 8-22 is not presented for direct comparison of the values to each other, but to provide general context for water quality conditions in various areas of the affected environment. Comparisons between concentrations in various parts of the affected environment made in the previous paragraphs reference CALFED documents, not the data in the tables.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ Key Document Text: "Tables 8-21 and 8-22" Comment: There is a wide variety in the number of samples available for the various locations. Direct comparison of these values is not valid if the data sets do not represent the same period or frequency.	
1527	174	[From ATT 1:] Section: 8.2.3.11 Page: 8-79 Line: 7-8 Type: WQ Key Document Text: "There are no state or federal regulatory water quality objectives/criteria for organic carbon or any USEPA-recommended criteria." Comment: The Central Valley Delta Drinking Water Policy, adopted in July 2013, clarifies that organic carbon is included in the chemical constituents narrative. This text needs to be revised accordingly. http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2013-0098_res.pdf	The identified section has been modified to indicate the Central Valley Water Board's adoption of the Basin Plan Amendment which added a narrative objective for organic carbon. The adoption of the BPA occurred following the completion of the initial draft of the EIR/EIS.
1527	175	[From ATT 1:] Section: 8.2.3.11 Page: 8-79 Line: 17-20 Type: WQ Key Document Text: "Existing Delta water quality regularly exceeds 2 mg/L Total Organic Carbon, and existing treatment plants already are obligated to remove some amount of TOC. Nevertheless, changes in source water quality at municipal intakes may trigger additional enhanced TOC removal, and associated increased treatment costs." Comment: It should be noted that this evaluation does not address the area upstream of the North Delta, where source water Total Organic Carbon levels are generally at or below 2 mg/L on a running annual basis and no treatment technique for TOC removal is required (as documented in the American and Sacramento Rivers Watershed Sanitary Surveys and their updates). Any increase above the current baseline levels may trigger increased treatment and associated costs.	As the text states, the statement applies to Delta water quality. As described in section 8.4.3., Effects and Mitigation Approaches, "changes in system operations and resulting reservoir storage levels and river flows would not be expected to cause a substantial long-term change in DOC concentrations in the water bodies upstream of the Delta." For more information on water quality please see Master Response 14. Regarding upstream reservoir effects please see Master Response 25.
1527	176	[From ATT 1:] Section: 8.2.3.12	The term "pathogens" has been used appropriately in this section. This section goes on to present background on specific pathogens relevant to the assessment.

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-80 Line: 14 Type: WQ Key Document Text: "The term pathogens refers to viruses, bacteria, and protozoa that pose human health risks." Comment: The term pathogen is used in a very broad manner, and it should be noted more specifically that the prevalence, human health impact, and drinking water treatability for this group of constituents should not be generalized.	
1527	177	[From ATT 1:] Section: 8.2.3.12 Page: 8-80 Line: 16-19 Type: WQ Key Document Text: "Most data that exist regarding pathogens are for coliform bacteria, which are indicators of potential fecal contamination by humans or other warm-blooded animals because of their relative abundance and ease of measuring in water samples." Comment: The text needs to be modified to add language to clarify that fecal coliform or E. coli are indicators of fecal contamination, not total coliform.	The sentence as written is correct. Total coliform is commonly tested as an indicator of fecal coliform presence.
1527	178	[From ATT 1:] Section: 8.2.3.12 Page: 8-80 Line 20-22 Type: WQ Key Document Text: "Sources of pathogens include wild and domestic animals, aquatic species, urban stormwater runoff, discharge from Water Treatment Plants, and agricultural point and nonpoint sources such as confined feeding lots and runoff." Comment: Another source of pathogens in the watershed is related to spills associated with wastewater, whether from collection systems or treatment failures.	The sources listed are the primary sources, not an exhaustive list of all sources of pathogens.
1527	179	[From ATT 1:] Section: 8.2.3.12 Page: 8-82 to 8-83	The total coliform requirement is a maximum contaminant level, not associated with the surface water treatment rules, as indicated by the placement of the total coliform MCL as a bullet item on the referenced pages. The text has been revised. However, this does not result in a change in the water quality assessment findings related to pathogens.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 38-44, 1-2 Type: WQ, WS, ERROR Key Document Text: "U.S. Environmental Protection Agency surface water treatment rules require that systems using surface water, or groundwater under the direct influence of surface water, to: (1) disinfect water to destroy pathogens and (2) filter water or meet criteria for avoiding filtration to remove pathogens, so that the following contaminants are controlled at the following levels (U.S. Environmental Protection Agency 2009d). Total coliform: no more than 5% positive samples in a month (for water systems that collect fewer than 40 routine samples per month, no more than one sample can be positive per month). Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli. If two consecutive total coliform positive samples occur, and one is also positive for E. coli/fecal coliforms, the system is deemed as having an acute MCL violation." Comment: This section is incorrect and needs to be revised. This section presents an insufficient description of the Surface Water Treatment Rule, Interim Enhanced Surface Water Treatment Rule, and the Long Term 1/Long Term 2 Enhanced Surface Water Treatment Rules. In addition, it inaccurately refers to the requirements of the Total Coliform Rule (which apply to treated water quality in the distribution system). See descriptions in Title 22, Chapter 17 - http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook /dwregulations-2013-07-01.pdf	
1527	180	[From ATT 1:] Section: 8.2.3.13 Page: 8-83 Line: 13-16 Type: WQ Key Document Text: "Current use pesticides include carbamates (e.g., carbofuran), organophosphates (e.g., chlorpyrifos, diazinon, methyl parathion, malathion), thiocarbamates (e.g., molinate, thiobencarb), and more recently pyrethroids (e.g., permethrin, cypermethrin), a class of synthetic insecticides applied in urban and agricultural areas." Comment: The identification of current use pesticides is incomplete and does not consider use of the pesticides in the upstream watersheds. This process should be reevaluated to include DPR reporting (http://calpip.cdpr.ca.gov/main.cfm) to identify pesticides of key interest to various beneficial uses. The Municipal and Domestic Water Supply use potential pesticides of interest for consideration of monitoring and/or evaluation in the Sacramento Valley have been identified to the Central Valley Regional Board as part of the Irrigated Lands Regulatory Program by the Sacramento River Joint Source Water Protection Program (TDC Environmental; Rice Pesticide Prioritization memo dated 9/13/13 and Sacramento River Watershed Pesticide Prioritization memo dated 10/7/13).	The list of pesticides is highlighting the predominant pesticides known to be used in the watershed. Please see response to comment 1527-14 for more information on pesticides.

DEIRS Ltr#	Cmt#	Comment	Response
1527	181	[From ATT 1:] Section: 8.2.3.13 Page: 8-83 Line: 25-28 Type: WQ Key Document Text: "The critical pathways for pesticides entering the rivers, streams, and the Delta include agricultural and urban stormwater runoff, irrigation return water, drift from aerial or ground-based spraying, and periodic release of agricultural return flows from rice production (Werner and Oram 2008)." Comment: Another pathway documented by the Central Valley Regional Board in the Irrigation Lands Regulatory Program is seepage through levees (Rice Pesticides Program 2013 Annual Monitoring Report) and subsurface tile drains (Attachment A to the WDR [R5-2014- XXXX] for Sacramento Valley Rice Growers), and these should be added to the text.	The pathways noted by the commenter are related to agriculture sources, which are reflected in the text cited by this comment.
1527	182	[From ATT 1:] Section: 8.2.3.13 Page: 8-83 Line: 35-36 Type: WQ Key Document Text: "The timing of pesticide input to Delta waters is related to application rates, when pesticides are applied to farmed land, runoff events, and other transport processes (Kuivila and Jennings 2007)." Comment: Another factor affecting pesticide input to waters is the application method as well as best management practices (such as pesticide hold times) implemented through management programs such as the Irrigated Lands Regulatory Program.	The discussion here is not intended to be an exhaustive list of all factors controlling fate and transport of pesticides.
1527	183	[From ATT 1:] Section: 8.2.3.13 Page: 8-85 Line: Table 8-23 Type: ERROR Key Document Text: "Diazinon Concentrations, by Water Body Category" Comment: Data is irrelevant and not representative of current conditions, because it is based on a 2006 study. More recent data should be used after the diazinon and chlorpyrifos	Although the information presented is from an older study, it still provides useful information representative of the existing conditions of the Delta. Diazinon has not been banned and is still used in agriculture. Chlorpyrifos has not been banned either; they are regulated in the Central Valley by a TMDL. Pesticide use and trends are constantly changing, so monitoring data generally only provide a snapshot and can be useful for inferring general trends, such as is done in the text. For more information regarding water quality please see Chapter 8 of the FEIR/EIS and Master Response 14.

DEIRS Ltr#	Cmt#	Comment	Response
		bans became effective.	
1527	184	[From ATT 1:] Section: 8.2.3.13 Page: 8-85 Line: Table 8-24 Type: ERROR Key Document Text: "Table 8-24. Chlorpyrifos Concentrations, by Water Body Category" Comment: Data are irrelevant and not representative of current conditions because it is based on a 2006 study. More recent data should be used after the diazinon and chlorpyrifos bans became effective.	Please see response to comment 1527-183.
1527	185	[From ATT 1:] Section: 8.2.3.13 Page: 8-85 Line: 4-5 Type: WQ Key Document Text: "Monitoring efforts at the north-of-Delta stations since 2001 have resulted in no pesticide detections, while monitoring at the south- of-Delta stations resulted in various detections." Comment: This text needs to be expanded to explain that the evaluation was based on a few selected sites (four), and three of those were located above the major agricultural areas in the Central Valley. The conclusion that this is not a significant concern is based on too little data not sufficiently representing source contributions. This evaluation could easily be supplemented with data from the Central Valley Regional Board Irrigated Lands Regulatory Program. http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/index.shtml	Please see response to comment 1527- 14. Pesticides are of concern based on the available data and were assessed for each alternative in the Draft EIR/EIS and RDEIR/SDEIS.
1527	186	[From ATT 1:] Section: 8.2.3.16 Page: 8-100 Line: 42-43 Type: WQ Key Document Text: "Trace metals such as arsenic, cadmium, chromium, copper, iron, lead,	Setting information for these metals was included in the Partially Recirculated Draft EIR/EIS, as well as additional analysis of the potential effects of aluminum. This analysis has been carried forward and is also included in the Final EIR/EIS in the analysis under Impact WQ-27 (see Chapter 8).

DEIRS Ltr#	Cmt#	Comment	Response
		manganese, nickel, silver, and zinc occur naturally in the environment." Comment: The Screening Analysis (Appendix 8C) indicated that aluminum should have been evaluated as part of this process. This is a critical constituent in drinking water treatment and must be evaluated for its impacts. This section must be revised to add aluminum to the evaluation.	
1527	187	[From ATT 1:] Section: 8.2.3.16 Page: 8-101 Line: 29-31 Type: WQ Key Document Text: "Additional background for arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel, silver, and zinc is provided below." Comment: This section does not provide background for chromium, iron, or manganese as noted in the text. This section needs to be revised to include these constituents in the background, as well as the evaluation as per the Screening Analysis (Appendix 8C) and Trace Metals Analysis (Appendix 8N). Also, aluminum needs to be added to the evaluation as noted above.	Please see response to comment 1527-186. Please also see Master Response 14 and Chapter 8, Water Quality. For information on constituent screening analysis please see Appendix 8C of the Final EIR/EIS. Please also see Appendix 8N of the Final EIR/EIS.
1527	188	[From ATT 1:] Section: 8.2.3.16 Page: 8-101 Line: 25-28 Type: WQ Key Document Text: "Their study showed that cadmium, copper, and zinc were transported primarily in dissolved form upstream of major agricultural activities but primarily in colloidal form downstream. Iron and lead were transported primarily in colloidal form at all mainstem Sacramento River sites." Comment: The source analysis of the trace metals needs to be expanded to evaluate the contribution of the reservoirs to dissolved metal concentrations and better explain the transformation in downstream rivers.	The statement cited by this comment is regarding the Sacramento River downstream of Shasta Dam and, thus, addresses metals in and released from Shasta Reservoir. Transformation processes in the ambient environment would continue with implementation of the project alternatives. The analysis of trace metals in Chapter 8 of the Draft EIR/EIS evaluated effects on metals based on the dissolved fraction. For more information on water quality please see Master Response 14.
1527	189	[From ATT 1:] Section: 8.2.3.16 Page: 8-102 Line: 35-36	The list of sources of copper is not meant to be an exhaustive list. The water quality assessments for trace metals (including copper) considered the potential for source changes in upstream copper.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ Key Document Text: "Sources of copper contamination include natural deposits, industrial and urban wastewater, and urban stormwater runoff (Buck et al. 2006; U.S. Environmental Protection Agency 2009j)." Comment: Another source of copper in the Central Valley watershed is from agricultural use as an herbicide (http://calpip.cdpr.ca.gov/main.cfm). This text needs to be expanded to include that source, and the evaluations need to be expanded. Senate Bill 346 initiated the phase out of copper in brake pads, which is a significant source of copper in urban runoff.	
1527	190	[From ATT 1:] Section: 8.2.3.16 Page: 8-103 Line: 34-36 Type: WQ, WS Key Document Text: "In 2000, the Association of California Water Agencies conducted a study to summarize arsenic data from across the state and to assess the effect of U.S. Environmental Protection Agency's arsenic standard on California's drinking water programs (Saracino-Kirby 2000)." Comment: The use of groundwater data evaluation is not applicable to the surface water quality evaluation and should be removed. Also, this data is representative of statewide data, which can vary significantly from the waters of the Project Area. This data needs to be reviewed and refined further to present applicable data to this project if it is intended to be used in this assessment.	The cited text is providing context to arsenic as a constituent of concern, in that arsenic is a bigger concern for groundwater than for surface water. Data for surface waters is summarized immediately following the text that the commenter cites. All assessments were conducted using surface water data, not groundwater data.
1527	191	[From ATT 1:] Section: 8.2.3.16 Page: 8-104 Line: 41-44 Type: WQ, WS Key Document Text: "Based on water quality criteria and objectives, and typical levels in surface waters, it is generally the case that arsenic, iron, and manganese are of primary concern for drinking water, while cadmium, chromium, copper, lead, nickel, silver, and zinc are of concern because of potential toxicity to aquatic organisms." Comment: It should be noted that hexavalent chromium has been determined by California Department of Public Health and U.S. Environmental Protection Agency as a more significant human health risk and that primary Maximum Containment Levels are in development. In August 2013 CDPH proposed an MCL of 10 ug/L. This regulation is anticipated to be final in 2014 and should have been included in the metals assessment.	Impact WQ-27, which addresses effects of the alternatives on trace metals concentrations, and its supporting Appendix 8N, provide information to conclude that the project alternatives would not cause chromium concentrations to be above applicable criteria, including the chromium VI MCL adopted by the state that became effective on July 1, 2014. Also, see Appendix A of the RDEIR/SDEIS, Appendix 8C, page 8C-1 regarding chromium VI data availability.

DEIRS Ltr#	Cmt#	Comment	Response
		http://www.cdph.ca.gov/services/DPOPP/regs/Pages/DPH-11-005HexavalentChromiumMCL.aspx	
1527	192	[From ATT 1:] Section: 8.2.3.17 Page: 8-110 Line: 11-13 Type: WQ Key Document Text: "The construction and operation of dams in the Sacramento and San Joaquin River system have the effect of reducing Total Suspended Solids concentrations downstream because sediments become trapped in the reservoirs." Comment: The dams and associated reservoirs of the SWP and CVP system do provide a sedimentation process frequently, but the operation of the reservoirs can also contribute to turbidity in downstream rivers. Low lake levels leave significant shoreline exposed and exacerbate the "first flush" effect of fall storms, low lake levels can also result in stratified anoxic zones containing dissolved metals being discharged downstream, and rapid or large releases can cause instream erosion in downstream rivers. These impacts need to be identified and assessed further.	Impact WQ-29, which addresses effects of the project alternatives on TSS and turbidity, discusses "first flush events" in the Upstream of Delta section. The effect of reservoir storage on dissolved oxygen was expanded upon in the Impact WQ-9 for all alternatives in the RDEIR/SDEIS. Please see Chapter 8 of the Final EIR/EIS. Also see Master Response 14.
1527	193	[From ATT 1:] Section: 8.2.3.17 Page: 8-110 Line: 17-20 Type: WQ Key Document Text: "Given that the dam and levee systems in place are unlikely to be removed, the human activity that most likely affects sediment delivery to the Delta is soil erosion associated with agricultural and urban land uses. These activities are pertinent because they occur downstream from the major dams on the system (Schoellhamer et al. 2007b)." Comment: Although turbidity generally increases from upstream to downstream, this statement is not true in all instances. Consideration of reservoir operations on the impact of turbidity levels in the downstream rivers needs to be assessed.	Impact WQ-29 within the Effects and Mitigation Approaches section of Chapter 8 assesses the effects of the project alternatives, including effects of modified reservoir releases, on turbidity (and TSS) levels.
1527	194	[From ATT 1:] Section: 8.2.3.17 Page: 8-112 Line: 1-7	This text has been deleted in the Final EIR/EIS such that this paragraph now acknowledges that Surface Water Treatment Rules have turbidity requirements for treated drinking water using surface water or groundwater under the direct influence of surface water.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ, WS Key Document Text: "U.S. Environmental Protection Agency's Surface Water Treatment Rules require systems using surface water or groundwater under the direct influence of surface water to implement the appropriate disinfection and/or filtration techniques to minimize turbidity in treated drinking water (U.S. Environmental Protection Agency 2006a). At no time can turbidity go above 5 NTU; systems that use filtration must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month. As of January 1, 2002, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month." Comment: This text is incorrect and needs to be revised. This is an incorrect summary of the current versions of the Interim Enhanced Surface Water Treatment Rule. There needs to be distinction between the primary standards for turbidity associated with the Surface Water Treatment Rules and the secondary standard for turbidity (5 NTU). See Title 22, Chapter 17-http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	
1527	195	[From ATT 1:] Section: 8.3 Page: 8-112 Line: 11-12 Type: ERROR Key Document Text: "The federal and state agencies responsible for regulating water quality in the study area are:" Comment: This text needs to be revised to add the California Department of Public Health as the primacy agency over drinking water in California.	The State Water Resources Control Board now regulates the public drinking water system. The SWRCB is responsible for the enforcement of the federal and state safe drinking water acts. The language in the Final EIR/EIS addressing this issue has not been changed.
1527	196	[From ATT 1:] Section: 8.3.1.5 Page: 8-115 Line: 32-34 Type: WQ Key Document Text: "The owners and operators of public water systems are required to comply with primary (health-related) Maximum Contaminant Levels and encouraged to comply with secondary (nuisance- or aesthetics-related) MCLs." Comment: This text is incorrect and needs to be revised. This text does not accurately reflect California regulatory requirements. Although the Federal secondary standards are non-enforceable for water agencies, the State of California's drinking water program has	The identified section has been modified to indicate the enforceability of secondary MCLs. See response to comment 1527-151.

DEIRS Ltr#	Cmt#	Comment	Response
		adopted those as enforceable standards. A sentence should be added to clarify that for water agencies in California all primary and secondary standards are enforceable and the standards must be met. See Title 22, Chapter 15, Article 16 - http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	
1527	197	[From ATT 1:] Section: 8.3.1.5 Page: 8-115 Line: 35 Type: WS, ERROR Key Document Text: "Safe Drinking Water Act drinking water standards apply to treated water as it is served to consumers." Comment: This text is incorrect and must be revised. Maximum Contaminant Levels are not always applied to treated water and can vary between water systems. The specific regulations in Title 22, Chapter 15 indicate whether compliance is based on raw or treated water (Sections 64431/64432, 64442/64443, 64444/64445, 64449). In addition, a water system must continue the compliance location based on historical sites (raw vs. treated), so that may be the controlling factor. MCLs apply at varying locations, and the text should reflect those conditions. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	The identified section has been modified to indicate the applicability of MCLs to raw water as well as treated water. Please also see response to comment 1527-151.
1527	198	[From ATT 1:] Section: 8.3.1.5 Page: 8-116 Line: 1-6 Type: WQ, ERROR Key Document Text: "Some constituents of Delta water are of particular concern to municipal contractors because they are either not removed, only partially removed, or are transformed by the treatment process into hazardous substances by community-used water treatment processes. Constituents of concern include Total Dissolved Solids, chlorides, bromides, and organic compounds. These substances can be removed from raw water by advanced water treatment processes, but to do so substantially increases the cost borne by municipalities." Comment: This text is not complete and should be qualified or corrected. There are many other constituents of concern that are not fully removed by conventional filtration, such as trace metals, or that have the potential to transform during treatment, such as organics. In addition to the cost for removal being higher, when source water levels are elevated there is greater possibility of detectability in treated water which can increase the risk to	The text cited by the comment is in the "Safe Drinking Water Act" section of the setting, within Chapter 8, and is providing an overview of constituents of "particular concern" to in drinking water treatment; it is not a list of all constituents of concern in drinking water. As noted in the comment, organics are of concern and organics is specifically mentioned as a constituent of concern. Also, the trace metals assessments in Impact WQ-27 addresses potential effects to human health beneficial uses from drinking water. Please see Chapter 8 of the Finale EIR/EIS and Master Response 14.

DEIRS Ltr#	Cmt#	Comment	Response
		public health.	
1527	199	[From ATT 1:] Section: 8.3.1.6 and 8.3.1.7 Page: 8-116 Line: 7-38 Type: WS, ERROR Key Document Text: "Summary of the Surface Water Treatment Rule and Stage 1 and Stage 2 Disinfectants and Disinfection Byproducts Rule and Long- Term 1 and Long-Term 2 Enhanced Surface Water Treatment Rule" Comment: We have concerns about how these sections are written and organized; we recommend that they be rewritten and organized to reflect the requirements more clearly and accurately. The microbial rules should be written in one section with correct references to all four Surface Water Treatment Rules, including the Interim Enhanced SWTR. The disinfection by-product rules should be written separately with their requirements. See Title 22, Chapters 15.5 and 17 - http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	Because the sections cited by the commenter are intended to provide an overview of the Summary of the Surface Water Treatment Rule and Stage 1 and Stage 2 Disinfectants and Disinfection Byproducts Rule and Long- Term 1 and Long-Term 2 Enhanced Surface Water Treatment Rule, no changes have been made to these sections.
1527	200	[From ATT 1:] Section: 8.3.2.11 Page: 8-121 Line: 22-28 Type: WS, ERROR Key Document Text: "Department of Public Health is designated by U.S. Environmental Protection Agency as the primary agency to administer and enforce requirements of the federal Safe Drinking Water Act in California. Public water systems are required to monitor for regulated contaminants in their drinking water supply. California's drinking water standards (e.g., Maximum Contaminant Levels) are the same or more stringent than the federal standards and include additional contaminants not regulated by USEPA. Like the federal MCLs, California's primary MCLs address health concerns, while secondary MCLs address aesthetics, such as taste and odor. The California SDWA is administered by DPH primarily through a permit system." Comment: This section is inaccurate. Department of Public Health is the "primacy" agency. The text needs to be revised to accurately reflect California enforcement of primary and secondary standards (Title 22, Chapter 15). California secondary standards are enforceable for water agencies, and this needs to be reflected in the text. California has developed standards for numerous constituents without a Federal MCL, and those should be addressed. Also, California point of compliance with MCLs varies depending on the specific constituent and water system.	Please see response to comment 1527-151.

DEIRS Ltr#	Cmt#	Comment	Response
		http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	
1527	201	[From ATT 1:] Section: 8.3.2.13 Page: 8-123 Line: 4-16 Type: WQ, WS, ERROR Key Document Text: "Summary of the Central Valley Water Board Drinking Water Policy" Comment: This text needs to be revised to reflect the known conditions of the Drinking Water Policy. This section is outdated and should have been updated to include the July 2013 Regional Board-adopted version of the Policy. http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2013-0098_res.pdf	Please see response to comment 1527-174.
1527	202	[From ATT 1:] Section: 8.4.1 Page: 8-127, 8-128 Line: 37-40, 1-2 Type: WQ, SCOPE Key Document Text: "Would implementation of the Alternatives result in water quality changes to the Plan Area, Upstream of the Delta, or SWP/CVP Export Service Areas that would result in exceedances of water quality criteria/objectives, or substantially degrade water quality, of/by sufficient frequency, magnitude, and geographic extent as to cause or substantially contribute to significant adverse effects on the beneficial uses of water in these areas of the affected environment?" Comment: This assessment is incomplete. Why is the assessment limited to the Plan Area? If there are effects in other areas they should be assessed as well.	Please see response to comment 1527- 67. For information on operational criteria and adaptive management please see Master Response 28 and Master Response 33, respectively. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	203	[From ATT 1:] Section: 8.4.1 Page: 8-128 Line: 3-4 Type: WQ, SCOPE Key Document Text: "Would implementation of the Alternatives result in beneficial effects	Beneficial effects on water quality means that there would be an improvement or a reduction in a constituent or parameter of concern that would enhance conditions for one or more beneficial uses. No change to the text has been made.

DEIRS Ltr#	Cmt#	Comment	Response
		on water quality in these areas?" Comment: Does "beneficial effects on water quality" refer to support of beneficial uses? This phrase should be revised for clarity.	
1527	204	[From ATT 1:] Section: 8.4.1 Page: 8-128 Line: 11-15 Type: WQ Key Document Text: "Moreover, models available for use in addressing such questions have been previously developed for the effects of operations of the SWP-CVP facilities for only a few water quality parameters (e.g., Electrical Conductivity, Dissolved Organic Carbon, and temperature) in defined portions of the affected environment (i.e., the Delta), and are poorly developed or not developed at all for nearly all other water quality parameters and locations, nor for most of the conservation measures proposed for implementation." Comment: There are other models that cover the same area for additional constituents (ammonia, nitrate, phosphorus, and others) or could be expanded to consider other constituents (methylmercury, pesticides, etc.). It is within the scope of this larger project to better develop these tools. The Central Valley Drinking Water Policy modeling efforts could be built on to better develop this. (http://www.waterboards.ca.gov/rwqcb5/water_issues/drinking_water_policy/dwp_wrkgrp_synthesis_rpt.pdf)	For information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	205	[From ATT 1:] Section: 8.4.1 Page: 8-128 Line: 14-17 Type: WQ Key Document Text: "Conservative parameters were evaluated using available models used for SWP-CVP planning and operations (i.e., California Water Resources Simulation Model [CALSIM II, Delta Simulation Model 2 [DSM2], and Reclamation's Temperature Model) wherever applicable, as well as constituents directly addressed by these models, and included EC, Dissolved Organic Carbon, and temperature." Comment: Dissolved Organic Carbon should not be considered a conservative constituent over large areas or time scales.	Simulation of DOC transport in DSM2 was successfully validated in 2001 by DWR (Pandey, 2001). DSM2 assumes DOC is a conservative parameter. For more information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	206	[From ATT 1:] Section: 8.4.1	Please see response to comment 1527- 67. Existing regulatory requirements are already in place to ensure SWP/CVP operations meet current water quality objectives intended to protect beneficial uses. Please refer also to Master Response 33, which describes the Adaptive Management process presented in the proposed

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-128 Line: 28-30 Type: WQ, AM Key Document Text: "In general, the fewest water quality changes of importance are expected to occur upstream of the Delta, followed by the SWP/CVP Export Service Areas, with the greatest number and magnitude of water quality changes expected for the Plan Area." Comment: We are concerned about the assumption that it is expected that the fewest water quality changes of importance are expected to occur upstream of the Delta. Potential water quality changes associated with revised CVP and SWP system operations to upstream waterbodies could be very significant to local users. This statement needs to be supported by water quality evaluations and verified in the future through the Adaptive Management program.	project. Chapter 3 of the Final EIR/EIS also describes an Adaptive Management and Collaborative Science approach for new conveyance facility alternatives. For information on operational criteria please see Master Response 28.
1527	207	[From ATT 1:] Section: 8.4.1 Page: 8-128 Line: 34-35 Type: WQ Key Document Text: "Models are available to simulate hydrodynamic and water quality changes within the Delta region." Comment: Modeling should be performed in all BDCP affected areas so that all impacts can be sufficiently assessed. There are models such as Watershed Analysis Risk Management Framework that have also been developed for the watershed areas tributary to the Delta that were successfully integrated with CALSIM and DSM2.	For information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	208	[From ATT 1:] Section: 8.4.1 Page: 8-129 Line: 3-13 Type: WQ Key Document Text: "The constituents of concern in the affected environment included both physically and chemically conservative and non-conservative parameters. The concentrations of conservative constituent tend to not be affected substantially by physical, chemical, or biological mechanisms that would result in a loss of the constituent from the system. Thus, the concentrations of conservative constituents can be reasonably estimated and changes assessed with mass-balance accounting of the mixing of known volumes and	There are sources and sinks of constituents that were considered, for the purposes of assessment, conservative. These parameters were assumed to be conservative for the purposes of assessment either because they have been shown to behave conservatively in the Delta through validation studies, or because there is no better model available that simulates gain/loss mechanisms and has been validated. In some cases (e.g., nitrate, methylmercury), the model was used as a conceptual model to evaluate changes due to source water contribution changes, while other mechanisms, including sources/sinks, were evaluated qualitatively. Given the best information available, this is a valid approach to assessing changes in constituents due to the project. For more information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		concentrations of different water sources." Comment: Conservative constituents can also have complex sources and sinks within the system that need to be accounted for, and simple mass balances over large areas and time periods must be accounted for in a model. This mass balance is essentially a conceptual model when it is used over these larger areas. The mass balance approach over large areas leads to additional uncertainty; incorrect conclusions can be drawn when time scales cannot be aligned properly.	
1527	209	[From ATT 1:] Section: 8.4.1 Page: 8-129, 8-130 Line: 41-43, 1-4 Type: WQ Key Document Text: "It was determined that the action alternatives would result in all three categories of potential water quality effects within the Plan Area. However, based on the description of BDCP alternatives (see Chapter 3, Description of Alternatives) for construction activities or other conservation measures in the Upstream of the Delta and the SWP/CVP Export Service Area, water quality changes were expected to be minimal and, hence, are not addressed in as much detail. For those Alternatives that include specific Conservation Measure 1 measures in the Plan Area, however, a project specific level of analysis is included." Comment: Insufficient information in the "Upstream of the Delta" areas is provided, especially impacts due to reservoir operations and reservoir stage. The areas just upstream from CM1 intakes past the CM2 diversions to the Feather River, in particular, could see thermal, flow, and reservoir impacts that could affect water quality and drinking water treatment. This reach of the river should be examined in detail.	Please see response to comment 1527-67. For information on upstream reservoir effects please see Master Response 25. For information on operational criteria please see Master Response 28. Water quality is discussed in Chapter 8 of the Final EIR/EIS and in Master Response 14.
1527	210	[From ATT 1:] Section: 8.4.1 Page: 8-130 Line: 28-30 Type: WQ Key Document Text: "Quantitatively evaluates constituents of primary concern where modeling tools were developed and were available for doing so, and qualitatively assesses effects where appropriate modeling tools were unavailable" Comment: Limiting assessment to available tools and science is insufficient for the scale of the project. The EIR/EIS does not adequately discuss the evaluated tools.	Modeling tools that were utilized are discussed in Chapter 5 of the EIR/EIS and its appendices, but more thorough discussion of the modeling tools that were utilized in the Water Quality assessment have been added to Chapter 8 of the EIR/EIS. For more information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	211	[From ATT 1:]	Section numbering was incorrect and has been revised in this Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.4.1 Page: 8-130 Line: 17-21 Type: WQ Key Document Text: "If the estimated water quality conditions for a constituent under an Alternative triggers one or more of the five water quality conditions defined as effects assessment criteria (NEPA) and thresholds of significance (CEQA) (see Section 8.3.2.3) at one or more of the assessment locations, then that Alternative was determined to have an adverse water quality effect (under NEPA) and a significant impact on water quality (under CEQA) for that water quality constituent or parameter." Comment: This section reference is incorrect, and needs to be reviewed and revised.	
1527	212	[From ATT 1:] Section: 8.4.1.1 Page: 8-130, 8-131 Line: 38-41, 1-39 Type: WQ Key Document Text: "Omissions" Comment: The model assessment should include additional models or frameworks to evaluate non-conservative constituents and larger model domains (Watershed Analysis Risk Management Framework, Hydrologic Simulation Program - FORTRAN, etc.). Also, the areas nearest to the proposed intakes should have higher resolution modeling for the adjacent areas.	Modeling tools that were utilized are discussed in Chapter 5 of the EIR/EIS and its appendices, but more thorough discussion of the modeling tools that were utilized in the Water Quality assessment have been added to Chapter 8 of the EIR/EIS. For more information regarding modeling please refer to Master Response 30 and Appendix 5A of the Final EIR/EIS. For information on intake location analysis please see Appendix 3F of the Final EIR/EIS.
1527	213	[From ATT 1:] Section: 8.4.1.2 Page: 8-131 Line: 41-43 Type: WQ, SCOPE Key Document Text: "Water quality changes in the affected environment upstream from the north-Delta boundary, which includes the Sacramento River to Shasta Lake, the Feather River to Lake Oroville, and the American River to Folsom Lake, were primarily assessed qualitatively." Comment: The model domain and areas need to be described more specifically (e.g., Sacramento River at I Street to Keswick, etc.). Also, it is not clear where the 'detailed'	DSM2 boundary conditions are described in Appendix 5A, DSM2 Input Requirements, beginning at page 5A-A-37, and in Tables A-4 and A-5. For more information on modeling please see master Response 30.

DEIRS Ltr#	Cmt#	Comment	Response
		modeling in the Sacramento Urban Area starts.	
1527	214	[From ATT 1:] Section: 8.4.1.2 Page: 8-132 Line: 3-11 Type: WQ, WS Key Document Text: "The assessment of water quality changes in water bodies upstream of the Delta relied, in part, on making determinations as to how reservoir storage and releases would be changed. Specific changes in reservoir storage and releases were determined from CALSIM II modeling of the SWP and CVP system (Appendix 5A describe the CALSIM II modeling performed in support of this assessment). Reservoir storage and river flow changes were then evaluated to make determinations regarding the capacity for the affected water bodies to provide dilution of watershed contaminant inputs. Also, if a particular parameter was found to be correlated to seasonal reservoir levels or river flows, how the parameter would be altered seasonally by operational changes in reservoir levels or river flows was assessed." Comment: Consideration of upstream water quality impacts was very limited. The revised operation of CVP and SWP reservoirs could impact not only dilution ability but also the constituents present, such as trace metals, organic carbon, and pathogens, as well as changes due to temperature variability. A qualitative assessment of pesticides only considering dilution impacts is insufficient and does not take into consideration significant water quality factors, such as application and fate and transport. This qualitative assessment needs to be expanded for most constituents in the upstream of Delta area.	Please see response to comment 1527-67. For information on upstream reservoir effects please see Master Response 25.
1527	215	[From ATT 1:] Section: 8.4.1.3 Page: 8-132 Line: 14-17 Type: WQ Key Document Text: "Using the methodology described below, changes in boron, bromide, chloride, mercury, methylmercury, nitrate, organic carbon, and selenium, within the Delta were determined quantitatively at 11 assessment locations (Figure 8-7)," Comment: The referenced Figure 8-7 has more than 11 "monitoring" points identified, and it is unclear which constituents were evaluated. Please provide a table that shows the constituents, types (e.g., quantitative), and locations of the assessments.	The constituents and types of analysis (qualitative vs. quantitative) are identified in Table 8-61 of Chapter 8, Water Quality of the FEIR/EIS. Figure 8-7 of Chapter 8, Water Quality, includes the 11 monitoring locations within the Delta, the 3 primary boundary locations (Sacramento River at Hood, San Joaquin River at Vernalis, and Suisun Bay at Bills Head Point near Martinez) of the Delta, and locations outside the Delta. Additionally, tables of the modeling results presented in the Appendices include the locations assessed quantitatively.
1527	216	[From ATT 1:]	Section numbering was incorrect and has been revised in this Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.4.1.6 Page: 8-139 Line: 34-36, 37-39 Type: WS Key Document Text: "Actions associated with new conveyance facilities and operations criteria that resulted in water quality changes associated with altered hydrodynamics, which were captured in the DSM2 modeling, were assessed quantitatively and discussed in Section 8.3.4." "Restoration actions that would result in water quality changes associated with altered hydrodynamics, which were captured in the DSM2 modeling, are discussed in Section 8.3.4 as operations- related water quality changes (Conservation Measure 1)." Comment: This section reference is incorrect, and needs to be reviewed and revised.	
1527	217	[From ATT 1:] Section: 8.4.1.6 Page: 8-140 Line: 8 Type: WS Key Document Text: Table 8-38 Comment: This table indicates that Conservation Measure 1 was the only conservation measure included in the CALSIM model evaluation to assess water quality impacts from revised hydrologic conditions. Since CM 2 includes a significant new diversion away from the Lower Sacramento River, CM 2 should have been included in that assessment as well, to identify water quality impacts to Municipal and Domestic Water Supply users between Fremont Weir and Freeport.	Please see chapter 8 of the Final EIR/EIS and Master Response 14. Please see Master Response 30 and Appendix 5A for information on modeling. Please also see response to comment 1527-221.
1527	218	[From ATT 1:] Section: 8.4.1.7 Page: 8-141 Line: 4-6 Type: ERROR Key Document Text: "Water quality constituents are also discussed in section 8.1. Data in section 8.1 is meant to characterize general conditions in the affected environment, and water quality criteria and objectives presented in section 8.1 are a comprehensive set of all applicable criteria and objectives."	Section numbering was incorrect and has been revised in this Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: These section references are incorrect, and need to be reviewed and revised.	
1527	219	[From ATT 1:] Section: 8.4.1.7 Page: 8-145 Line: Table 8-42 Type: ERROR Key Document Text: "Table Footnote C - In some cases, data were reported as non- detects, and the entry contained an accompanying reporting limit. "Yes" indicates that at least one non-detect was replaced with the reporting limit in order to calculate summary statistics, while "No" indicates that this was not done, generally because no data were reported as non-detect." Comment: For the purposes of calculating summary statistics it is not accurate to substitute "non-detects" with the reporting limit. The table should be updated to use an alternate presentation that is more reflective of conditions. See <http://pubs.acs.org/doi/pdf/10.1021/es053368a> for a discussion of appropriate methods.	The method of using a reporting limit for non-detect results is a conservative estimate of concentration in that the reporting limit is the upper bound of the possible actual concentration of the sample in question. With this conservation approach, the resulting statistics in Table 8-42 (mean, minimum, maximum, percentiles) shows considerable variability between the five sources waters, allowing for discerning how the change in source water fractions in the Delta due to the project alternatives would cause change in boron concentrations at the Delta assessment locations.
1527	220	[From ATT 1:] Section: 8.4.1.7 Page: 8-146 to 8-147 Line: 42-45, 1-2 Type: WQ, WS Key Document Text: "Bromide concentrations at a particular location and time in the Delta are determined primarily by the sources of water to that location, at a given time. Hence, long-term average concentrations at a particular Delta location are determined primarily by the long- term average sources of water to that location, and the long-term average concentration of bromide in each of the major source waters to the location. The major source waters to any given Delta location are: (1) Sacramento River, (2) San Joaquin River, (3) Bay water, (4) eastside tributaries, and (5) agricultural return water." Comment: The use of long term average concentrations of bromide is unsupported given that the regulatory framework that this is applied to (disinfection by-products in the treated water) is based on a running annual average, calculated quarterly. The Municipal and Domestic Water Supply beneficial use of the Sacramento River could be impacted very quickly if there is seawater intrusion occurring seasonally. Consideration should be made in this evaluation for the potential for seawater intrusion to impact water quality during a shorter interval period, similar to the evaluation for chloride.	Bromide concentrations were evaluated on a monthly average basis and frequency of exceeding applicable thresholds were summarized in Appendix 8E, Bromide, Tables 2–23. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS.
1527	221	[From ATT 1:] Section: 8.4.1.7	Effects of CM2 on hydrodynamics and flows are incorporated into the modeling that was assessed as part of CM1, and this aspect of CM2 was assessed quantitatively. The statement is referring to the effects of these conservation measures that do not affect flows and Delta hydrodynamic conditions (these were assessed

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-149 Line: 16-18 Type: WQ, WS Key Document Text: "The effects of other conservation measures (i.e., CM2, CM3, and CM5-CM22) which do not substantially affect flows or Delta hydrodynamic conditions also were assessed qualitatively." Comment: This statement is not correct, and the text needs to be revised. Conservation Measure 2 involves significant diversions from the Lower Sacramento River during an extended period of the year, which will significantly impact flows on the Sacramento River between Fremont Weir and the Delta.	qualitatively)—it is not claiming that these conservation measures have no effect on flows or Delta hydrodynamics. For more information on modeling please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1527	222	[From ATT 1:] Section: 8.4.1.7 Page: 8-162 Line: 2-7 Type: ERROR Key Document Text: "However, because nitrate concentrations vary considerably between the source waters to the Delta, conservative modeling via DSM2 and the mass-balance approach described in section 8.3.1.3 was employed to provide a characterization of changes in nitrate concentration anticipated as a result of changes in source water fractions throughout the Delta alone (using mean concentrations from Table 8-51, above)." Comment: This section reference is incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	223	[From ATT 1:] Section: 8.4.1.7 Page: 8-162 Line: 30-32 Type: ERROR Key Document Text: "As discussed in the Methods For Analysis section (Section 8.3.1 above), DSM2 was utilized directly to model and predict Dissolved Organic Carbon at 11 locations across the Delta, and the degree DOC changed under the various project alternatives." Comment: This section reference is incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	224	[From ATT 1:]	Long-term in this sentence means over a number of years, rather than days or months. In the development of human health criteria for carcinogens, USEPA considers exposure over a 70-year lifetime.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.4.1.7 Page: 8-162 Line: 32-36 Type: ERROR Key Document Text: "Because Dissolved Organic Carbon is a precursor to the formation of Disinfection Byproduct Precursors which represent a long-term risk to human health, and because the existing source water quality goal is based on a running annual average, the quantitative assessment focuses on the degree to which an alternative may result in change in long-term average DOC concentrations at select locations upstream of the Delta, within the Delta, and in the SWP/CVP Export Service Areas." Comment: The definition of long-term averaging needs to be specifically provided.	
1527	225	[From ATT 1:] Section: 8.4.1.7 Page: 8-162 Line: 44 Type: WQ Key Document Text: "Dissolved Organic Carbon in the Delta is generally considered to act conservatively; thus, the mass-balance modeling approach employed." Comment: DOC is not a conservative constituent. Provide the basis for this assumption over the scope of the Delta residence time.	Please see response to comment 1527-205.
1527	226	[From ATT 1:] Section: 8.4.1.7 Page: 8-163 Line: 1-3 Type: WQ Key Document Text: "Moreover, the Particulate Organic Carbon fraction would be largely removed through conventional drinking water treatment (State Water Project Contractors Authority 2007:3-2 19)." Comment: This statement is far too general to apply to the wide variety of water treatment facilities utilizing water in the Project Area. This should be revised to reflect that Particulate Organic Carbon is more likely to be removed via physical processes than Dissolved Organic Carbon but that removal rates can vary, as noted by the U.S. Environmental Protection Agency in the Stage 1 and 2 D/DBP Rules.	This overview statement is provided as background information, and it is recognized that level of removal of organic carbon is dependent upon the chemical state and concentration of the constituent, as described in the referenced document included in this comment. This referenced document (State Water Project Watershed Sanitary Survey 2006) was used in the preparation of Chapter 8 of the FEIR/EIS. This referenced document discusses the difficulties of removing high concentrations of organic carbon.

DEIRS Ltr#	Cmt#	Comment	Response
1527	227	[From ATT 1:] Section: 8.4.1.7 Page: 8-163 Line: 11-16 Type: WQ Key Document Text: "In light of these source water goals and Environmental Protection Agency's Total Organic Carbon removal action thresholds, the assessment of alternatives evaluates how each alternative would affect the frequency with which predicted future Dissolved Organic Carbon concentrations would exceed 2, 3, and 4 mg/L on a long-term average basis at the assessment locations. Because, in many cases, the existing condition is one already exceeding 2 and 3 mg/L, the frequency with which DOC exceeds 4 mg/L becomes a key focus of the assessment, as well as the change in long-term average DOC concentration." Comment: This statement reflects only the water quality conditions in the Delta. The areas upstream of the Delta have different water quality conditions related to organic carbon and have been able to maintain median source water levels below the 2 mg/L threshold as documented in the American and Sacramento Rivers Watershed Sanitary Survey and its Updates. References (for above comment): American River Watershed Sanitary Survey, 1998 Update, December 1998, Archibald & Wallberg Consultants, MWH American River Watershed Sanitary Survey, 2003 Update, December 2003, Archibald & Wallberg Consultants, MWH American River Watershed Sanitary Survey, 2008 Update, December 2008, Starr Consulting, Palencia Consulting Engineers American River Watershed Sanitary Survey, 2013 Update, December 2013, Starr Consulting, Palencia Consulting Engineers Sacramento River Watershed Sanitary Survey, 2000 Update, December 2000, Archibald & Wallberg Consultants et. Al. Sacramento River Watershed Sanitary Survey, 2005 Update, March 2006, MWH, Starr Consulting, Archibald & Wallberg Consultants Sacramento River Watershed Sanitary Survey, 2010 Update, December 2010, Starr Consulting, Palencia Consulting Engineers	Upstream conditions for organic carbon were addressed as part of the water quality assessment. Please see Chapter 8 of the final EIR/EIS and Master Response 14 for more information.
1527	228	[From ATT 1:] Section: 8.4.1.7 Page: 8-163 Line: 35-37 Type: WQ	Please refer to Master Response 14 regarding water quality, specifically pesticides assessment issues. Please see Chapter 8 of the Final EIR/EIS for more information.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "Assessing pesticide-related effects is substantially challenged by: 1) limited available monitoring data in the Delta and other water bodies of the affected environment, and 2) a continually changing pesticide use market." Comment: Although there are many challenges associated with assessing pesticide effects, monitoring data is not a controlling issue in the Central Valley. The Central Valley Regional Board Irrigated Lands Regulatory Program has collected and evaluated large amounts of data that should have been reviewed as part of this assessment. These evaluations can contribute to a better understanding of the priorities and vulnerabilities of the watershed. http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/index.shtml and http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/monitoring_plans_reports_reviews/index.shtml	
1527	229	[From ATT 1:] Section: 8.4.1.7 Page: 8-164 Line: 23-32 Type: WQ Key Document Text: "Perhaps more challenging than a limited monitoring effort is the dynamic state of the pesticide market. Regulatory and pest resistance pressures have left the pesticide market, namely the insecticide market, in a state of flux. Pesticide use varies from year to year depending on numerous external factors such as climate and associated pest outbreaks, cropping patterns, and economic trends in housing construction and urban development. Layered upon this year-to-year variation is an overall trend of decreased OP insecticides use and increased pyrethroid use, primarily due to the early regulatory phase-out of many Organophosphates insecticide uses initiated in early 2000. The market has yet to balance and reach equilibrium, and what limited and relatively short-term monitoring data that is available ultimately only represents a snapshot of a trend in the gradual replacement of many OP uses with that of pyrethroids. Until markets stabilize, trends will inevitably continue to develop." Comment: Pesticide use is registered and relatively well understood. While urban uses are difficult to track, product availability is a good indicator. The "equilibrium" actually seems to be reached relatively quickly, and the noted paragraph should be further researched and updated for accuracy.	Please see response to comment 1527-228.
1527	230	[From ATT 1:] Section: 8.4.1.7 Page: 8-164, 8-165 Line: 44-46, 1-7 Type: ERROR	The text being cited in this comment is in Section 8.4.1.7, Constituent-Specific Considerations, which is within the Methods for Analysis section of Chapter 8. There are no conclusions being presented here; rather this section is describing factors considered in the pesticide analysis common across all alternatives. Effects of CM1 on pesticides are addressed in Impact WQ-21 and considered changes in water flows and source fractions relative to thresholds presented in Section 8.4.2.3.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "And finally, if transported to surface waters, sufficient amounts of pesticide must be present that once diluted by surface water flows, the resulting concentration is of a magnitude capable of eliciting a measurable effect in aquatic life. All of these factors contribute in the end to the potential for adverse beneficial use effects, but of the many factors involved, CVP/SWP operations only affect river flows and, thus available dilution. In an estuary environment, where substantial dilution capacity typically occurs, duration of aquatic life exposure in addition to pesticide concentration is important. While the capacity of the Delta to dilute pesticide inputs is largely unaffected by CVP/SWP operations, the duration of exposure, or residence time, can be affected by operations. Therefore, in the Delta, changes in source water fractions represent long-term changes in exposure potential." Comment: Concentrations of contaminants could increase in areas of lesser flow downstream from the North Delta intakes as the higher quality Sacramento River water is exported. Therefore, the qualitative conclusion should be that an increase is expected due to Conservation Measure 1.	
1527	231	[From ATT 1:] Section: 8.4.1.7 Page: 8-165 Line: 22-24 Type: WQ Key Document Text: "Effects of alternatives on pesticides are primarily incidental and indirect, as existing and future sources of pesticide loading are largely unrelated." Comment: Concentrations could increase in areas of lesser flow downstream from the intakes as the higher quality Sacramento River water is exported. Therefore, the qualitative conclusion should be that an increase in pesticides is expected.	Please refer to Master Response 14 regarding water quality, specifically pesticides assessment issues.
1527	232	[From ATT 1:] Section: 8.4.1.7 Page: 8-169 Line: 12 Type: ERROR Key Document Text: "Water quality criteria used in the assessment of trace metals are presented in Table 8-51." Comment: This table reference is incorrect, and needs to be reviewed and revised.	The table reference was incorrect and has been updated to Table 8-58 in this Final EIR/EIS.
1527	233	[From ATT 1:] Section: 8.4.1.7	Table 8-58 has been modified to add aluminum and additional discussion on aluminum was added to the assessment. For more information on water quality please see Chapter 8 of the Final EIR/EIS and Master Response 14.

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-170 Line: 3 Type: WQ Key Document Text: "Table 8-58" Comment: This table does not include aluminum, which should have been included in the evaluation as per the Screening Assessment (Appendix 8C). This table needs to be updated, and the evaluation needs to be expanded.	
1527	234	[From ATT 1:] Section: 8.4.1.7 Page: 8-170 Line: 6-15 Type: WQ Key Document Text: "Throughout the trace metals assessment dissolved metals concentrations are utilized, because the dissolved fraction better approximates the bioavailable fraction to aquatic organisms. Furthermore, drinking water treatment plants readily remove particulate and suspended matter from raw water. While maximum contaminant levels for treated drinking water are measured on a total recoverable basis, the dissolved fraction of these metals is taken as the more accurate predictor of metals concentration post- treatment. This is particularly the case with iron and manganese which are both naturally abundant in soil. Total recoverable iron and manganese concentrations can be very high in water carrying a substantial load of suspended matter (i.e., TSS). Therefore, assessment of aquatic life and drinking water effects utilizes the dissolved fraction of trace metals in the environment." Comment: The use of dissolved metals concentrations for Municipal and Domestic Water Supply evaluation is fundamentally flawed and incorrect. The evaluation for trace metals relative to the MUN beneficial use needs to be reassessed based on total fraction. Compliance can be based on either raw or treated water levels, as per Title 22 Section 64432 (e), and needs to be considered. Conventional water treatment processes include coagulation, flocculation, sedimentation, and filtration, typically referred to as conventional filtration. The specific design parameters vary from facility to facility. The removal rate of a constituent will also vary from facility to facility, depending on source water quality and water treatment operations. The American Water Works Association has published a general treatment effectiveness table for a variety of constituents (Water Quality and Treatment, A Handbook of Community Water Systems. American Water Works Association, 4th Ed. Table 3-1 General Effectiveness of Water Treatment Processes for Contaminant Removal (p 184-185)). This table indicates that iron and manganese have a wide range of removal for conventional filtration, from 20 to 100 percent. Chromium also has a wide range of removal that depends on the species present, from zero to 100 percent. Aluminum generally has a fair removal rate, 20 to 60 percent, through conventional filtration. The statement also does not account for the additional costs associated with	The screening analysis compared both total and dissolved fractions of metals to the lowest applicable criterion, and if the maximum detect of either exceeded the criterion, it was carried forward for analysis, as described in Appendix 8C of the Final EIR/EIS. For more information on water quality please see Master Response 14 and Chapter 8 of the Final EIR/EIS. Please also see response to comment 1527-186 regarding aluminum.

DEIRS Ltr#	Cmt#	Comment	Response
		performing additional levels of removal associated with higher source water loading and potential increase in public health risk due to higher treated water levels.	
1527	235	[From ATT 1:] Section: 8.4.2.1 Page: 8-173 Line: 15-36 Type: WQ, ERROR Key Document Text: "Screening Analysis and Results" Comment: See Separate Comments on Appendices 8 C-N	Please see responses to comments on Appendices 8C through 8N, provided in responses to Comment Letter 1527, Comments 292 through 319.
1527	236	[From ATT 1:] Section: 8.4.2.1 Page: 8-173 Line: 26-28 Type: WQ Key Document Text: "Of these, 15 are addressed further in the Screening Analysis itself in Appendix 8C because they did not warrant alternative-specific analyses, and 1, temperature, is addressed in Chapter 11, Fish and Aquatic Resources." Comment: This evaluation needs to be expanded to include Temperature effects related to the Municipal and Domestic Water Supply beneficial use. Temperature is a key general water quality parameter that has an impact on the source water quality, treatability (related to rate processes), and treated water quality for drinking water (Water Quality and Treatment, A Handbook of Community Water Systems. American Water Works Association, 4th Ed.).	Please refer to Master Response 14 for a discussion on temperature effects on drinking water. Please also see Chapter 8 of the Final EIR/EIS.
1527	237	[From ATT 1:] Section: 8.4.2.1 Page: 8-174 Line: 1 Type: WQ Key Document Text: Table 8-61 Comment: Footnote 'e' needs to be revised to include chromium and iron.	Table 8-61 has been updated to include chromium and iron.
1527	238	[From ATT 1:]	Please see response to comment 1527-162.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.4.2.2 Page: 8-174 to 8-175 Line: 9-10, 1-2 Type: WQ Key Document Text: "The CEQA baseline, "Existing Conditions", is defined in Appendix 3D, and for the purposes of the quantitative water quality assessments, is represented by Existing Conditions modeling runs, not historical water quality monitoring data as presented in Section 8.1.3." Comment: The section reference is incorrect and needs to be reviewed and revised. Also, it is unclear why modeling output was used over real data to provide the basis for the Existing Conditions water quality assessment.	
1527	239	[From ATT 1:] Section: 8.4.2.3 Page: 8-176 Line: 8-9 Type: ERROR Key Document Text: "(applicable objectives/criteria are identified in Appendix 8A and the constituent-specific assessments in Section 8.3.1.7)" Comment: This section reference is incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	240	[From ATT 1:] Section: 8.4.2.3 Page: 8-177 Line: 30-35 Type: WQ Key Document Text: "As such, effects criterion/threshold number 1 will identify significant impacts under CEQA when water quality under an alternative is anticipated to change substantially, thereby causing adverse effects to beneficial uses, and will avoid making such determinations when the violation of a water quality standard is too infrequent, low in magnitude, and/or isolated geographically to actually cause any adverse effects on beneficial uses of the water body or water body segment." Comment: It is not clear what the phrase "low in magnitude" is intended to refer to relative to water quality standard exceedances. The 303(d) impairment listing guidance does not consider the magnitude of exceedances when finding impairments to beneficial uses. More specific guidance that demonstrates consistency with water quality regulation should be	The application of threshold 1 must be considered in its entirety. As described on page 8-177 in lines 22-35 of the Draft EIR/EIS, “low in magnitude” is one of several factors that were considered relative to effects on beneficial uses. Clean Water Act section 303(d) impairments were addressed via threshold 4 on page 8-176; application of this threshold is described on page 8-176, lines 37-44.

DEIRS Ltr#	Cmt#	Comment	Response
		used and cited so that the review can properly evaluate the assessment of water quality impacts.	
1527	241	[From ATT 1:] Section: 8.4.3.1 Page: 8-178 Line: 5-7 Type: ERROR Key Document Text: "Per the description of comparisons made in this chapter which are discussed in section 8.3.2.2, this section contains the comparison of the No Action Alternative vs. Existing Conditions for CEQA purposes." Comment: This section reference is incorrect, and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	242	[From ATT 1:] Section: 8.4.3.1 Page: 8-184 Line: 9-12 Type: WQ, WS Key Document Text: "While greater water demands under the No Action Alternative would alter the magnitude and timing of reservoir releases north and east of the Delta, these activities would have negligible, if any, effect on the sources, and ultimately the concentration of bromide in the Sacramento River, the eastside tributaries, and the various reservoirs of the related watersheds." Comment: The No Action Alternative has climate change and sea level rise associated with it; therefore, the potential for reverse flows in the Sacramento River and increased tidal influence should have been included in the evaluation for bromide. These influences could impact the frequency and concentration of peak bromide levels (shown to be 100 ug/L at Hood in Table 8-43).	The assessment of bromide in the Delta used DSM2 modeling results, which extend throughout the tidally affected Delta to Freeport. Thus, the potential for increased bromide concentrations in the Sacramento River due to tidal influences and sea water intrusion was assessed. The cited text is from upstream of the Delta, where tidal influences are not present and bromide concentrations would not be expected to be affected by the project. For information on climate change please see Master Response 19. For more information on water quality please see Master Response 14. Modeling is discussed in Master Response 30.
1527	243	[From ATT 1:] Section: 8.4.3.1 Page: 8-187 Line: 40-43 Type: WQ, WS Key Document Text: "Consequently, changes in the magnitude and timing of reservoir releases and river flows upstream of the Delta would have negligible, if any, effect on	The assessment of chloride in the Delta used DSM2 modeling results, which extend throughout the tidally affected Delta to Freeport. Thus, the potential for increased chloride concentrations in the Sacramento River due to tidal influences and sea water intrusion was assessed. The cited text is from upstream of the Delta, where tidal influences are not present and chloride concentrations would not be expected to be affected by the project. For information on climate change please see Master Response 19. For more information on water quality please see Master Response 14. Modeling is discussed in Master Response 30.

DEIRS Ltr#	Cmt#	Comment	Response
		chloride sources, and ultimately the concentration of chloride in the Sacramento River, the eastside tributaries, and the various reservoirs of the related watersheds." Comment: The No Action Alternative has climate change and sea level rise associated with it. Therefore, the potential for reverse flows in the Sacramento River and increased tidal influence should have been included in the evaluation for chloride. These influences could impact the frequency and concentration of peak chloride levels (shown to be 33 mg/L at Hood in Table 8-45).	
1527	244	[From ATT 1:] Section: 8.4.3.1 Page: 8-194 Line: 40-43 Type: WQ, WS Key Document Text: "Based on these considerations, electroconductivity levels (highs, lows, typical conditions) in the Sacramento River and its tributaries, the eastside tributaries, or their associated reservoirs upstream of the Delta would not be expected to be outside the ranges occurring under Existing Conditions." Comment: The No Action Alternative has climate change and sea level rise associated with it; therefore, the potential for reverse flows in the Sacramento River and increased tidal influence should have been included in the evaluation for EC. These influences could impact the frequency and concentration of peak electroconductivity levels.	The assessment of electrical conductivity in the Delta used DSM2 modeling results, which extend throughout the tidally affected Delta to Freeport. Thus, the potential for increased electrical conductivity in the Sacramento River due to tidal influences and sea water intrusion was assessed. The cited text is from upstream of the Delta, where tidal influences are not present and electrical conductivity would not be expected to be affected by the project. For information on climate change please see Master Response 19. For more information on water quality please see Master Response 14. Modeling is discussed in Master Response 30.
1527	245	[From ATT 1:] Section: 8.4.3.1 Page: 8-204 Line: 13-16 Type: WQ, WS Key Document Text: "Consequently, long-term average Dissolved Organic Carbon concentrations under the No Action Alternative would not be expected to change by frequency, magnitude and geographic extent, relative to Existing Conditions and, and thus, would not adversely affect the Municipal and Domestic Water Supply beneficial use, or any other beneficial uses, in water bodies of the affected environment located upstream of the Delta." Comment: The evaluation of Dissolved Organic Carbon concentrations does not take into account timing of reservoir releases and impacts on dilution of downstream sources, the potential for diverted flows at Fremont Weir to siphon lower organic carbon water from the Feather River and American Rivers away from the Lower Sacramento River, and climate change impacts. Climate change impacts have the potential for increased temperatures to impact algal growth that can increase organic carbon levels and for increased intensity	The assessment of the No Action Alternative on water quality upstream of the Delta considered changes in flows and effects on dissolved organic carbon (page 8-204, lines 6-16). Temperature effects on aquatic biological resources are addressed in Chapter 11, Fish and Aquatic Resources. Please also see Master Response 14 and Chapter 8 of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		storm events to transport more organic carbon from the watershed. These should be considered in the evaluation.	
1527	246	[From ATT 1:] Section: 8.4.3.1 Page: 8-206 Line: 41-43 Type: WQ, WS Key Document Text: "Pathogen concentrations in the Sacramento and San Joaquin Rivers have a minimal relationship to flow rate in these rivers, although most of the high concentrations observed have been during the wet months (Tetra Tech 2007)." Comment; Coliform concentrations in the Sacramento area do show an increase in wet periods as well (American and Sacramento River Watershed Sanitary Surveys and Updates); since climate changes include the increase in precipitation in Northern California and the increase in storm intensity, an evaluation should be conducted to determine if climate change could impact the concentrations of source water levels of pathogens.	The statement indicates that there is a minimal relationship between flow rate and pathogen concentrations. However, precipitation is not expected to change with climate change to an extent that a measurable change in pathogens in water bodies would occur. Please see Impact WQ-19 in Chapter 8 and Section 29.2.1.3 in Chapter 29 of the FEIR/EIS. For more information on climate change please see Master Response 19.
1527	247	[From ATT 1:] Section: 8.4.3.1 Page: 8-208 Line: 9-14 Type: WQ Key Document Text: "Cryptosporidium and Giardia, Data were available only for the Sacramento River, limiting the ability to make comparisons between sources. Often not detected and when detected, concentrations typically less than 1 organism per liter. There may be natural/artificial barriers/processes that limit transport to water. Significant die off of those that reach the water contribute to the low frequency of detection." Comment: This comment is typical to all the pathogen evaluations for the No Action Alternative and all action alternatives. Related to protozoa, there has been a gross misrepresentation and interpretation of the evaluation conducted as part of the Conceptual Model for Pathogens and Pathogen Indicators in the Central Valley. The Conceptual Model notes that there was limited data availability for protozoa for the study and presents what was available as a general indicator, not a confirmed source assessment or quantification of risk. It should be noted that Cryptosporidium and Giardia source water concentrations of 1 organism per liter would trigger additional treatment requirements under the Surface Water Treatment Rules, and these levels are not considered low. The statement that there is significant die off contributing to low frequency of detection is incorrect on two fronts. First of all, protozoa are notable resistant in the ambient environment with low rates of decay as shown in Table 4-1 and Figure 4-1 and discussed in Chapter 2 of the Conceptual Model. In addition, they can be resistant to conventional filtration, so high source water	The text cited by the commenter is summarizing the Pathogens Conceptual Model findings, and should actually state, “There may be natural/artificial barriers/processes that limit Cryptosporidium transport to water. Significant die off of those that reach the water may contribute to the low frequency of detection.” However, this change does not modify the impact conclusions for WQ-19 for any of the alternatives. The potential for impacts considered the effects of changes of Delta source water fractions relative to other factors that affect pathogen levels, including proximity to pathogen sources.

DEIRS Ltr#	Cmt#	Comment	Response
		concentrations require additional treatment. Finally, the Conceptual Model shows that Giardia was detectable in 45 to 70 percent of samples, Figure 3-4, which is frequent.	
1527	248	[From ATT 1:] Section: 8.4.3.1 Page: 8-208 Line: 23-28 Type: ERROR Key Document Text: "The effects of the No Action Alternative relative to Existing Conditions would be changes in the relative percentage of water throughout the Delta being comprised of various source waters (i.e., water from the Sacramento River, San Joaquin River, Bay water, eastside tributaries, and agricultural return flow), due to potential changes in inflows particularly from the Sacramento River watershed due to increased water demands (see Table 8-55) and somewhat modified SWP and CVP operations." Comment: This table reference is incorrect, and needs to be reviewed and revised.	This sentence has been modified, resulting in the table reference being removed.
1527	249	[From ATT 1:] Section: 8.4.3.1 Page: 8-210 Line: 2-3 Type: WQ Key Document Text: "Therefore, the pesticide assessment focuses on the present use pesticides for which substantial information is available, namely diazinon, chlorpyrifos, pyrethroids, and diuron." Comment; The basis for selection of present use pesticides assessed in this report is insufficient. More information needs to be presented to explain why other pesticides of interest were not included, other than a lack of data for the limited sites included in the data evaluation.	Please refer to Master Response 14 for more information regarding water quality, specifically pesticides assessment issues.
1527	250	[From ATT 1:] Section: 8.4.3.1 Page: 8-211 Line: 19-24 Type: WQ, WS Key Document Text: "However, summer average flow reductions of up to 12%, relative to Existing Conditions, are not considered of sufficient magnitude to substantially increase	The waters in which changes in flow would occur are the major tributaries to the Delta downstream of the CVP and SWP reservoirs. Effects of changes in flow were considered relative to ambient pesticide conditions. The concept of degradation and use of assimilative capacity, and effects on beneficial uses, relates back to the thresholds of significance in Section 8.4.2.3 of the Draft EIR/EIS and 8.3.4.2 of the FEIR/EIS under Impact WQ-21.

DEIRS Ltr#	Cmt#	Comment	Response
		in-river concentrations or alter the long- term risk of pesticide-related effects on aquatic life beneficial uses. Greater long-term average flow reductions, and corresponding reductions in dilution/assimilative capacity, would be necessary before long-term risk of pesticide related effects on aquatic life beneficial uses would be adversely altered." Comment: More information is needed to support the lack of sufficiency of flow reductions to impact ambient water concentrations of pesticides. The reliance upon assimilative capacity may not be valid if discharging to a high quality waterbody since it may show a trend of degradation.	
1527	251	[From ATT 1:] Section: 8.4.3.1 Page: 8-219 Line: 34-42 Type: WQ, WS Key Document Text: "Relative to Existing Conditions, under the No Action Alternative sources of trace metals would not be expected to change substantially with exception to sources related to population growth, such as increased municipal wastewater discharges and development contributing to increased urban runoff. Facility operations could have an effect on these sources if concentrations of dissolved metals were closely correlated to river flow, suggesting that changes in river flow, and the related capacity to dilute these sources, could ultimately have a substantial effect on long-term metals concentrations. On the Sacramento River, available dissolved trace metals data and river flow at Freeport are poorly associated (Appendix 8N, Figure 1)." Comment: This section has not included a fair and complete assessment of impacts on source water concentrations upstream of the Delta of trace metals and needs to be revised. The BDCP has asserted that the construction of the upstream dams has allowed downstream levels of metals to be reduced by trapping the particulate matter containing those metals. An assessment of reservoir storage volumes relative to dissolved metals concentrations should have been conducted. Low lake levels can result in stratifications and diversions from anoxic zones, which may have higher concentrations of dissolved metals that are resuspended from sediment. Metals concentrations should be evaluated for total fraction and compared with reservoir storage levels as well as flow.	Please see response to Comment 1527-25.
1527	252	[From ATT 1:] Section: 8.4.3.1 Page: 8-220 Line: 4-11 Type: WQ, WS Key Document Text: "Given the poor association of dissolved trace metal concentrations with flow, river flow rate and reservoir storage reductions that would occur under the No	The paragraph immediately preceding the text cited in this comment identifies and cross-references Appendix 8N, Trace Metals, where figures are presented evaluating the correlation of dissolved metals concentrations with river flows in the Sacramento River and San Joaquin River. Also, please see response to comment 1527-25.

DEIRS Ltr#	Cmt#	Comment	Response
		Action Alternative, relative to Existing Conditions, would not be expected to result in a substantial adverse change in trace metal concentrations in the reservoirs and rivers upstream of the Delta. As such, the No Action Alternative would not be expected to substantially increase the frequency with which applicable Basin Plan objectives or California Toxic Rules criteria would be exceeded in water bodies of the affected environment located upstream of the Delta or substantially degrade the quality of these water bodies, with regard to trace metals." Comment: This section has a conclusion which is not proven, since no comparison was made with the total fraction of the metals and no correlations were assessed between the metals and reservoir levels. This statement needs to be revised based on a reevaluation of the data.	
1527	253	[From ATT 1:] Section: 8.4.3.1 Page: 8-220 Line: 30-32 Type: WQ Key Document Text: "The arsenic criterion was established to protect human health from the effects of long-term chronic exposure, while secondary maximum contaminant levels for iron and manganese were established as reasonable goals for drinking water quality." Comment: This text incorrectly states that Maximum Contaminant Levels for iron and manganese are "reasonable goals". California water systems are required to comply with these drinking water standards, and the text needs to be revised to reflect the condition. See Title 22, Chapter 15 (http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf)	Please see response to comment 1527-151.
1527	254	[From ATT 1:] Section: 8.4.3.1 Page: 8-220 Line: 33-34 Type: WQ Key Document Text: "The primary source water average concentrations for arsenic, iron, and manganese are below these criteria." Comment: This text is misleading since the total fraction of iron and manganese are both higher than the criteria. A reassessment needs to be conducted to evaluate the total fraction, and this text needs to be clarified.	Text regarding aluminum, iron, and manganese levels relative to applicable water quality criteria, which in the Central Valley are the secondary maximum contaminant levels (MCLs), was added to Section 8.1.3.16 of the Final EIR/EIS Environmental Setting/Affected Environment. This text explains how total concentrations of these metals can be elevated during high sediment transport event, however, this is through natural processes and that these elevated concentrations do not necessarily translate to direct exceedances of MCLs in potable supplies.
1527	255	[From ATT 1:]	Impact WQ-29 within the Effects and Mitigation Approaches section of Chapter 8 assesses the effects of the

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8.4.3.1 Page: 8-222 Line: 17-21 Type: WQ Key Document Text: "Because of such a relationship, the changes in mean monthly average river flows under the No Action Alternative are not expected to cause river Total Suspended Solids concentrations or turbidity levels (highs, lows, typical conditions) to be outside the ranges occurring under Existing Conditions. Consequently, this alternative is expected to have minimal effect on TSS concentrations and turbidity levels in the reservoirs and rivers upstream of the Delta, relative to Existing Conditions." Comment: This assessment does not account for other reservoir operations that may affect the turbidity of the ambient water quality, as noted in previous comments on Section 8.2.3.17. Also, climate change conditions may result in increased fire risk and storm intensity that could contribute increased solids loading to the waterbodies.	project alternatives, including effects of modified reservoir releases, on turbidity (and TSS) levels. The fire risk and storm intensity concerns raised by the commenter are not a component of the project alternatives and would not be considered as foreseeable under existing or No Action Alternative conditions. For information on climate change please see Master Response 19.
1527	256	[From ATT 1:] Section: 8.4.3.9 Page: 8-408 Line: 19-30 Type: WQ Key Document Text: "Under Alternative 4, over the long term, average annual delta exports are anticipated to range from an increase of 112 thousand acre-feet under scenario H1 to a decrease by 730 TAF under scenario H4 relative to Existing Conditions, and an increase by 815 TAF under scenario H1 to a decrease of 27 TAF under scenario H4 relative to the No Action Alternative. Since, over the long-term, between 47 (scenario H1) and 49% (scenario H4) of the exported water will be from the new north Delta intakes, average monthly diversions at the south Delta intakes would be decreased because of the shift in diversions to the north Delta intakes (see Chapter 5, Water Supply, for more information). The result of this is increased San Joaquin River water influence throughout the south, west, and interior Delta, and a corresponding decrease in Sacramento River water influence. This can be seen, for example, in Appendix 8D, ALT 4, H3-Old River at Rock Slough for ALL years (1976-1991), which show increased San Joaquin River (SJR) percentage and decreased Sacramento River (SAC) percentage under the alternative, relative to Existing Conditions and the No Action Alternative." Comment: The analysis should report and evaluate in more detail the effects on hydrodynamics in the Sacramento River up to the I Street Bridge, due to the fact that the significant reduction in Sacramento River flows downstream of Hood will certainly increase tidal influences on the upstream reach. The evaluation should include points between Emmaton and I Street.	The hydrodynamics and salinity conditions on the Sacramento River were modeled using DSM2 QUAL for the Existing Conditions, No Action Alternative, proposed project (Alternative 4A), and all other action alternatives. DSM2 model simulated the effects of the north Delta diversion on the salinity conditions in the Sacramento River downstream of the proposed intakes. Appendix 5A Section C of the EIR/EIS shows the potential changes in the flows, water levels and salinity expected along the Sacramento River and other Delta channels downstream of the intakes. Please see Master Response 30 regarding Modeling.

DEIRS Ltr#	Cmt#	Comment	Response
1527	257	[From ATT 1:] Section: 8.4.3.9 Page: 8-416 Line: 17-19 Type: WQ Key Document Text: "Bromide loading in these watersheds would remain unchanged and resultant changes in flows from altered system-wide operations under Alternative 4 would have negligible, if any, effects on the concentration of bromide in the rivers and reservoirs of these watersheds." Comment: Similar to the comment on the No Action Alternative, there needs to be further assessment of the potential for reverse flow to propagate further upstream on the Sacramento River, increasing seawater intrusion upstream of the Delta (due to both Conservation Measure 1 and CM2) and increasing seasonal, peak bromide levels.	The effects of climate change and sea level rise on salinity-related parameters, including bromide were accounted for in the modeling of bromide using output on changing source water fractions from DSM2. Any increases in bromide due to the project allowing greater inward flow of seawater are reflected in the modeling results presented for bromide for the Delta assessment locations. Alternative 4A would result in substantially lesser water quality impacts to salinity-related parameters, as compared to the preferred alternative in the Draft EIR/EIS, including less than significant impacts to bromide. Please see Appendix 8E of the FEIR/EIS.
1527	258	[From ATT 1:] Section: 8.4.3.9 Page: 8-422 Line: 39-43 Type: ERROR Key Document Text: "Modeling scenarios included assumptions regarding how certain habitat restoration activities would affect Delta hydrodynamics (Conservation Measure 2 and CM4), and thus such hydrodynamic effects of these restoration measures were included in the assessment of CM1 facilities operations and maintenance (see Impact Water Quality-1)." Comment: The reference to Impact WQ-1 does not appear correct. This needs to be reviewed and revised.	The correct reference is to Impact WQ-5, and has been updated in this Final EIR/EIS.
1527	259	[From ATT 1:] Section: 8.4.3.9 Page: 8-423 Line: 37-40 Type: WQ Key Document Text: "Consequently, the Alternative 4 H1-H4 Scenarios would not be expected to cause exceedances of chloride objectives/criteria or substantially degrade water quality with respect to chloride, and thus would not adversely affect any beneficial uses of the Sacramento River, the eastside tributaries, associated reservoirs upstream of the	Please see comment response number 257.

DEIRS Ltr#	Cmt#	Comment	Response
		Delta, or the San Joaquin River." Comment: There needs to be further assessment of the potential for reverse flow to propagate further upstream on the Sacramento River, increasing seawater intrusion upstream of the Delta (due to both Conservation Measure 1 and CM2) and increasing seasonal, peak chloride levels.	
1527	260	[From ATT 1:] Section: 8.4.3.9 Page: 8-424 Line: 21 Type: ERROR Key Document Text: "More discussion of this phenomenon is included in Section 8.3.1.3. Comment: This section reference is incorrect and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	261	[From ATT 1:] Section: 8.4.3.9 Page: 8-436 Line: 14-17 Type: WQ, WS Key Document Text: "Based on these considerations, electroconductivity levels (highs, lows, typical conditions) in the Sacramento River and its tributaries, the eastside tributaries, or their associated reservoirs upstream of the Delta would not be expected to be outside the ranges occurring under Existing Conditions or the No Action Alternative." Comment: Similar to the comment on the No Action Alternative, there needs to be further assessment of the potential for reverse flow to propagate further upstream on the Sacramento River, increasing seawater intrusion upstream of the Delta (due to both Conservation Measure 1 and CM2) and increasing seasonal, peak EC levels.	The effects of climate change and sea level rise on salinity-related parameters, including electrical conductivity (EC) were accounted for in the modeling of EC using DSM2. Any increases in EC due to the project allowing greater inward flow of seawater are reflected in the modeling results presented for EC for the Delta assessment locations, relative to Bay-Delta Water Quality Control Plan objectives. Alternative 4A would result in substantially lesser water quality impacts to salinity-related parameters, including EC and chloride, as compared to the preferred alternative in the Draft EIR/EIS. Alternative 4A would still have significant impacts to EC; however, feasible mitigation measures were introduced to reduce the identified impacts to less than significant levels to protect beneficial uses and achieve compliance with SWRCB D-1641 standards.
1527	262	[From ATT 1:] Section: 8.4.3.9 Page: 8-439 Line: 36-44 Type: WQ Key Document Text: "River flow rate and reservoir storage reductions that would occur under Alternative 4, Scenarios H1-H4, relative to Existing Conditions, would not be expected	The salt accumulation in soils may not change appreciably under the project. However, the cited section is part of the impact discussion and intended only to state that there are no anticipated adverse increases in salinity at upper watershed locations as a result of any project action or other causes. The cited actions are not mitigation measures. For the EIS, there is no anticipated change in upper watershed salt accumulation. The EIS is meant to identify and provide mitigation for impacts. If there is no impact, no action is required in this process. Salt management is the purview of CV-SALTS and the Regional WQ Control Board.

DEIRS Ltr#	Cmt#	Comment	Response
		to result in a substantial adverse change in electroconductivity levels in the reservoirs and rivers upstream of the Delta, given that: changes in the quality of watershed runoff and reservoir inflows would not be expected to occur in the future; the state's aggressive regulation of point-source discharge effects on Delta salinity-elevating parameters and the expected further regulation as salt management plans are developed; the salt- related Total Maximum Daily Loads adopted and being developed for the San Joaquin River; and the expected improvement in lower San Joaquin River average EC levels commensurate with the lower EC of the irrigation water deliveries from the Delta." Comment: It is unclear if the regulatory programs and water quality policies described are intended as a mitigation measure. Regulatory programs like Central Valley Salinity Alternatives for Long-term Sustainability will be dramatically affected by the BDCP and will likely require a "grand" solution to prevent the continued accumulation of salts in the Central Valley. Operation of the water exports has amplified the problem, and the BDCP should also address this long-term issue. It is insufficient to assume that salt accumulation will resolve itself through regulatory programs. Further, the proposed mitigation measures are continued assessment and investigative approaches that do not commit to actual reductions in salinity.	
1527	263	[From ATT 1:] Section: 8.4.3.9 Page: 8-446 Line: 17-21 Type: WQ Key Document Text: "BDCP Conservation Measure 12 (CM12) addresses the potential for methylmercury bioaccumulation associated with restoration activities and acknowledges the uncertainties associated with mitigating or minimizing this potential effect. CM12 proposes project-specific mercury management plans for restoration actions that will incorporate relevant approaches recommended in Phase 1 Methylmercury Total Maximum Daily Load control studies." Comment: As a bioaccumulate, the load of methylmercury should be considered as well in the evaluation of impacts, including detailed assessments at locations in the Delta and upstream. The effects of the restoration areas are not adequately characterized in the water quality analysis. The effects should be estimated to provide a better sense of the uncertainty and potential range of loads and concentrations associated with the BDCP actions. At a minimum, the EIR/EIS should evaluate consistency with the Delta Methylmercury TMDL allocations for each of the subregions and how the BDCP would impact compliance with the TMDL targets for each area.	Please see comment response number 19. Please refer to Master Response 14 for more information regarding methylmercury analysis. Please see EC12 in Appendix 3B of the FIER/EIS for more information regarding methylmercury management under the new preferred alternative, 4A.
1527	264	[From ATT 1:] Section: 8.4.3.9 Page: 8-446, 8-447	Please see Impact WQ-14 in Section 8.3.3.9 of the FEIR/EIS, which states that There would be no substantial, long-term increase in mercury or methylmercury concentrations or loads in the rivers and reservoirs upstream of the Delta or the waters exported to the CVP and SWP service areas due to implementation of CM2–CM21 relative to Existing Conditions. However, in the Delta, uptake of mercury from water and/or methylation of inorganic mercury may increase to an unquantified degree as part of the creation of new, marshy, shallow, or organic-rich restoration areas. Design of restoration sites under Alternative 4 would be

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 3-42, 1-2 Type: WQ Key Document Text: "Impact WQ-14: Effects on Mercury Concentrations Resulting from Implementation of Conservation Measure 2-22" Comment: The evaluation concludes that there are adverse impacts and significant uncertainties, but it does not propose mitigation measures to reduce methylmercury loads or concentrations. The Delta is impaired for methylmercury with no available assimilative capacity. The evaluation should consider mitigation measures to reduce the potential load increase. Numerous mitigation measures (e.g., offset in other historic source locations) should be considered as part of the Total Maximum Daily Load Phase 1 evaluation.	guided by CM12 which requires development of site-specific mercury management plans as restoration actions are implemented. The effectiveness of minimization and mitigation actions implemented according to the mercury management plans is not known at this time, although the potential to reduce methylmercury concentrations exists based on current research. Although the BDCP will implement CM12 with the goal to reduce this potential effect, the uncertainties related to site specific restoration conditions and the potential for increases in methylmercury concentrations in the Delta result in this potential impact being considered significant. No mitigation measures would be available until specific restoration actions are proposed. Please refer to Master Response 14 for more information regarding methylmercury analysis. Please see EC12 in Appendix 3B of the FEIR/EIS for more information regarding methylmercury management under the new preferred alternative, 4A.
1527	265	[From ATT 1:] Section: 8.4.3.9 Page: 8-447 Line: 3-8 Type: WQ Key Document Text: "There would be no substantial, long-term increase in mercury or methylmercury concentrations or loads in the rivers and reservoirs upstream of the Delta or the waters exported to the CVP and SWP service areas due to implementation of Conservation Measure 2-CM22 relative to Existing Conditions. However, in the Delta, uptake of mercury from water and/or methylation of inorganic mercury may increase to an unquantified degree as part of the creation of new, marshy, shallow, or organic-rich restoration areas." Comment: The Sacramento River reach between Veterans Bridge and Emmaton is not adequately characterized and is not consistent with the previous NEPA finding of adverse effects due to uncertainty, since this reach would be affected by the restoration areas that introduce the uncertainty. Throughout this assessment, this reach is not evaluated sufficiently.	Please see comment response number 264.
1527	266	[From ATT 1:] Section: 8.4.3.9 Page: 8-451 Line: 27-31 Type: CM19, WQ Key Document Text: "Because urban stormwater is a source of nitrate in the affected environment, Conservation Measure 19, Urban Stormwater Treatment, is expected to slightly reduce nitrate loading to the Delta, thus slightly decreasing nitrate-N concentrations relative to the No Action Alternative. Implementation of CM12-CM18 and CM20-CM22 is	The text cited by the comment is acknowledging that stormwater is a source of nitrate, but does not suggest that stormwater is particularly “high” relative to other sources. The limited utility of CM19 to affect nitrate is noted in the statement that nitrate concentrations may be reduced “slightly.” No change to the impact discussion is needed.

DEIRS Ltr#	Cmt#	Comment	Response
		not expected to substantially alter nitrate concentrations in any of the water bodies of the affected environment." Comment: Urban wet weather runoff is generally low in nitrates, and the conclusion that CM19 would reduce nitrate concentrations is unfounded. A reference should be provided that demonstrates that urban wet weather runoff is high in nitrates should be provided. In some cases, especially in the San Joaquin River, urban runoff dilutes river concentrations. Many CM19 and current low impact development (LID) control measures are intended to reduce flows. Restoration areas use groundwater that is higher in nitrates for habitat flows.	
1527	267	[From ATT 1:] Section: 8.4.3.9 Page: 8-452 Line: 11-18 Type: WQ, WS Key Document Text: "Thus changes in system operations and resulting reservoir storage levels and river flows under the various operational scenarios of Alternative 4 would not be expected to cause a substantial long- term change in Dissolved Organic Carbon concentrations in the water bodies upstream of the Delta. Any negligible changes in DOC levels in water bodies upstream of the Delta under Scenarios H1-H4 of Alternative 4, relative to Existing Conditions and the No Action Alternative, would not be of sufficient frequency, magnitude and geographic extent that would adversely affect any beneficial uses or substantially degrade the quality of these water bodies, with regards to DOC." Comment: Similar to the previous comment on the No Action Alternative. There needs to be further assessment of the other factors potentially influencing organic carbon concentrations in the source water quality, both in the Delta and upstream of the Delta. Factors that should be assessed include changes due to revised reservoir operations, increase in diverted flows at Yolo Bypass, and climate change impacts.	Please see comment response number 67. The assessment of dissolved organic carbon for Alternative 4 upstream of the Delta does consider changes in reservoir operations and flow releases. Effects of climate change and water system diversions are incorporated into the modeling of reservoir operations and flows. For more information regarding Impact WQ-17 for the preferred alternative please see Section 8.3.4.2 in Chapter 8 of the FEIR/EIS, which includes upstream, in-delta, and SWP/CVP export service areas.
1527	268	[From ATT 1:] Section: 8.4.3.9 Page: 8-456 Line: 12-20 Type: CM19, WQ Key Document Text: "Implementation of CM12-CM22 would not be expected to have substantial, if even measurable, effect on Dissolved Organic Carbon concentrations upstream of the Delta, within the Delta, and in the SWP/CVP service areas. Consequently, any negligible increases in DOC levels in these areas of the affected environment are not expected to be of sufficient frequency, magnitude and geographic extent that they would adversely affect the Municipal and Domestic Water Supply beneficial use, or any other beneficial uses, of the affected environment, nor would potential increases substantially	CM12–CM21 involve actions unrelated to dissolved organic carbon, hence, the included statement that these measures would not be expected to have a measurable effect on concentrations upstream of the Delta, in the Delta, or in the SWP/CVP export service areas. These actions either relate to specific constituents (i.e., mercury, dissolved oxygen) or relate to fisheries actions. Please see Mitigation Measure WQ-18 in Appendix 3B of the FEIR/EIS to address the potential increased water treatment costs that could result from DOC concentration effects on municipal and industrial water purveyor operations.

DEIRS Ltr#	Cmt#	Comment	Response
		degrade water quality with regards to DOC." Comment: This conclusion statement is inaccurate and misleading, and the assessment is insufficient. The conclusion seems in contrast to some conclusions in Conservation Measure 2-CM5 and CM7-CM12 that could affect organic carbon. In some cases, increases of 0.5 mg/L were projected that could impact Municipal and Domestic Water Supply beneficial uses by requiring additional water treatment. This increase is a substantial fraction of current concentrations. A more detailed assessment should be performed to evaluate the impact on beneficial uses.	
1527	269	[From ATT 1:] Section: 8.4.3.9 Page: 8-456 Line: 21-24 Type: WQ, WS Key Document Text: "Change in Delta hydrodynamics involves a two part process, including the conveyance facilities and operational scenarios of Conservation Measure 1, as well as the change in Delta channel geometry and open water areas that would occur as a consequence of implementing tidal wetland restoration measures such as that described for CM4." Comment: Since CM2 results in significant flows diverted from the Sacramento River seasonally, this can also impact the hydrodynamics and thus should have been included in the evaluation on the impact to DOC, both in the Delta and upstream of the Delta.	It should be noted that the Draft EIR/EIS included an analysis of changes due to habitat restoration under the action alternatives (with other assumptions in these alternatives) as compared to Existing Conditions and No Action Alternative. The analyses of changes in DOC were based upon DSM2 QUAL as described in the EIR/EIS Appendix 5A. The changes in DOC at key Delta locations were discussed in the Chapter 8 of the EIR/EIS. Also, regarding assessment of water quality changes in the upstream of Delta region, including the Sacramento River, please refer to Master Responses 25 and 30. Please see Impact WQ-18 in Chapter 8 of the FEIR/EIS and Mitigation Measure WQ-18 in Appendix 3B of the FEIR/EIS to address the potential increased water treatment costs that could result from DOC concentration effects on municipal and industrial water purveyor operations.
1527	270	[From ATT 1:] Section: 8.4.3.9 Page: 8-457 Line: 32-33 Type: WQ Key Document Text: "Furthermore, DOC is not bioaccumulative, therefore changes in Dissolved Organic Carbon concentrations would not cause bioaccumulative problems in aquatic life or humans." Comment: While Dissolved Organic Carbon is not bioaccumulative, the effect on human health is as a disinfection byproduct precursor, such that it should essentially be considered bioaccumulative, depending on the context of the analysis.	Effects of DOC on disinfection byproduct formation were considered in the analysis. Human health risks from disinfection byproducts were also considered. Substantially increased DOC concentrations in municipal source water may create a need for existing drinking water treatment plants to upgrade treatment systems in order to achieve EPA Stage 1 Disinfectants and Disinfection Byproduct Rule action thresholds. While treatment technologies sufficient to achieve the necessary DOC removals exist, implementation of such technologies would likely require substantial investment in new or modified infrastructure. The statement is correct that DOC does not bioaccumulate, and all concerns regarding human health effects of disinfection byproducts were assessed in Chapter 8 of the FEIR/EIS. Please see Impact WQ-31: Water Quality Effects Resulting from Construction-Related Activities (CM1-CM21).
1527	271	[From ATT 1:] Section: 8.4.3.9	CMs 2-22 were evaluated at a programmatic level. Specific locations and designs of restoration areas that may load additional DOC to the Delta are unknown, and thus it is not possible at this time to define an appropriate monitoring program or assess impacts on specific drinking water intakes. When restoration areas receive project level environmental analysis, these issues will be further evaluated. Please see Master

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-458 Line: 8-38 Type: WQ Key Document Text: "The BDCP proponents will also establish measures to help guide the design and creation of the target wetland habitats. At a minimum, the measures should limit potential increases in long- term average Dissolved Organic Carbon concentrations, and thus guide efforts to site, design, and maintain wetland and riparian habitat features, consistent with the biological goals and objectives of the BDCP. For example, restoration activities could be designed and located with the goal of preventing, consistent with the biological goals and objectives of the BDCP, net long-term average DOC concentration increases of greater than 0.5 mg/L at any municipal intake location within the Delta." Comment: As presented, mitigation measure Water Quality-18 notes that it may not be possible to include the measure in light of other BDCP goals. Furthermore, there are insufficient assurances in place on how the BDCP will monitor future changes in DOC and causes of impairments to municipal drinking water intakes. The EIR/EIS should evaluate the impact on drinking water intakes and treatment if mitigation is not implemented or effective.	Response 2 for more information regarding project versus program level planning.
1527	272	[From ATT 1:] Section: 8.4.3.9 Page: 8-458 Line: 39-40 Type: WQ, WS Key Document Text: "Impact Water Quality-19, Effects on Pathogens" Comment: See other comments on pathogen text in the No Action Alternative.	Please see responses to comments on the pathogens assessment of the No Action Alternative, which are provided in responses to Comment Letter 1527, Comments 246 and 247.
1527	273	[From ATT 1:] Section: 8.4.3.9 Page: 8-462 Line: 21-26 Type: WQ Key Document Text: "Because of a great deal of scientific uncertainty in the loading of coliforms from these various sources, the resulting change in coliform loading is uncertain, but it is anticipated that coliform loading to Delta waters would increase. Based on findings from the Pathogens Conceptual Model that pathogen concentrations are greatly influenced by the proximity to the source, this could result in localized increases in wildlife-related coliforms relative to the No Action Alternative."	No mitigation is proposed, because changes in pathogen levels are anticipated to be less than significant. Even though there is uncertainty that precludes quantification of pathogen changes, the projected localized increases in pathogen concentrations are not expected to substantially change in response to changing reservoir storage, river flows, or Delta source water fractions (see Impact WQ-19 and WQ-20 for all alternatives).

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: Mitigation should be required based on the uncertainty of coliform and pathogen source changes from new restoration areas and the conclusion that restoration areas would increase concentrations of pathogens. The July 2013 Basin Plan Amendment includes narrative objectives for Giardia and Crytosporidium and trigger levels for investigative action. The CEQA and NEPA impact assessment is insufficient because these triggers are not properly evaluated and the finding of "not adverse" is inconsistent with the Basin Plan if drinking water intakes are impacted.	
1527	274	[From ATT 1:] Section: 8.4.3.9 Page: 8-464 Line: 11-14 Type: WQ Key Document Text: "Monitoring for pyrethroid insecticides in main-stem rivers is limited and detections are rather few. With the replacement of many traditionally organophosphates related uses, however, it is conservatively assumed that pyrethroid incidence and associated toxicity could ultimately take a pattern of seasonality similar to that of the chlorpyrifos or diazinon." Comment: There is much data in the Sacramento Delta collected in the last five years by the CMP (15-20 data points). Pyrethroids have a different transport mechanism, decay rate, effect levels, and application pattern, and it is not reasonable to assume that "toxicity patterns" would be similar to OP Pesticides.	Please refer to Master Responses 14 and 30 regarding use of data and the qualitative assessment approach for pesticides.
1527	275	[From ATT 1:] Section: 8.4.3.9 Page: 8-464 Line: 40-42 Type: WQ, WS Key Document Text: "However, summer average flow reductions of up to 19% are not considered of sufficient magnitude to substantially increase in-river concentrations or alter the long-term risk of pesticide-related effects on aquatic life beneficial uses." Comment: More information is needed to support the lack of sufficiency of flow reductions to impact ambient water concentrations of pesticides. The reliance upon assimilative capacity may not be valid if discharging to a high quality waterbody, since it may show a trend of degradation	See response to Comment Letter 1527, Comment 250.
1527	276	[From ATT 1:] Section: 8.4.3.9	The cited text is from the assessment of CM1. Assessing changes in pesticide use due to unforeseen increases in invasive weeds or increased demand due to climate change would be speculative and thus was not included in the assessment. Dilution of pesticides was assessed. Effects of CM2–CM22 were also assessed (Impact WQ-22) at a programmatic level. For more information regarding project versus program

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-467 Line: 25-28 Type: WQ Key Document Text: "Because long-term average pesticide concentrations are not expected to increase substantially, no long-term water quality degradation with respect to pesticides is expected to occur and, thus, no adverse effects on beneficial uses would occur. This impact is considered to be less than significant. No mitigation is required." Comment: The EIR/EIS does not adequately nor sufficiently discuss the uncertainty of this broad conclusion. There are a number of factors that may require additional pesticide use such as invasive weed productivity interfering with Conservation Measure 1 or CM2 operation due to climate change, increased agricultural applications due to climate change, and the unknown effect of the changes in flow patterns that may alter "scour" and dilution of pesticides already in the system. This finding is inaccurate since a number of the conservation measures may increase pesticide concentrations, and it is not clear whether or when each conservation measure will be completed.	level planning please see Master Response 2.
1527	277	[From ATT 1:] Section: 8.4.3.9 Page: 8-467 Line: 25-28 Key Document Text: "Because long-term average pesticide concentrations are not expected to increase substantially, no long-term water quality degradation with respect to pesticides is expected to occur and, thus, no adverse effects on beneficial uses would occur. This impact is considered to be less than significant. No mitigation is required." Comment: The uncertainty with the broad conclusion is not sufficiently evaluated. There are reasonable conditions which may lead to increases in pesticides that should be evaluated. It is misleading to draw this broad conclusion based only on qualitative assessments when quantitative approaches are feasible and data are available. The EIR/EIS should perform a quantitative computational modeling effort to evaluate pesticide concentrations.	Please see comment response number 276.
1527	278	[From ATT 1:] Section: 8.4.3.9 Page: 8-479 Line: 10-13 Type: WQ, WS Key Document Text: "Facility operations could have an effect on these sources if concentrations of dissolved metals were closely correlated to river flow, suggesting that changes in river flow, and the related capacity to dilute these sources, could ultimately have	Please see comment response number 25.

DEIRS Ltr#	Cmt#	Comment	Response
		a substantial effect on long-term metals concentrations." Comment: Reservoir operation will control the elevation, thus storage volume, in the reservoirs. These volumes could result in stratification of the reservoir and impacts to the concentration of dissolved metals in the water discharged to downstream rivers and should be evaluated. The United States Geological Survey National Water Quality Assessment program has identified upstream reservoirs and mines as sources of trace metals (http://ca.water.usgs.gov/user_projects/sac_nawqa/study_description.html) Metals evaluations need to be conducted on total metals fraction relationship to storage volumes, to account for impacts to drinking water treatment requirements and treated water levels.	
1527	279	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,1,1-trichlorobenzene Maximum Contaminant Level 0.2 mg/L" Comment: This is incorrect. No standard exists for this constituent. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	280	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,1,1-trichloroethane" Comment: There is a Maximum Contaminant Level of 0.2 mg/L which should be shown in the last column. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	281	[From ATT 1:] Section: 8A Page; 8A-1 Line: Table 8A-1	Table 8A-1 of the FEIR/FEIS has been revised per the comment.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WS, ERROR Key Document Text: "1,1,2-trichloro-1,2,2-trifluoroethane MCL 0.12 mg/L" Comment: This is incorrect. The Maximum Contaminant Level is 1.2 mg/L for this constituent. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	
1527	282	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,1,2-trichlorobenzene MCL 0.005 mg/L" Comment: This is incorrect. No standard exists for this constituent. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	283	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,1,2-trichloroethane" Comment: There is a Maximum Contaminant Level of 0.005 mg/L, which should be shown in the last column. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	284	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,2-dichloropropene MCL 0.005 mg/L"	Table 8A-1 of the FEIR/FEIS has been revised per the comment.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: This is incorrect. No standard exists for this constituent. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	
1527	285	[From ATT 1:] Section: 8A Page: 8A-1 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "1,2-dichloropropane" Comment: There is a Maximum Contaminant Level of 0.005 mg/L, which should be shown in the last column. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	286	[From ATT 1:] Section: 8A Page: 8A-2 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "Arsenic MCL 0.01 mg/L" Comment: This is incorrect. The Maximum Contaminant Level is 0.010 mg/L for this constituent. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	287	[From ATT 1:] Section: 8A Page: 8A-5 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "Sulfate" Comment: There is a Maximum Contaminant Level of 250 mg/L for this constituent, and it should be added to the table. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Recentlyadoptedregulations/R-2	Table 8A-1 of the FEIR/FEIS has been revised per the comment.

DEIRS Ltr#	Cmt#	Comment	Response
		1-03-finalregtext.pdf	
1527	288	[From ATT 1:] Section: 8A Page: 8A-5 Line: Table 8A-1 Type: WS, ERROR Key Document Text: "Thiobencarb MCL 0.001 mg/L" Comment: This is incorrect. There is a primary and a secondary Maximum Contaminant Level for this constituent, and it should be represented by both 0.07/0.001 mg/L. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	289	[From ATT 1:] Section: 8A Page: 8A-5 Line: Table 8A-1 Key Document Text: "Toxaphene MCL 0.003 and 0.005 mg/L" Comment: There should only be one line for toxaphene, and the correct Maximum Contaminant Level is 0.003 mg/L. http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Dwdocuments/EPAandCDPH-2-13-2014.pdf	Table 8A-1 of the FEIR/FEIS has been revised per the comment.
1527	290	[From ATT 1:] Section: 8A Page: 8A-14 Line: Table 8A-3 Type: WS, ERROR Key Document Text: "Chemical Constituents Narrative" Comment: This narrative water quality objective needs to be included as it applies to the Region 5 Basin Plan and includes organic carbon as per the Drinking Water Policy. http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2013-0098_res.pdf	The Chemical Constituents narrative objective has been added to Table 8A-3.
1527	291	[From ATT 1:]	Water quality data sources for the setting are described in Section 8.2.2 of Chapter 8, Water Quality of the FEIR/EIS. Also see Master Response 14 regarding presentation and use of data in the Environmental

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 8B Page: 8B-1 to 8B-5 Line: Table B-1 Type: WQ, WS, SCOPE Key Document Text: "Summary of Data Availability for Use in Environmental Setting" Comment: Four sites are located upstream of the Delta in the North (Sacramento River at Keswick, Feather River at Oroville, American River at Water Treatment Plan, and Sacramento River at Verona). The table needs additional footnotes explaining the specific programs and sources of data for each constituent. Many constituents of interest for drinking water do not have any data evaluated at any of these four sites. The limited data do not support that a complete assessment has been conducted for the area upstream of the Delta, and this data should have been supplemented with available data from existing Municipal and Domestic Water Supply users in the Sacramento metropolitan area.	Setting section of Chapter 8 of the FEIR/EIS.
1527	292	[From ATT 1:] Section: 8C.1 Page: 8C-1 Line: 4-5 Type: WQ Key Document Text: "A constituent 'screening analysis' was performed as the first portion of the overall analysis of water quality effects of implementing the Alternatives." Comment: This process is fundamentally flawed as it was focused on evaluating only the data that was readily available at the few sites selected for ease of data acquisition. As noted in the comment on Appendix 8B, there was limited data available at the selected sites upstream of the Delta in the Sacramento River system. There is significantly more data readily available in the Sacramento Valley, as presented in other comments herein. The process should have identified water quality constituents of concern, based on the applicable beneficial uses, and then targeted data collection on those constituents in order to determine the water quality effects of the BDCP.	Please see comment response number 12.
1527	293	[From ATT 1:] Section: 8C.1 Page: 8C-1 Line: 20 Type: WQ, WS, ERROR Key Document Text: "This screening analysis evaluated 182 water quality	Please see comment response number 12. It was not designed to necessarily assess every water quality constituent that exists that can pose a threat to water quality generally. If a water quality constituent was either present in any of the databases used, was identified in public scoping comments, was 303(d) listed, or was considered by best professional judgment to have available information sufficient to assess and could potentially have significant or adverse impacts due to the project, it was included in the screening analysis. Constituents not included in the screening analysis either do not have enough information available to assess, or are considered to have no potential for significant/adverse effects due to the project.

DEIRS Ltr#	Cmt#	Comment	Response
		constituents/parameters." Comment: The list of constituents provided in Step 1 (Table SA-6) is missing 36 constituents with primary or secondary Maximum Contaminant Loads in drinking water. All of those regulated constituents should have been placed on an initial screening list (perhaps as part of Step 4) to determine if they needed to be evaluated and if data was readily available to assess.	
1527	294	[From ATT 1:] Section: 8C.1.1 Page: 8C-1 Line: 35-38 Type: WQ, SCOPE Key Document Text: "However, for consistency and due to data availability concerns, the input data for the screening analysis was limited to two data sets that were publically available via the web and managed by a public agency (i.e., data from the DWR Water Data Library and the Bay Delta and Tributaries Project [BDAT])." Comment: Although these data sets do provide ease of obtaining and consistency in evaluation, neither program is focused on evaluating the Municipal and Domestic Water Supply beneficial use; therefore, the data sets are insufficient in terms of the number of constituents and the number of data points to assess the water quality impacts to that and other beneficial uses. The data collection should have targeted key constituents and geographic areas where additional data should have been obtained from other reliable programs such as CDPH compliance monitoring and Central Valley Regional Water Board WDR and National Pollutant Discharge Elimination System permit monitoring.	The databases relied upon for the assessment were selected because they provided a sufficient number of data points in a consistent manner that minimized bias for the constituents selected for the analyses. The water quality assessment included a screening analysis of 182 water quality constituents/parameters as described in Chapter 8 and Appendix 8C of the Final EIR/EIS. The screening analysis determined that 110 constituents/parameters would not be effected by implementation of the action alternatives. It should be noted that some of these constituents/parameters occurred at concentrations that adversely affected beneficial uses under Existing Conditions and No Action Alternative as well as the action alternatives. However, if the action alternatives would not change the conditions that would occur under the No Action Alternative, these conditions would occur with or without implementation of the Proposed Project or the action alternatives, no mitigation is required from the Project. It also should be noted that the evaluation is a comparative analysis to determine the incremental differences between conditions under the Proposed Project and other action alternatives and as compared to the conditions under the Existing Conditions and the No Action Alternative.
1527	295	[From ATT 1:] Section: 8C.1.1.1 Page: 8C-2 Line: 5 Type: WQ, Scope Key Document Text: "Table SA-1" Comment: The Sacramento River upstream of the Delta is solely represented by five sites located within the Delta (at Hood and Greene's Landing) and therefore not representative of upstream conditions. For example, there are significant differences in water quality, such as presence and detectability of pesticides from upstream agriculture, which cannot be assessed at the Delta sites for potential impacts to upstream water quality from reduced dilution. This analysis was too limited in scope and should have been expanded to target key geographic areas upstream of the Delta.	The quantitative portion of the screening analysis focused on determination of which constituents should be included for detailed assessment based on conditions in the Delta. Because the Delta is downstream of the "Upstream of Delta" region, it is assumed that if a constituent required detailed assessment in any portion of the Plan Area, including the Upstream of Delta region, it would also require detailed assessment in the Delta Region. It is not expected that there are constituents that would require detailed assessment in the Upstream of Delta region that would not require this level of detailed assessment in the Delta. Pesticides were carried forward out of the screening analysis for detailed assessment. Pesticide concentrations were analyzed in the EIR/EIS along the Sacramento River at Freeport, American River at Nimbus Dam, and Feather River downstream of Thermalito, as described in Appendix 8L of the EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
1527	296	[From ATT 1:] Section: 8C.1.2 Page: 8C-3 Line: 2-4 Type: WQ Key Document Text: "Because modeling performed in support of the Environmental Consequences impact assessments assumed no new sources of water quality constituents, water quality concerns arise primarily through altered mixing of Delta source waters." Comment: The broad statement is misleading and should be corrected. New sources may exist in the restoration wetlands and other conservation measures. What is the basis for assuming that there are no new sources? Pathogens, methylmercury, organic carbon, and potentially increased use of groundwater to offset upstream supply restrictions during droughts are all constituents where new sources (restoration areas, water supply changes, etc.) should be considered as part of the EIR/EIS.	Contributions of constituents due to implementation of conservation measures were addressed in the separate impact discussions for those conservation measures, for each alternative. The text regarding modeling referenced in this comment refers to the modeling performed to evaluate conservation measure 1 (water conveyance facilities and operations).
1527	297	[From ATT 1:] Section: 8C.1.3.1.2 Page: 8C-6 Line: 14-18 Type: WQ Key Document Text: "Available tools were considered appropriate for modeling only those constituents that could be assumed to be conservative (i.e., not transformed into a new constituent or lost as water flows through the system). Constituents of concern that could not be analyzed through quantitative modeling, or for which it was determined that quantitative modeling was not necessary for an environmental impacts determination, were carried forward for qualitative analysis." Comment: This is an unnecessary limitation. The BDCP should be required to collect additional data and develop modeling tools for all constituents of concern.	Please see comment response number 294.
1527	298	[From ATT 1:] Section: 8C.1.3.2 Page: 8C-6 Line: 21 Type: WS, ERROR Key Document Text: "Summary of Source Water Data (Step 1) -"	Aluminum was added to the screening analysis in Appendix 8C and into the trace metals assessment in Impact WQ-27 for the project alternatives, based on data availability and known presence in the ambient surface waters of the affected environment. The remaining constituents listed in this comment have not been added into the water quality assessment.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: This process is missing 36 constituents with primary or secondary Maximum Contaminant Levels in drinking water. There are five constituents that we recommend be added to the screening analysis, at a minimum, including aluminum, perchlorate, 1,1,2-trichloro-1,2,2- trifluoroethane, di (2-ethylhexyl) adipate, and di (2-ethylhexyl) phthalate based on potential risk to source water quality.	
1527	299	[From ATT 1:] Section: 8C and 8C.1.3.2.1 Page: 8C-6 Line: 28-30 Type: ERROR Key Document Text: "In addition to the 28 summary characteristics identified in Section 4.4.2.1 and Section 4.4.2.2, the following were 29 determined across all source water locations." Comment: This section reference is incorrect and needs to be reviewed and revised.	Section numbering was incorrect and has been revised in this Final EIR/EIS.
1527	300	[From ATT 1:] Section: 8C.1.3.3 Page: 8C-7 Line: 18 Type: WQ, ERROR Key Document Text: "Determine if maximum detect exceeds minimum applicable criterion" Comment: The primary drinking water standards for metals are based upon the total fraction of the metal in analysis, not the dissolved fraction as per Safe Drinking Water Act. Drinking water treatment provides variable levels of metals reduction, depending on the process, other water quality criteria, and the fraction total/dissolved metals present. It is incorrect to apply the metals Maximum Contaminant Levels to the dissolved fraction for analysis, and this needs to be revised.	Please see comment response number 25. See Table SA-6 in Appendix 8C of the FEIR/EIS.
1527	301	[From ATT 1:] Section: 8C.1.3.3 Page: 8C-7 Line: 20 Type: WQ Key Document Text: "Determine if constituent is of concern based on professional	E. Coli was assessed as a surrogate for pathogens in the pathogens assessment, and thus was carried forward from the Screening Analysis into the detailed assessment sections in Chapter 8 of the FEIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		judgment" Comment: It is unclear what is the basis for professional judgment to carry E. coli forward for Step 5 evaluation. If this is based on impacts to the Municipal and Domestic Water Supply beneficial use, E. coli is only used as a surrogate to represent potential risk to human health from pathogens. Source water concentrations of E. coli can be used by the California Department of Public Health if direct monitoring of Giardia and viruses is not available to determine the level of treatment required at a water treatment plant (based on the Surface Water Treatment Rule and its U.S. Environmental Protection Agency and California DPH guidance documents). This needs to be clarified and specified for what trigger levels will be used.	
1527	302	[From ATT 1:] Section: 8C.1.3.4 Page: 8C-8 Line: 6 Type: WQ Key Document Text: "Determine if constituent is of concern based on professional judgment" Comment: It is unclear what is the basis for professional judgment related to total and fecal coliform and Giardia and Cryptosporidium evaluations. The concentrations of these constituents in the source water are what determine the level of treatment required in the source water, as per the Surface Water Treatment Rules, and therefore they are of significant concern to the Municipal and Domestic Water Supply use. These constituents are not carried forward for evaluation for the MUN use; this needs to be reevaluated, based on limited data and the significance of the constituents.	Total and fecal coliform, Giardia, and Cryptosporidium were all assessed as part of the pathogens assessment. Appendix 5C indicated that Cryptosporidium had been carried forward for detailed assessment, but not Giardia and total and fecal coliform. Appendix 5C has been corrected to indicate that total and fecal coliform and Giardia were carried forward based on professional judgment, provided in Appendix A of the 2015 RDEIR/SDEIS.
1527	303	[From ATT 1:] Section: 8C.1.3.5 Page: 8C-8 Line: 14-16 Type: WQ Key Document Text: "Non-detect constituents carried forward from screening in Step 3 and additional constituents of concern not analyzed for in the dataset (e.g., pyrethroids and dioxins) were assessed against the following triggers for potential detailed assessment." Comment: The process for selecting additional constituents of concern needs to be described. There are many drinking water constituents with regulatory standards that were not included and should have been evaluated and considered for inclusion that are not included in Table SA-9 (See comment on Step 1 evaluation).	Please see comment response number 12. The rationale for selecting additional constituents of concern is provided in Appendix 8C, Section 8C.1.3.5 in lines 17-23.

DEIRS Ltr#	Cmt#	Comment	Response
1527	304	[From ATT 1:] Section: 8C.1.3.6 Page: 8C-8 Line: 30-31 Type: WQ Key Document Text: "Determine if adequate modeling tools, relative to the physical/chemical properties of the constituent, exist to perform a quantitative assessment in the Delta" Comment: Please provide a basis for making this determination of adequate modeling tools and which tools were evaluated and why they were not found to be adequate. Certainly, such tools should be available for adaptive management, and beginning with these tools now would provide much needed information.	Please refer to Master Response 30 for a discussion of water quality assessment modeling.
1527	305	[From ATT 1:] Section: 8C.1.3.6 Page: 8C-8 Line: 32-34 Type: WQ Key Document Text: "Determine if a quantitative assessment is necessary to determine the potential environmental impact (e.g., when all source water concentrations are similar, then the mixed condition is predictable without quantitative modeling)" Comment: The suggested approach that modeling is only necessary for hydrodynamics (i.e., blended sources of the same magnitude are essentially 'mixed') does not consider non-conservative processes or the additive effects of some toxicants. All assessments should be based on quantitative approaches.	Sufficient data and models are not available to evaluate every constituent addressed in Chapter 8, Water Quality, quantitatively. Further, the nature of the effects of the alternatives on changing flows and Delta source water fractions does not necessitate a quantitative approach. Please refer to Master Response 30 regarding the qualitative approach taken in the water quality assessment for certain constituents and for the Upstream of the Delta region.
1527	306	[From ATT 1:] Section: 8C.1.4.4 Page: 8C-11 Line: 12-13 Type: WQ Key Document Text: "Decreasing the thresholds to nine would trigger quantitative analysis of iron and manganese. Further threshold reductions to six would trigger chromium." Comment: This finding of the Sensitivity Analysis supports that iron, manganese, and chromium need to be carried forward in the Screening Analysis and examined in more detail	Iron and manganese were assessed in Chapter 8, within Impacts WQ-27 and WQ-28 for the project alternatives. Section 8.1.3.16 of the Draft EIR/EIS has been modified and presented in the RDEIR/SDEIS to describe the importance of iron and manganese to the study area. See response to Comment Letter 1527, Comment 191 regarding chromium.

DEIRS Ltr#	Cmt#	Comment	Response
		in Chapter 8.	
1527	307	[From ATT 1:] Section: 8C.1.5.2 Page: 8C-12 Line: 38-40 Type: WS, ERROR Key Document Text: "Secondary Maximum Contaminant Levels are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations." Comment: This statement is incorrect. Secondary Maximum Contaminant Levels are enforceable standards for public water systems in California as per Title 22, Chapter 15, Article 16. The text needs to be revised accordingly and the evaluation reconsidered.	The identified section has been modified to indicate the enforceability of secondary MCLs. See response to comment 1527 (151).
1527	308	[From ATT 1:] Section: 8C.1.5.2 Page: 8C-13 Line: 5-7 Type: WS Key Document Text: "Coagulation/flocculation and filtration remove metals like iron, manganese, and zinc. Aeration removes iron and manganese. Granular activated carbon removes most of the contaminants which cause color (U.S. EPA 2012b)." Comment: The efficiency of conventional filtration to remove metals is highly variable (American Water Works Association Water Quality and Treatment, 4th Ed., Table 3.1) and should not be represented as consistent. Also, aeration and Granulated Activated Carbon are not standard treatment processes implemented by most Municipal and Domestic Water Supply users and should not be identified as typically available treatment.	Please see comment response number 234. Information provided does not result in a change to the conclusion regarding color-causing constituents and the project alternatives presented in Appendix 8C of the FEIR/EIS.
1527	309	[From ATT 1:] Section: 8C Page: 8C-22 Line: Table SA-6 Type: WQ Key Document Text: "Error" Comment: The basis for calculation of means and standard deviations for constituents with	This is described in Section 8C.1.2.2 of Appendix 8C, Screening Analysis, of the EIR/EIS. The average is the average of detects and the reporting limit (if non-detect), and the standard deviation is the standard deviation of detects and reporting limits (if non-detect).

DEIRS Ltr#	Cmt#	Comment	Response
		non-detects or not detected in any samples is not provided.	
1527	310	[From ATT 1:] Section: 8C Page: 8C-22 Line: Table SA-6 Type: WQ, CM19 Key Document Text: "Observation" Comment: Very limited chlorpyrifos, diazinon, and bacteria data were included in the screening process, and most all data were reported as non- detect. No pyrethroid data were included. The use of this limited dataset conflicts with assertions made throughout the EIR/EIS and the BDCP that pesticides are present. The data used for the EIR/EIS is misleading, inconsistent, and inadequate.	Please see Master Responses 14 and 30 regarding use of data and the qualitative assessment approach for pesticides.
1527	311	[From ATT 1:] Section: 8C Page: 8C-22 to 8C-27 Type: WQ Key Document Text: "Table SA-6" Comment: A review of this data set shows that there are numerous constituents with results that are obviously out of range. This data needs to be inspected further to identify inconsistent data points. Examples at the Special Areas of Conservation site include high results for asbestos, chloride, bromide, and sulfate. Other issues recommended for review include high detection limits for Giardia and Cryptosporidium, non-detectability for total and fecal coliform and E. coli (which are ubiquitous), and the lack of total fraction metals for nickel and selenium.	While some data may appear to be out of range, for the screening assessment all data were assessed, so as not to arbitrarily eliminate constituents from further assessment. For constituents that were assessed quantitatively (e.g., boron, bromide), additional data review was performed and questionable data points were removed if they would have biased the modeling approach. This is addressed in the tables within the "Constituent-Specific Considerations Used in the Assessment" (Section 8.4.1.7). Note that Table SA-6 includes values for total selenium. No data for total nickel were provided in the data set relied upon for this assessment.
1527	312	[From ATT 1:] Section: 8C Page: 8C-28 to 8C-31 Type: WQ, WS Key Document Text: "Table SA-7" Comment: All metal constituents with primary drinking water Maximum Contaminant Levels [MCL] need to have the criteria revised so that the MCL does not apply to the dissolved fraction, and applies only to the total fraction.	Please refer to the response to comment 234.

DEIRS Ltr#	Cmt#	Comment	Response
1527	313	[From ATT 1:] Section: 8C Page: 8C-29 Type: WQ Key Document Text: "Table SA-7" Comment: It is unclear why chromium was not carried forward when a trend of degradation is identified in the table. Also, since there is a proposed Maximum Contaminant Level of 10 ug/L, the constituent should have been carried forward based on professional judgment. This evaluation needs to be reconsidered and revised.	Please see response to Comment Letter 1527, Comment 191.
1527	314	[From ATT 1:] Section: 8C Page: 8C-29 Type: WQ, ERROR Key Document Text: "Table SA-7" Comment: Total iron is shown as being forwarded to the Step 5 evaluation, but it is not included in Table SA-10. This error needs to be corrected, and the constituent needs to be moved forward in the evaluation.	Iron was inadvertently left off of Step 5, but was carried forward and included in the analysis contained in Chapter 8, Water Quality of the EIR/EIS.
1527	315	[From ATT 1:] Section: 8C Page: 8C-34 and 8C-36 Type: WQ Key Document Text: "Table SA-8" Comment: 1,3-dichloropropene has a Maximum Contaminant Level of 0.5 ug/L. This needs to be applied to its two isomers: cis-1,3-dichloropropene and trans-1,3- dichloropropene.	The comment is correct that the same Maximum Contaminant Level applies to all three constituents, but was inadvertently not included for the latter two. However, none of these constituents was ever detected in any of the datasets. Thus, correction of this omission would not have changed the results of the screening analysis.
1527	316	[From ATT 1:] Section: 8C Page: 8C-38 Type: WQ Key Document Text: "Table SA-10" Comment: Iron needs to be included in this table as per Step 2 analysis in Table SA-7. Also, it should be noted that water temperature is carried forward for a qualitative analysis but that	Table SA-10 has been revised to include iron. Please see Master Response 14 regarding assessment of effects of temperature changes on the municipal and domestic supply beneficial use.

DEIRS Ltr#	Cmt#	Comment	Response
		the analysis provided is limited to the aquatic life beneficial use and does not apply to drinking water. Temperature is a key parameter for drinking water treatment and quality, and the evaluation should be expanded to address the Municipal and Domestic Water Supply beneficial use.	
1527	317	[From ATT 1:] Section: 8C Page: 8C-39 to 8C-40 Type: WQ Key Document Text: "Table SA-11" Comment: The list of trace metals is not complete since iron was not carried forward in the Step 5 analysis (Table SA-10). In addition, any revised evaluation for chromium should be considered before finalizing this table.	Regarding iron, see response to Comment Letter 1527, Comment 306. Regarding chromium, see response to Comment Letter 1527, Comment 191.
1527	318	[From ATT 1:] Section: 8L.1 Page: 8L-2 to 8L-3 Type: WQ, SCOPE Key Document Text: "Tables 2, 3, and 4" Comment: Pesticide use in the Central Valley varies greatly by crops produced and geographic distribution. Splitting the flow analysis for dilution into two seasons is insufficient to evaluate the range of potential impacts. The evaluation should have included four seasons (winter, spring, summer, and fall) to more accurately relate dilution potential to seasonal applications of pesticides.	Given the constituent-specific considerations outlined in Section 8.4.1.7 common to the pesticide assessment for all alternatives, conducting the assessment considering changes in flow in two time periods (summer and winter) is sufficient for the qualitative assessment of pesticides.
1527	319	[From ATT 1:] Section: 8N.1 Page: 8N-1 Line: 6 Type: WQ Key Document Text: "Tables and figures below support the trace metals assessment." Comment: The appendix needs to be expanded to include an assessment of available aluminum data. The assessment of dissolved metals should consider impacts of the upstream reservoir storage levels and the potential relationship to peak levels, especially of iron and manganese in the Sacramento River. Also, a companion assessment of the total fraction of each metal needs to be presented as well.	Appendix 8C and 8N have been revised and presented in Appendix A of the RDEIR/SDEIS to include aluminum data. See response to Comment 234 regarding dissolved and total metals assessment. Also see Master Response 30 regarding upstream assessments.

DEIRS Ltr#	Cmt#	Comment	Response
1527	320	[From ATT 1:] Section: 25.1.1 Page: 25-2 Line: 13-14 Type: WQ, WS Key Document Text: "For the purposes of this analysis, the study area (the area in which impacts may occur) for public health is defined as the Plan Area (the area covered by the BDCP) and Areas of Additional Analysis." Comment: This evaluation is very limited, to only the Plan Area or Delta Region, in scope and therefore does not account for impacts to upstream diverters related to the Municipal and Domestic Water Supply beneficial use. This evaluation is not complete, as it should have evaluated the impacts to the Municipal and Domestic Water Supply users upstream caused by changes in reservoir storage and river flow conditions.	Please see comment response number 67.
1527	321	[From ATT 1:] Section: 25.1.1.1 Page: 25-3 to 25-4 Type: WQ, WS Key Document Text: "Drinking Water - Constituents of Concern" Comment: The evaluation is focused on constituents of concern related to Delta users only. The evaluation should consider a complete list of constituents of interest for all upstream Municipal and Domestic Water Supply users. The list of constituents is limited to disinfection by-products, trace metals, and pesticides. There is no clarification why this does not match the evaluations conducted as part of Chapter 8 and its appendices. The list of trace metals and pesticides is incomplete and should be explained or expanded.	As explained in Chapter 8, Water Quality, in general, the fewest water quality changes of importance are expected to occur Upstream of the Delta, followed by the SWP/CVP Export Service Areas, with the greatest number and magnitude of water quality changes expected for the Plan Area. All constituents for which data were compiled were run through an initial screening analysis that determined the appropriate levels of analysis needed for each constituent and whether further analysis beyond that provided by the screening analysis itself was warranted. The details of the screening analysis are provided in FEIR/EIS Chapter 8. Trace metals of primarily human health and drinking water concern (arsenic, iron and manganese), as noted in BDCP EIR/EIS Chapter 8, were included in the analysis in Chapter 25. With regard to pesticides considered in the public health analysis, only present use pesticides for which substantial information is available, namely diazinon, chlorpyrifos, pyrethroids, and diuron, are addressed, and these are the same pesticides addressed in Chapter 8 and the results discussed are from the water quality analysis in Chapter 8. As noted in Chapter 8, there is insufficient data to perform an assessment of BDCP alternatives' effects on all pesticides. Within available data, however, there is sufficient evidence that the organophosphate insecticides diazinon and chlorpyrifos, and the herbicide diuron may be found in the affected environment. See Master Response 14 regarding characterization of water quality as regards pesticides.
1527	322	[From ATT 1:] Section: 25.1.1.3 Page: 25-12 Line: 18-21 Type: WQ Key Document Text: "Furthermore, sediment disturbance would be limited to localized areas under the alternatives since, based on the pathogen conceptual model (discussed in Section 25.3.1.2, Pathogens and Water Quality), pathogen concentrations experience a rapid die-off the farther they travel from their source; thus, this issue is not discussed	This statement is based on discussion in Chapter 8, Impact WQ-19. Impact WQ-19 in Chapter 8 has been modified in the RDEIR/SDEIS to clarify, "There may be natural/artificial barriers/processes that limit Cryptosporidium transport to water. Significant die off of those that reach the water may contribute to the low frequency of detection." Similar clarification has been added to Chapter 25. The projected localized increases in pathogen concentrations are anticipated to be a less than significant impact.

DEIRS Ltr#	Cmt#	Comment	Response
		further." Comment: As noted in the comments in Chapter 8, this statement on pathogen die-off is incorrect and needs to be revised and included in the discussion.	
1527	323	[From ATT 1:] Section: 25.1.1.3 Page: 25-12 Line: 24-26 Type: WQ Key Document Text: "Although transport rates are initially increased during wet weather events, the increased availability of water to the Delta helps to reduce pathogen viability during these instances." Comment: This statement is not a general knowledge in the water industry, and a reference for this statement needs to be provided which supports the reduced pathogen viability.	The text was revised for clarification.
1527	324	[From ATT 1:] Section: 25.1.1.3 Page: 25-12 Line: 29-32 Type: WQ Key Document Text: "In most instances, pathogens in drinking water sources are removed by filtration or bio-membranes, or are destroyed by disinfection. Infections in humans may arise from pathogens that break through standard treatment processes implemented at drinking water sources. Infection in humans may also result from food ingestion or the ingestion of untreated water during recreation." Comment: This section focuses on the recreational risk associated with increased pathogen concentrations. Therefore, it is incorrect to discuss drinking water treatment in this section. The first two sentences should be deleted and the third sentenced revised accordingly to focus on recreation.	This text has been revised as recommended by the commenter.
1527	325	[From ATT 1:] Section: 25.1.1.3 Page: 25-12 Line: 33-35 Type: WQ	Table reference corrected to 25-3.

DEIRS Ltr#	Cmt#	Comment	Response
		Key Document Text: "Although there are many potential pathogens that enter Delta waterways, the presence of pathogens identified in Table 25-33 is tested by wastewater treatment service districts, public drinking water service districts, and other public agencies as needed (e.g., Department of Public Health)." Comment: The Table reference is incorrect and needs to be reviewed and revised. Also, if the reference is to Table 25-3, then it is unlikely that the reference public agencies monitor for these specific constituents at any regular frequency. This statement and the table need to be reviewed, confirmed, and corrected as appropriate. See California Integrated Water Quality System Database to confirm - https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=esmrAnalytical	
1527	326	[From ATT 1:] Section: 25.1.1.3 Page: 25-13 to 25-14 Line: 3-13, 1-10 Type: WQ Key Document Text: "Water Treatment" Comment: Since the pathogen discussion focuses on the recreational impacts, it is inappropriate to include a discussion on water treatment in this section. This entire subsection needs to be deleted.	Because human exposure to pathogens primarily occurs through drinking water or contact with pathogen sources in water, the "Water Treatment" subsection of Section 25.1.1.1 is included to provide a short discussion explaining that pathogen removal happens prior to distribution and treatment techniques generally have a greater than 99% removal rate, thus supporting the statement in Section 25.3.1.2 that pathogens would have a very limited effect on drinking water quality (and therefore the potential effect is dismissed from the analysis) even if implementation of any of the action alternatives were to result in an increase in pathogens to drinking water sources in the Plan Area.
1527	327	[From ATT 1:] Section: 25.1.1.3 Page: 25-14 Line: 33-38 Type: WQ, ERROR Key Document Text: "Data for Cryptosporidium and Giardia along the Sacramento River showed that these parameters were often not detected, and when detected the concentrations were generally low, typically less than one organism per liter (Tetra Tech 2007). The incidence of these pathogens could be caused by the presence of natural or artificial barriers that limit transport to water and by the significant die-off of oocysts that do reach the water, as well as by limitations in the analytical detection of Cryptosporidium oocysts in natural waters (Tetra Tech 2007)." Comment: As noted in the comments in Chapter 8, these statements on pathogen die-off, significance of detection, and relative frequency of detection are incorrect and need to be revised and included in the discussion.	Please see comment response number 247. In addition, in Chapter 25, reference in the impact analysis to pathogens undergoing rapid die-off was revised to indicate that some types of pathogens may experience rapid die-off.
1527	328	[From ATT 1:]	This text has been revised as recommended by the commenter.

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 25.1.1.3 Page: 25-15 Line: 10-12 Type: WQ, ERROR Key Document Text: "It was determined in the report by Tetra Tech (2007) that the data are inadequate to assess if the sites examined exceeded these standards. California drinking water MCLs do not exist for pathogens." Comment: The reference to the Tetra Tech Conceptual Model is inappropriate because its focus was evaluation of the data for drinking water risk, which is not the purpose of this section - it is stated that this is focused on pathogen risk from recreation. This text should be deleted.	
1527	329	[From ATT 1:] Section: 25.2.2.4 Page: 25-25 Line: 22-28 Type: WS Key Document Text: "The Safe Drinking Water Act (SDWA) was established to protect the public health and quality of drinking water in the United States, whether from aboveground or underground sources. The SDWA directed EPA to set national standards for drinking water quality. It required EPA to set Maximum Contaminant Levels for a wide variety of potential drinking water pollutants (see Appendix 8A of Chapter 8, Water Quality). The owners or operators of public water systems are required to comply with primary (health-related) MCLs and encouraged to comply with secondary (nuisance- or aesthetics-related) MCLs. SDWA drinking water standards apply to treated water as it is served to consumers." Comment: This text needs to be clarified to indicate that these are federal standards only, and that the applicable regulations in California are provided in Section 25.2.3.2.	Text in Section 25.2.2.4 was clarified to indicate standards being referred to are federal standards only, and that the applicable regulations for drinking water in California are provided in Section 25.2.3.2.
1527	330	[From ATT 1:] Section: 25.2.2.5 Page: 25-25 Line: 37-39 Type: WS, ERROR Key Document Text: "The Surface Water Treatment Rules apply to all drinking water supply activities in California and its implementation is overseen by the California Department of	This text has been revised as recommended by the commenter.

DEIRS Ltr#	Cmt#	Comment	Response
		Public Health (CDPH)." Comment: The text is incorrect and needs to be revised to clarify that the Surface Water Treatment Rules apply to drinking water systems utilizing surface water or groundwater under the direct influence of surface water. Also, it should be clarified that California Department of Public Health implementation is based on the California adopted versions of the SWTRs.	
1527	331	[From ATT 1:] Section: 25.2.3.2 Page: 25-26 Line: 14-20 Type: WQ Key Document Text: "EPA has designated California Department of Public Health as the primary agency to administer and enforce the requirements of the federal Safe Drinking Water Act in California. Public water systems are required to be monitored for regulated contaminants in their drinking water supply. California's drinking water standards (e.g., Maximum Contaminant Levels) are the same as or more stringent than the federal standards, and include additional contaminants not regulated by EPA. Like the federal MCLs, California's primary MCLs address health concerns, while secondary MCLs address aesthetics, such as taste and odor. The California SDWA is administered by CDPH, primarily through a permit system." Comment: California Department of Public Health is the "primacy" agency for the Safe Drinking Water Act in California. For water agencies, California's secondary MCLs are enforceable standards, unlike federal regulations, and this needs to be clarified in the text. See Title 22, Chapter 15 - http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	Text in Ch. 25, Section 25.2.3.2, of the FEIR/EIS has been revised to indicate that federal secondary drinking water standards are guidelines only, but that in California, the state's primary and secondary MCLs are both legally enforceable. Text has also been revised to indicate that the California Department of Public Health is the "primary" agency for the Safe Drinking Water Act in California.
1527	332	[From ATT 1:] Section: 25.2.4.5 Page: 25-28 Line: 15-21 Type: WQ Key Document Text: "Primary Maximum Contaminant Levels are established for the protection of environmental health and secondary MCLs are established for constituents that affect the aesthetic qualities of drinking water, such as taste and odor. Both the Central Valley and San Francisco Bay Basin Plans incorporate by reference the California Department of Public Health numerical drinking water MCLs. The incorporation into the Basin Plans of the MCLs, which are normally applicable to treated drinking water systems regulated by CDPH, makes the MCLs also applicable to ambient receiving waters regulated	Text in Section 25.2.4.5 was revised to clarify that both primary and secondary MCLs are enforceable regulations in California for public water systems. Text in this same section regarding MCLs being "normally applicable to treated drinking water systems…" was also revised.

DEIRS Ltr#	Cmt#	Comment	Response
		by the Regional Water Boards." Comment: The text needs to be modified to add language clarifying that both primary and secondary Maximum Contaminant Levels are enforceable regulations in California for public water systems. Also, the text needs to be modified to clarify that MCLs do not "normally apply" to treated water, see specific comments on Section 8. See Title 22, Chapter 15 -http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf	
1527	333	[From ATT 1:] Section: 25.3.1.2 Page: 25-35 Line: 24-28 Type: WQ, ERROR Key Document Text: "As described in Chapter 8, Water Quality (Section 8.3.3), the findings of the Pathogen Conceptual Model state that pathogen concentrations are greatly influenced by proximity to the pathogen- generating source, and pathogen concentrations in the study area are generally not influenced by flow rates or inputs from the Sacramento and San Joaquin Rivers because of travel time and rapid pathogen die-off rates." Comment: As noted elsewhere, the statement regarding rapid pathogen die- off rates is incorrect and needs to be deleted. The discussion should be reviewed and revised appropriately.	Please see response to Letter 1527, Comment 322.
1527	334	[From ATT 1:] Section: 25.3.1.2 Page: 25-35 Line: 29-32 Type: WS Key Document Text: "Human exposure to pathogens primarily occurs through drinking water or contact with pathogen sources in water. The removal of pathogens in drinking water happens prior to distribution and treatment techniques generally have a greater than 99% removal rate, as described in Section 25.1.1.33; therefore, pathogens would have a very limited effect on drinking water quality." Comment: This section was focused on the pathogen risk to recreators. The explanation as to why the drinking water risk was not evaluated and presented here should have been included earlier in the Chapter to clarify its exclusion. Also, the section reference is incorrect and needs to be reviewed and revised.	It is noted early on in the chapter (and multiple times) that the focus of the impact analysis with respect to pathogens would be in the context of the risk to recreators. Topics or issues dismissed from further discussion in the impact analysis for each of the resource topics in the FEIR/EIS are, for the most part, identified in the "Methods for Analysis" section, as is the case for pathogens and effects on drinking water in Ch. 25, Public Health. Therefore, for the sake of internal consistency, the text will not be revised per the commenter's suggestion. With regards to the erroneous reference to Section 25.1.1.33, this was a typo and has been corrected.
1527	335	[From ATT 1:]	The impact analysis in FEIR/EIS Chapter 25, Public Health, addresses certain water quality parameters that are of public health and drinking water concern—specifically, present-use pesticides that do not

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 25.3.1.3 Page: 25-36 Line: 12-18 Type: WQ Key Document Text: "Therefore, this analysis summarizes the qualitative and quantitative results presented in Chapter 8 to identify whether the construction and operation of the facilities associated with the alternatives would exceed water quality standards for pesticides that do not bioaccumulate (for this assessment, only present use pesticides for which substantial information is available, namely diazinon, chlorpyrifos, pyrethroids, and diuron, are addressed); trace metals of human health and drinking water concern (i.e., arsenic, iron, and manganese); Disinfection Byprofuct Precursors, including HAA5, bromated, chlorite, and Trihalomethanes via the THM formation potential5 (THMFP)." Comment: This summary is incomplete as compared with the analysis presented in Chapter 8 and needs to be reviewed and revised accordingly and updated to include any revised analysis in response to public comments on the draft EIR/EIS. Also, there is reference to trace metals (arsenic, iron, and manganese) which were not presented in Section 25.1.1.1, and this needs to be reviewed and corrected.	bioaccumulate for which substantial information is available (i.e., diazinon, chlorpyrifos, pyrethoids, and diuron; the trace metals arsenic, iron, and manganese; and the DBP precursors DOC and bromide. That analysis relies on and summarizes results in Chapter 8, Water Quality as they pertain to those water quality parameters only in the context of exceedance(s) of water quality criteria for constituents of concern in drinking water sources, as indicated in the FEIR/EIS Section 25.3.2, Determination of Effects. Text in that section as well as in Sections 25.3.1.3, Constituents of Concern and Water Quality was revised for clarification. It is not intended that the impact analysis in Chapter 25 provide a summary of the water quality impact analysis in Chapter 8. Any updates in Chapter 8 that are applicable to the analysis in Chapter 25 will be made in Chapter 25 as well. The reference to Section 25.1.1.1 was corrected.
1527	336	[From ATT 1:] Section: 25.3.2 Page: 25-39 Line: 16-23 Type: WQ Key Document Text: "Exceedance(s) of water quality criteria for constituents of concern such that an adverse effect would occur to public health from drinking water sources. This analysis is based on the qualitative and quantitative results presented in Chapter 8, Water Quality, to identify whether the construction and operation of the alternatives would exceed water quality standards for pesticides that do not bioaccumulate (present use pesticides for which substantial information is available, namely diazinon, chlorpyrifos, pyrethroids, and diuron); trace metals of human health and drinking water concern (i.e., arsenic, iron, and manganese); Disinfection Byproduct Precursors, including Haloacetic Acids, bromated, chlorite; and Trihalomethane via the Trihalomethane Formation Potential." Comment: This criteria for significance should be reevaluated based on any changes to the water quality analysis presented in Chapter 8 based on comments received on the Draft EIR/EIS.	Any revisions made in EIR/EIS Chapter 8 (Water Quality) that are applicable to the impact analysis in Chapter 25 have been carried over to Chapter 25 for the final EIR/EIS.
1527	337	[From ATT 1:] Section: 25.3.3.1	Chapter 8 of the FEIR/EIS describes whether concentrations of various water quality constituents are expected to increase or decrease with the project, relative to existing conditions and the No Action Alternative. To the extent that concentrations of various water quality constituents are expected to increase, Chapter 8 describes whether these increases are expected to result in impacts to beneficial uses of water in

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 25-45 Line: 1-6 Type: WQ Key Document Text: "However, under the No Action Alternative, existing exceedances would not increase above baseline conditions (see Chapter 8) to levels that adversely affect any beneficial uses or substantially degrade water quality. Furthermore, drinking water from the study area would continue to be treated prior to distribution into the drinking water system. Therefore, there would be no adverse effect on drinking water due to new water conveyance facilities." Comment: This determination should be revised based on any changes to the water quality evaluation analysis presented in Chapter 8 based on comments received on the Draft EIR/EIS.	the Delta. For constituents for which adverse impacts were expected, mitigation and other commitments, such as additional evaluation and modeling and consultation with water purveyors to identify additional measures to avoid and minimize or offset these impacts, were introduced to address those impacts. All water quality comments received on the Draft EIR/EIS or RDEIR/SDEIS have been responded to in this Final EIR/S. Where changes in the document have been made in response to a comment, it is noted in the response.
1527	338	[From ATT 1:] Section: 25.3.3.9 Page: 25-112 Line: 3-6 Type: WS Key Document Text: "Changes to Dissolved Organic Carbon and bromide concentrations and, by extension, Disinfection Byproduct Precursors, under Alternative 4 operational scenarios (H1-H4) suggest that there would not be exceedances of DBP criteria due to operations, because long-term average DOC and bromide concentrations would be only slightly higher under this alternative relative to the No Action Alternative." Comment: Similar to another comment on Chapter 8, the use of long term average concentrations of bromide and Dissolved Organic Carbon should be reconsidered. The treatment technique for Total Organic Carbon removal is based on a running annual average, calculated quarterly, so shorter-term impacts could occur quickly due to seasonal variability in TOC levels of the source water. Also, future conditions from both climate change and reservoir operations could result in more frequent and expanded reverse flow scenarios on the Sacramento River, which could impact the detectability of bromide in the source water periodically.	The discussion of changes to water quality in Chapter 25 is based the modeling results discussed in Chapter 8, Water Quality. Contrary to the comment, the potential water quality impacts are evaluated in consideration of both short-term and long-term timeframes. In particular, the majority of the impact assessments are based on the results of the DSM2 modeling which provides monthly average changes in constituent concentrations. It is not clear to what periods applicable for drinking water regulations the commenter is referring.
1527	339	[From ATT 1:] Section: 25.3.3.9 Page: 25-113 Line: 5-11 Type: WS Key Document Text: "Mitigation Measure WQ-5 is available to reduce these effects	The North Bay Aqueduct AIP was included only in the Cumulative Impact Analysis because the project was undergoing CEQA analysis in 2009 when the Notice of Preparation and Notice of Intent were published. Therefore, the numerical models do not include this project. Please note that the operation (not construction) of the North Bay Aqueduct Alternate Intake Project is a covered activity under Alternative 4. The new preferred alternative does not include the NBA AIP as a covered activity, but is under the no action/no project and cumulative. Please refer to Master Response 9 regarding cumulative impact analysis in the BDCP EIR/EIS and why certain

DEIRS Ltr#	Cmt#	Comment	Response
		(implementation of this measure along with a separate, non- environmental commitment as set forth in EIR/EIS Appendix 3B, Environmental Commitments, relating to the potential increased treatment costs associated with bromide-related changes would reduce these effects). Further, DWR issued a Notice of Preparation on December 2, 2009 to construct and operate the Alternate Intake Project that would establish an alternative surface water intake on the Sacramento River upstream of the Sacramento Regional Wastewater Treatment Plant discharge." Comment: It is unclear if the North Bay Aqueduct Alternate Intake Project operations defined in the Mitigation Measure have been sufficiently included in the modeling and evaluations. This additional diversion could impact the likelihood, frequency, and duration of reverse flow scenarios on the Sacramento River and could require additional modifications to the upstream reservoir release requirements, impacting source water quality between the upstream reservoirs and the Delta. This should be clarified and confirmed.	projects were not included.
1527	340	[From ATT 1:] Section: 25.3.3.9 Page: 25-113 Line: 21-28 Type: WQ, WS Key Document Text: "Water quality modeling results indicate that water conveyance facilities operations would not substantially change concentrations of metals of primarily human health and drinking water concern (arsenic, iron, manganese) in Delta waters relative to the No Action Alternative. The arsenic criterion was established to protect human health from the effects of long-term chronic exposure, while secondary maximum contaminant levels for iron and manganese were established as reasonable goals for drinking water quality. Average concentrations for arsenic, iron, and manganese in the primary source water (Sacramento River, San Joaquin River, and the bay at Martinez) are below these criteria." Comment: Consideration of impacts to trace metals from reservoir reoperation should be included in the assessment, as commented on Chapter 8. This summary may need to be revised accordingly. Also, it needs to be clarified that secondary Maximum Contaminant Levels for iron and manganese are not goals in California, rather they are enforceable standards for water agencies. Finally, only average concentrations of the dissolved fraction of iron and manganese are lower than the MCLs, so a revised assessment of the total fraction, as requested in Chapter 8, could result in a revised summary in this section.	Please see comment response number 151. Text regarding secondary MCLs for iron and manganese as "reasonable goals" was revised to indicate that in California these are enforceable standards. Any revisions made in EIR/EIS Chapter 8 (Water Quality) that are applicable to the impact analysis in Chapter 25 have been carried over for the final EIR/EIS.
1527	341	[From ATT 1:] Section: 25.3.3.9 Page: 25-114 Line: 20-25	Please see comment response number 308. Revisions have been made to the conclusion discussion, where necessary, for Impact PH-2, Exceedances of Water Quality Criteria for Constituents of Concern such that there is an Adverse Effect on Public Health as a Result of Operation of the Water Conveyance Facilities. In addition to and to supplement Mitigation Measure WQ-5, DWR has set forth in EIR/EIS Appendix 3B, Environmental Commitments, AMMs, and CMs, a separate other commitment to address the potential increased water treatment costs that could result from bromide-related concentration effects on municipal

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ, WS Key Document Text: "Furthermore, drinking water from the study area would continue to be treated prior to distribution into the drinking water system, and water treatment plants are required to meet drinking water requirements set forth in the California Safe Drinking Water Act (Health and Safety Code Section 116275 et seq.) and the regulations adopted by California Department of Public Health. Therefore, it is not anticipated that there would be adverse effects on public health related to pesticides from drinking water sources." Comment: Conventional filtration is not effective at treatment and removal of organic compounds, such as pesticides and herbicides (See American Water Works Association Water Quality and Treatment, A Handbook of Community Water Systems. American Water Works Association, 4th Ed. Table 3- 1 General Effectiveness of Water Treatment Processes for Contaminant Removal (p 184-185). Advanced treatment processes would be required, such as granular activated carbon, and would need to be implemented at additional cost to most of the current Municipal and Domestic Water Supply users. If water treatment is being depended on to reduce or minimize the impact to public health, then the associated costs for advanced treatment should be evaluated and incorporated into the assessment. Attachment A provides treatment cost information from the 2012 ACWA Public Health Goal Survey, which demonstrates the significant costs to water agencies and their customers for contaminant removal.	water purveyor operations. Please see Mitigation Measure WQ-18 in Appendix 3B of the FEIR/EIS to address the potential increased water treatment costs that could result from DOC concentration effects on municipal and industrial water purveyor operations.
1527	342	[From ATT 1:] Section: 25.3.3.9 Page: 25-114 Line: 28-32 Type: WQ, WS Key Document Text: "Water quality modeling results (Chapter 8, Water Quality, Section 8.3.3.9) indicate that changes in flows under Alternative 4 operational scenarios would not, for the most part, result in increased exceedances of water quality criteria for constituents of concern (Disinfection Byproduct Precursors, trace metals and pesticides) in the study area." Comment: Similar to the NEPA Effects comments above, the CEQA conclusion should be reconsidered if revisions are made to the water quality assessment in Chapter 8.	The comment is regarding updating the related impact analysis in Chapter 25 of the EIR/EIS consistent with any applicable updates made to the water quality assessment in Chapter 8 of the document.
1527	343	[From ATT 1:] Section: 25.3.3.9 Page: 25-114 Line: 44-46 Type: WQ, WS Key Document Text: "The increase in long-term average bromide concentrations predicted	Please see comment response number 340.

DEIRS Ltr#	Cmt#	Comment	Response
		for Barker Slough would result in a substantial change in source water quality to existing drinking water treatment plants drawing water from the North Bay Aqueduct." Comment: The use of long term average concentrations of bromide should be reevaluated, as noted in comments on Chapter 8	
1527	344	[From ATT 1:] Section: 25.4.1.1 Page: 25-183 Line: 23-25 Type: WQ, WS Key Document Text: "This cumulative impact analysis considers past, present, and reasonably foreseeable future projects that could affect the same resources and, where relevant, occur within the same time frame as the BDCP action alternatives." Comment: As mentioned in other comments on Chapters 5 and 6, the list of projects should have included state and federal climate change adaptation and mitigation strategies, as well as the Joint Federal Project and associated Water Control Manual at Folsom Dam. Has the North Bay Aqueduct Alternative Intake Project been included in the modeling of the BDCP or should it be included in this cumulative impact analysis?	Please see comment response number 339.
1527	345	[From ATT 1:] Section: 25.4.1.1 Page: 25-189 Line: 38-45 Type: WQ, WS Key Document Text: "However, drinking water from the study area would continue to be treated prior to distribution into the drinking water system, and water treatment plants are required to meet drinking water requirements set forth in the California Safe Drinking Water Act and the regulations adopted by California Department of Public Health. Therefore, it is not anticipated that there would be a cumulatively considerable contribution to adverse effects on public health from pesticides in drinking water due to implementation of BDCP action alternatives; nor would implementation of the BDCP action alternatives in combination with any of the projects listed in Table 25-10 be expected to result in a cumulative adverse effect on public health with regards to pesticides in drinking water in the study area associated with Dissolved Organic Carbon." Comment: As noted in the previous comment, conventional filtration is not effective at treatment and removal of organic compounds, such as pesticides and herbicides. Advanced treatment processes would be required, such as granular activated carbon, and would need to be implemented at additional cost to most of the current Municipal and Domestic Water Supply users. If water treatment is being depended on to reduce or	See response to Letter 1527, Comment 341.

DEIRS Ltr#	Cmt#	Comment	Response
		minimize the impact to public health, then the associated costs for advanced treatment should be evaluated and incorporated into the assessment.	
1527	346	[From ATT 1:] Section: 25.4.1.1 Page: 25-190 Line: 2-6 Type: WQ, WS Key Document Text: "Implementing the projects listed in Table 25-10 in combination with any of these BDCP alternatives is not anticipated to result in the potential for increases in public health concerns because changes in existing concentrations of Disinfection Byproduct Precursors, trace metals, or pesticides affecting water quality could occur from cumulative project actions that affect the location, timing, and amount of water diversions; but the changes in flows would not be considerable." Comment: This statement appears to be based on a qualitative judgment and needs to be supported with technical information. It appears that dilution associated with river flows is the main basis for the impacts, but there are other factors, such as sea level rise and reservoir storage, that could be attributed to impacts.	The text the commenter is referring to has been deleted. It was remnant text from a previous iteration of the cumulative analysis and, with the exception of the reference to pesticides, the text was not applicable to the impact being discussed, i.e., the potential for cumulative public health impacts related to pesticides due to implementation of any of the action alternatives.
1527	347	[From ATT 1:] Section: 25.4.1.1 Page: 25-194 Line: 1-3 Type: WQ Key Document Text: "...the cumulative water quality condition in the study area for the pathogens and trace metals is not considered to be adverse." Comment: This determination does not account for any in-reservoir or in-river generation of these constituents. This evaluation needs to be broadened and include the total fraction of trace metals.	Please see comment response 234. The discussion of changes to water quality in Chapter 25 is based the modeling results discussed in Chapter 8, Water Quality. Because river flow and concentration data exist from which to evaluate correlations, and because the river flows originate from reservoir releases, changes in trace metals upstream of the Delta focused on whether a relationship between trace metal concentration and flow exists.
1527	348	[From ATT 1:] Section: 25.4.1.1 Page: 25-194 Line: 16-18 Type: WQ, ERROR Key Document Text: "However, the localized nature of pathogen generation and the quick	Please see comment response number 322.

DEIRS Ltr#	Cmt#	Comment	Response
		die-off of pathogens once released into water bodies would generally prevent substantial pathogen exposure to recreationists and the cumulative effect would not be considerable or adverse." Comment: This statement regarding the quick die-off of pathogens is technically incorrect and needs to be removed. See comments on Chapter 8. This text needs to be reviewed and revised.	
1527	349	[From ATT 1:] Section: 29.2 Page: 29-1 Line: 33-35 Type: WQ, WS Key Document Text: "How will the impacts of the BDCP alternatives on the study area for each resource (the area in which impacts may occur) be affected by climate change? i.e., are future changes in climate likely to exacerbate project impacts? Comment: This question was only addressed in the BDCP by identifying potential changes to sea level rise and hydrologic variations, but the BDCP did not address or incorporate planned mitigation/adaptation strategies which are being developed by DWR/U.S. Bureau of Reclamation/U.S. Army Corps of Engineers (as discussed in previous comments on Chapters 5 and 6) to address the impacts. This evaluation should be revised to include this information.	Please see comment response number 59, 112, and 116.
1527	350	[From ATT 1:] Section: 29.2 Page: 29-1 Line: 36-37 Type: WQ, WS Key Document Text: "How will the BDCP alternatives affect the resiliency and adaptability of the Plan Area (the area covered by the BDCP) to the effects of climate change?" Comment: Since the BDCP alternatives rely on operations of upstream storage reservoirs as part of the solution for meeting Delta outflow requirements, the resilience and adaptation analysis conducted in this Chapter should have been expanded to include the impacts from revisions to upstream reservoir operation changes. This evaluation should be expanded to evaluate the resiliency and adaptability of other portions of the Project Area, such as the upstream reservoirs and the rivers below them to the Delta.	Please see Master Response 19 regarding climate change and Master Response 25 regarding upstream reservoir effects.
1527	351	[From ATT 1:]	Table 29-1 has been updated to add the link between water quality and wildfire, this connection will be included in the final EIR/S. The connections between Public health and increased water temperature,

DEIRS Ltr#	Cmt#	Comment	Response
		Section: 29.2 Page: 29-3 Line: 5 Type: WQ, WS Key Document Text: "Table 29-1" Comment: This table is missing several linkages. Water Quality (Ch. 8) should be linked to increased fire risk since wildfires have a great impact on the watershed conditions and the runoff from the area. Public Health (Ch. 25) should be linked to increased water temperature, reduced precipitation/runoff volume, shift from snowfall to rainfall, early snowmelt, and changes in erosion/sedimentation rates since all of these effects could result in an impact to the source water quality that enters the drinking water treatment plants, potentially impacting public health; this is especially concerning for direct users directly upstream of the Delta.	reduced precipitation, shift from snowfall to rainfall, early snowmelt, and changes in erosion/sedimentation are secondary and thus have not been included in the matrix. While the climate impacts noted above can reduce water quality and reduced water quality can in turn have deleterious public health impacts, the table was only intended to map direct consequences not secondary consequences. The Safeguarding California Plan, which describes California's vulnerabilities to climate change and what the State is doing to safeguard California from these impacts follows this same distinction.
1527	352	[From ATT 1:] Section: 29.6.1 Page: 29-15 Line: 7-8 Type: WS Key Document Text: "Resiliency and Adaptability to Sea Level Rise and Hydrology Changes" Comment: This section focuses only on the resiliency and adaptability of the BDCP to meet Delta export demands in the face of sea level rise and other climate changes. The waters supply reliability is largely based on the ability to divert Sacramento River water in lieu of the current diversion locations. All evaluations are focused on the Plan Area (Delta) and do not make consideration of the changes in resiliency or adaptability of other Project Areas, such as upstream of the Delta. It should be clarified why these were excluded or expand the evaluations to consider those areas as well.	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. Appendix 5A is a lengthy and highly technical appendix to the EIR/EIS that provides detailed information about the physical modeling methodology and analysis used for the EIR/EIS. For the alternatives analysis, the EIR/EIS relies on the modeling of physical variables such as flow to evaluate changes to conditions affecting resources within the Delta, as well as effects to upstream and downstream resources. For more information regarding modeling please see Appendix 5A and Master Response 19 regarding climate change.
1527	353	[From ATT 1:] Section: 29.6.1.1 Page: 29-15 Line: 27-29 Type: WS Key Document Text: "While these change metrics represent long-term averages, modeling results for the BDCP 2060 period also indicate that droughts will increase in severity and duration - resulting in periods of critical dryness."	The BDCP was evaluated at the Late-Long-Term planning horizon which is defined as 2060. The current proposed project, Alternative 4A, is evaluated at the Early Long-Term horizon. ELT is modeled at 2025 and the support modeling data was used to develop the analysis contained in the 2015 RDEIR/SDEIS. Please refer to Master Response 30 regarding modeling and sensitivity analyses conducted to support the RDEIR/SDEIS and Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: This statement supports the need to look at short-term periods, which would allow identification of periods of increased vulnerability to water supply and quality, such as during droughts.	
1527	354	[From ATT 1:] Section: 29.6.1.1 Page: 29-16 Line: 6-10 Type: WS Key Document Text: "DWR's modeling of future conditions suggests that with current management and operations, level of demand, and current climate, major CVP and SWP reservoirs could reach dead storage levels (the level below which water cannot be released) and that the likelihood of these critical conditions will increase substantially as the climate warms." Comment: The dead storage levels for each of the major CVP and SWP reservoirs should be identified in this section.	Please see comment response number 118.
1527	355	[From ATT 1:] Section: 29.7.1.2 Page: 29-24 Line: 25 Type: WS Key Document Text: "State (Applicable Plans and Policies)" Comment: The DWR Reoperation Program should be included in this evaluation, since one of the goals of the program is to revise CVP/SWP operations to provide adaptation and mitigation for climate change impacts. http://www.water.ca.gov/system_reop/	It is unclear how DWR's System Reoperation Program would be included in the climate change evaluation in EIR/EIS chapter 29. Once this program adopted and implemented, operation of the SWP facilities, including those proposed under the California WaterFix (or another alternative) could be subjected to these system operation changes.
1527	356	[From ATT 1:] Section: 29A.1 Page: 29A-1 Line: 5-6 Type: WQ, WS Key Document Text: "This appendix contains a summary of projected climate change modeling analyses of Delta tidal flows and salinity conditions conducted for Chapter 6, Surface Water and Chapter 8, Water Quality."	Operations of the north Delta diversions assumed application of north Delta bypass flow criteria on a daily-averaged basis, and operation of the individual intakes on a 15-min instantaneous basis. As noted in the Appendix 5A of the EIR/EIS, the north Delta diversions will be subjected to a sweeping velocity requirement. In the modeling, a 0.4 feet/second (fps) sweeping velocity requirement was assumed, and when the cross-sectional averaged instantaneous velocity downstream of each north Delta diversion intake falls below 0.4 fps, the diversion at the intake was not allowed. These operating rules would allow to minimize any increases in the reverse flows at Freeport due to the operation of the north Delta diversion intakes. It should be noted that reverse flows occur due to tidal activity under Existing Conditions and No Action Alternative. However, the action alternatives would not increase the frequency or extent of these reverse flow conditions in the Sacramento River near the north Delta diversions or in the Sacramento and American rivers near City of Sacramento. Please see Master Response 14 regarding assessment of water quality changes in the upstream of Delta

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: Previous comments on Chapters 6 and 8 indicate why the City of Sacramento recommends that this evaluation be expanded up the Sacramento River to determine if climate changes, on their own or in combination with Conservation Measures 1 and 2, have the potential to cause reverse flow or backwater effects just upstream of the Delta.	region, including the Sacramento River.
1527	357	[From ATT 1:] Section: 29B.8 Page: 29B-4 Line: 31-33 Type: WQ, WS Key Document Text: "The projected inflows to Folsom Reservoir are therefore the combination of projected changes in rainfall and snowmelt runoff together with possible changes in the operations of these upstream storage projects." Comment: It is unclear if the modeling analysis included any changes in the operations of upstream storage reservoirs. Since these are a key function on the inflow to Folsom Reservoir, future changes in operations should have been investigated. Given the hydropower dominance in the watershed, it is reasonable to assume that future storage levels will change to meet the projected future power demand increases during summer months. An evaluation of the Federal Energy Regulatory Commission (FERC) relicensing for Placer County Water Agency, Sacramento Municipal Utility District, Pacific Gas and Electric, and El Dorado Irrigation District should be conducted to identify climate change adaptation and mitigation strategies or plans.	Please see comment response number 112, 116, and Master Response 25 regarding upstream reservoir effects.
1527	358	[From ATT 1:] Section: 29C.1 Page: 29C-1 Line: 5-6 Type: WQ, WS, SCOPE Key Document Text: "This appendix contains a summary of projected climate change modeling of water temperature analyses conducted for Chapter 8, Water Quality, and Chapter 11, Fish and Aquatic Resources." Comment: Temperature was not evaluated in Chapter 8 as an impact to water quality of interest to the Municipal and Domestic Water Supply beneficial use. This constituent is of concern and should have been included in that evaluation, as commented previously.	Please refer to Master Response 14 regarding the assessment of temperature changes on the municipal and domestic supply beneficial use.
1527	359	[From ATT 1:] Section: 29C.2 Page: 29C-1	The text in this section has been determined to be adequate for the purposes of this appendix. No revisions to the text have been made.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 17-18 Type: WQ, WS Key Document Text: "Temperature Effects from Reservoir Operations and Climate Change" Comment: This section needs to be expanded to include general information on how temperature relates to the Municipal and Domestic Water Supply beneficial use, especially regarding its impact on associated source water quality, water treatment efficiencies, and treated water quality.	
1527	360	[From ATT 1:] Section: 29C.2.9 Page: 29C-12 Line: 12-13 Type: WQ, WS Key Document Text: "Folsom reservoir is operated to meet water temperature objectives at the Watt Avenue Bridge, about 13 miles downstream from Nimbus Dam (68 degrees F from June 1 to September 30)." Comment: Watt Avenue Bridge is located just upstream of the E.A. Fairbairn Water Treatment Plant and provides a good estimate of the source water temperature at the EA Fairbairn WTP, which could be used in an assessment for the impact to the Municipal and Domestic Water Supply beneficial use.	Information regarding the potential impacts to municipal and industrial uses is provided in Section 4.2.6, Groundwater, Section 4.2.7, Water Quality, Section 4.3.16, Public Services and Utilities, Section 4.3.20 Hazards and Hazardous Materials, and 4.3.26, Growth Inducement. The BDCP/California WaterFix EIR/EIS analysis assumes that diversions from the American River by the City of Sacramento would not be modified due to operations of the action alternatives as compared to the No Action Alternative. The modeling used assumes that Folsom Dam would be operated to meet existing temperature and quality criteria for fish and wildlife, and municipal and industrial uses.
1527	361	[From ATT 1:] Section: 29C.2.9 Page: 29C-13 Line: 26-28 Type: WQ, WS Key Document Text: "The simulated effects of climate change on the Folsom Dam and Nimbus Dam release temperatures were quite large (5-10 degrees F) in September and October." Comment: An increase of 5-10 degrees F in a drinking water supply can significantly affect operations and treated water quality. A similar increase in temperature was evaluated when the Temperature Control Device was installed at Folsom Dam as part of the 2013 Update to the American River Watershed Sanitary Survey. A 5-7 degrees F increase in temperature resulted in an increase in disinfection by-products in the distribution system ranging from 13 to 45 percent. These temperature increases are significant and need to be included in the analysis for impact to the Municipal and Domestic Water Supply beneficial use upstream of the Delta.	Please see comment response number 358.

DEIRS Ltr#	Cmt#	Comment	Response
1527	362	[From ATT 1:] Section: 29C.2.9 Page: 29C-13 Line: 30-33 Type: WQ, WS Key Document Text: "The simulated effects of climate warming should be confirmed with more detailed temperature modeling of Folsom Reservoir that includes potential changes in temperature panel operations. The Folsom temperatures were simulated to increase more than any other reservoir, because of the very limited cold water storage and very low carryover storage in most years." Comment: The recommendation for more specific modeling in the American River system does not appear to be carried out anywhere else in the Adaptive Management program or in the Environmental Commitments. This is a very significant impact to Municipal and Domestic Water Supply beneficial users and needs to be addressed more thoroughly.	The FEIR/EIS impact analysis is based upon describing the comparison of conditions under all alternatives as compared to the Existing Conditions and No Action Alternative. The results of the temperature modeling for Folsom Lake and the effects on the American River fisheries are presented in Chapter 11, Fish and Aquatic Resources. The CALSIM II modeling was not modified if the temperature criteria were not met. The effects of the project alternatives were compared to the No Action Alternative conditions to determine the effects of the alternatives. No mitigation measures were required to address changes between the No Action Alternative and the Existing Conditions.
1527	363	[ATT 1: att1 -- Attachment A to City of Sacramento specific comments on BDCP EIR/EIS. Cost estimate tables for treament technologies.]	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 the comment referencing the attachment or the Final EIR/EIS.
1527	364	[ATT 2: Letter dated January 16, 2013 from Natural Resources Defense Council, et al. regarding a portfolio-based conceptual alternative for BDCP.]	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 comments referencing this attachment. Please see comment response number 5.
1527	365	[ATT 3: Attachment 3. Table of City of Sacramento specific comments on Bay Delta Conservation Plan.]	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 the comment referencing the attachment or the Final EIR/EIS.
1527	366	[From ATT 3:] Section: 1.1 Page: 1-3 Line: 15-33 Type: SCOPE Reference Document Text: "The Plan Area covers the Sacramento-San Joaquin Delta, as defined by California Water Code Section 12220 (statutory Delta), as well as certain areas in which Conservation Measures will be implemented such as Suisun Marsh and the Yolo Bypass (Section 1.4.1, Geographic Scope of the BDCP) (Figure 1-1). The infrastructure of the state and federal water projects form an integrated system that extends beyond the boundaries of the Delta; as such, the BDCP will affect water operations, species, and habitat both inside and outside of the Delta. While the Plan Area generally does not include areas upstream and downstream of the Delta, the Plan addresses the upstream and downstream	As noted in Chapter 1, Section 1.5, EIR/EIS Project Area, the Plan Area consists mainly of the statutory Delta, the Suisun Marsh, and the Yolo Bypass. The Areas of Additional Analysis are two areas outside the defined Plan Area that encompass power transmission corridors. One area lies west of the Plan Area and is considered in the analysis of proposed BDCP alternatives that include the western alignment for the water conveyance facility (Alternatives 1C, 2C, and 6C). The other area lies east of the Plan Area and represents the potential transmission line alignment analyzed for Alternative 4. Implementation of the BDCP (or an alternative) could also affect regions upstream of the Delta and throughout the SWP/CVP Export Service Areas. Consequently, the project area encompasses a larger geographic area than the Plan Area, comprising three defined regions: the Upstream of the Delta Region, the Delta Region (as defined in Chapter 1, Section 1.5—generally referred to as the Plan Area), and the SWP and CVP Export Service Areas (see Figure 1-4 in Chapter 1, Introduction).

DEIRS Ltr#	Cmt#	Comment	Response
		effects of covered activities (Chapter 5, Effects Analysis)" Comment: The statement implies that the project is confined to the legal Delta area; however, a number of the Conservation Measures, including Conservation Measure 19, include areas outside of this area. The description of the project area should clearly define the actual areas or describe the implication to areas not within the Delta, but included in Conservation Measures or other BDCP actions. Only a small fraction of the Sacramento urban area is within the legal Delta.	
1527	367	[From ATT 3:] Section: 1.6.2 Page: 1-40 Line: 1-7 Reference Document Text: "The BDCP is built on and reflects the extensive body of scientific investigation, study, and analysis of the Delta compiled over several decades, including the results and findings of numerous studies initiated under the California Bay-Delta Authority (CALFED) Bay-Delta Science Program and the Ecosystem Restoration Program, the long-term monitoring programs conducted by the Interagency Ecological Program (IEP), research and monitoring conducted by state and federal resource agencies resource agencies, water contractor scientists, and research contributions of academic investigators." Comment: The BDCP should identify the known science shortcomings and propose a means to fill these data gaps. Given the uncertainty in causes of covered species effects, a clear assessment of data gaps and necessary tools should be included in the BDCP.	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. For more information regarding adaptive management and monitoring please see Master Response 33.
1527	368	[From ATT 3:] Section: 2.3.2.1.5 Page: 2-18 Line: 6-17 Type: WQ, AM Reference Document Text: "Other sources of flows of toxic substances in the ecosystems of the Plan Area include wastewater treatment plants, urban runoff, and upstream sources. Although there is considerable uncertainty regarding the effects of some of these toxics on fish, at least three mechanisms have been identified through which toxics could affect fish. First, direct exposure to toxics could have negative impacts on fish, especially to more vulnerable life stages such as eggs and larvae. Second, toxic substance-induced mortality of zooplankton, a source of food for nearly all fish species at one or more life stages, could limit food to fish species and result in reduced growth rates, reproductive output, and survival rates. Third, the bioaccumulation of toxics such as mercury and selenium by Potamocorbula is well documented, and likely occurs in other organisms as well. Because some fish (e.g., sturgeon and splittail) and aquatic birds (e.g., surf scoter, American coot, and scaup) forage on organisms that bioaccumulate mercury and/or selenium, their tissue can bioaccumulate these toxics, thus reducing growth, reproduction, and survival (Luoma	It would be beneficial to have a complete understanding of the role of water quality contaminants in Delta ecosystems. However, a summary statement such as that cited by the commenter is not an appropriate place for such an investigation. Nor is remediation of Delta toxics issues a central purpose for the proposed project; it is in fact only treated directly in CM12 and in CM19, neither of which proposes to alter existing regulation with regard to toxins. The requested analysis is appropriately the responsibility of those agencies charged with regulation of toxins discharged to public waters. For more information regarding impacts to aquatic resources and its mitigation measures please see Chapter 11 of the FEIR/EIS. For more information regarding methylmercury analysis please see Master Response 14.

DEIRS Ltr#	Cmt#	Comment	Response
		and Presser 2000)." Comment: The statement regarding the uncertainty of the effects of toxics on fish should be expanded to identify where the uncertainty exists and broadened to include the uncertainty in fate and transport between sources and Delta effects. It will be important to understand the entire physical model from sources, fate and transport, and exposure period in order to improve conditions, provide effective conservation measures, and evaluate conservation measure effectiveness. Identifying these data and understanding the gaps is important to improving the science.	
1527	369	[From ATT 3:] Section: 3.1; 3.3; 3.4 Page: 3.1-4; 3.4-326 Line: 7-8; 17-18 Type: CM19 Reference Document Text: "The BDCP Page 3.1-4 states, 'The conservation measures comprise the specific actions to be taken to meet the biological goals and objectives.' And, the Conservation Strategy (Section 3.4) specifies 22 Conservation Measures (CM). Urban Stormwater Treatment is Conservation Measure 19 (CM 19) and page 3.4-326 Line 17-18 states, 'The primary purpose of CM 19 is to contribute to Objective L2.5, which calls for water quality conditions within the Delta that help restore native fish habitat." Comment: Page 3.4-326 provides an improper reference. CM19 is included in Objective L2.4 not L2.5 (page 3.3-7).	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	370	[From ATT 3:] Section: 3.2.1.2 Page: 3.2-3 Line: 36-38 Type; CM19, WQ Reference Document Text: "The BDCP is not intended to encompass the entire range of the covered species (except in the case of delta smelt), nor is it intended to address all of the stressors that have contributed to the decline of these species. Rather, it is focused on stressors that can be addressed feasibly within the Plan Area." Comment: The BDCP does not provide sufficient review of all of the stressors to demonstrate that all of the feasible measures have been considered.	Please refer to each Resource Chapter in the FEIR/EIS for more information regarding proposed project impacts. Also, please see Appendix 3B for more information regarding Environmental Commitments.
1527	371	[From ATT 3:] Section: 3.2.3	See response to letter 1527, comment 368 regarding authority and responsibility for comprehensive analysis of stormwater discharge effects. BDCP does not propose any increased level of protection beyond that required under existing regulation. CM19 funds would likely be allocated primarily to retrofit older systems that are not yet compliant with

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 3.2-6 Line: 36-39 Type: WQ Reference Document Text: "Changes in water quality have important direct and indirect effects throughout the estuarine ecosystem. Water quality in the Delta is affected by a variety of discharges from agricultural, industrial, and urban sources that have been linked to ecological changes (e.g., Thompson et al. 2000; Glibert 2010)." Comment: The BDCP does not present a stressor source evaluation when developing the aquatic resources component of conservation measures. While several types of potential sources with "direct or indirect" effects are identified, only urban runoff was identified for inclusion as a conservation measure. In particular, the cited source for urban runoff impacts, (Thompson et al, 2000), was written prior to the use regulation changes to pesticides. Since the registration changes, incidences of aquatic species mortality related to urban runoff have declined as observed by the SSQP and others statewide (Schiff, Kenneth; Bax, Beth; Markle, Phil; Fleming, Terry; and Newman, Jennifer (2007) "Wet and Dry Weather Toxicity in the San Gabriel River," Bulletin of the Southern California Academy of Sciences: Vol. 106: Iss. 3.). The BDCP should include a more extensive evaluation of the sources, fate and transport, and the impact on aquatic life beneficial uses for all sources, including diversion flows, atmospheric deposition, point sources, and nonpoint sources to determine if load reductions are feasible and would improve Delta conditions.	current regulations. Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5.
1527	372	[From ATT 3:] Section: 3.2.3 Page: 3.2-6 Line: 36-38 Type: CM19, WQ Reference Document Text: "Changes in water quality have important direct and indirect effects throughout the estuarine ecosystem. Water quality in the Delta is affected by a variety of discharges from agricultural, industrial, and urban sources that have been linked to ecological changes (e.g., Thompson et al. 2000; Glibert 2010)." Comment: This statement does not include all of the sources and activities that can result in changes in water quality. The BDCP will result in reduced dilution in the Delta, which should be considered in the discussion of water quality.	The statement cited in the comment highlights the primary sources of discharges to the Delta, though there are other factors that affect water quality, including inflow quantity and quality. The assessment of the project alternatives in Chapter 8, Water Quality, of the EIR/S considered changes in inflow quantity and quality that would result under the alternatives, through use of modeled changes in source water fractions at Delta assessment locations. Section 8.3.1, Methods for Analysis, provides details regarding the assessment approach. Please see Master Response 14 for more information regarding Water Quality.
1527	373	[From ATT 3:] Section: 3.2.3 Page: 3.2-7 Line: 28-29	See BDCP Section 5.5 and BDCP Appendices 5.C and 5.D for detailed explanation of anticipated effects on water quality. Numerous comments were received that focused on various elements of the BDCP. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		Type; WQ Reference Document Text: "Improve passage of fish within and through the Delta by improving hydrodynamic and water quality conditions that can create barriers to movement and high susceptibility to predators." Comment: This statement should be clarified as to the water quality parameters of concern.	
1527	374	[From ATT 3:] Section: 3.2.3 Page: 3.2-7 Line: 40-41 Type: WQ Reference Document Text: "In addition, it addresses specific stressors on covered fishes, such as impediments to fish passage, sources of unnatural mortality, and water quality impairments." Comment: This statement discusses that the BDCP addresses water quality impairments, but the BDCP does not provide sufficient evaluation of this topic.	Please see Chapter 11 of the FEIR/EIS for more information regarding water quality impairments on aquatic resources and its associated mitigation measures.
1527	375	[From ATT 3:] Section: 3.2.3.3 Page: 3.2-10 Line: 18-27 Type: CM19, WQ Reference Document Text: "Other measures include actions to increase dissolved oxygen in specific problem areas important to salmonid migration (CM14 Stockton Deep Water Ship Channel Dissolved Oxygen Levels), to contribute to overall Delta water quality improvements (CM12 Methylmercury Management, CM19 Urban Stormwater Treatment) to reduce illegal harvest of covered fishes (CM17 Illegal Harvest Reduction), to reduce the number of small water diversions in the Plan Area (CM21 Nonproject Diversions), to develop new and expanded conservation hatcheries for delta smelt and longfin smelt for the purpose of establishing refugial populations that will not impair the genetic fitness of the wild stocks (CM18 Conservation Hatcheries), and to reduce the risk of new invasive species appearing in the Plan Area (CM20 Recreational Users Invasive Species Program)." Comment: Based on the presented evaluation summary, CM12 and CM19 are included as Conservation Measures to "contribute to the overall Delta water quality improvements". While CM12 is focused on evaluating the effects of restoration areas created by the BDCP, there is no specific justification provided for inclusion of CM19. The benefit of CM19 to downstream water quality is not well established. The BDCP should provide a justification for inclusion of CM19 based on known or reasonably expected quantified downstream	Reviewer should refer to Appendix 5D, which provides greater detail regarding pollutants and the potential effects of various Conservation Measures, including CM19. Please see comment response number 38.

DEIRS Ltr#	Cmt#	Comment	Response
		benefits compared to total implementation costs.	
1527	376	[From ATT 3:] Section: 3.2.3.3 Page: 3.2-10 Line: 21-22 Type: CM19, WQ Reference Document Text: "to contribute to overall Delta water quality improvements (CM12 Methylmercury Management, CM19 Urban Stormwater Treatment)" Comment: Other feasible measures to contribute to overall Delta water quality improvement should be included in this discussion.	Please see comment response number 368.
1527	377	[From ATT 3:] Section: 3.2.3.3 Page: 3.2-10 Line: 22 Type: ERROR Reference Document Text: "... to contribute to overall Delta water quality improvements (CM12 Methylmercury Management, CM19 Urban Stormwater Treatment) to reduce illegal harvest of covered fishes ..." Comment: Missing comma between "(Stormwater Treatment)" and "to reduce illegal harvest of covered fishes".	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. F Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	378	[From ATT 3:] Section: 3.3.1 Page: 3.3-2 Line: 2-5 Type: AM Reference Document Text: "Failure to achieve a biological goal or objective will not be a basis for a determination by the fish and wildlife agencies of noncompliance or for the suspension or revocation of the permits as long as the Permittees are properly implementing the BDCP and in compliance with the Implementing Agreement and the permit terms and conditions." Comment: The BDCP does not incentivize meeting biological goals to minimize degradation. For example if the BDCP is unable to fund CM3-CM22, how would the program change and	Proposed Alternatives that include the BDCP have a conservation strategy that was designed to the meet the biological goals and objectives of the plan. To remain in compliance with the state and federal permits under the Alternatives with BDCP, DWR and Reclamation must provide adequate funding to implement all proposed conservation measures (CM1-CM22). The funding strategy was designed to ensure that CDFW under the NCCP Act and USFWS and NMFS under Section 10 of the ESA can make their regulatory findings that funding is "assured. "As described in the BDCP funding chapter (Chapter 8), if during implementation adequate funding is not available from the sources described in that chapter, the BDCP would likely need to be amended to reduce the allowable take to a level that is commensurate with the available funding. Such an amendment would also re-evaluate the biological goals and objectives to determine which were feasible given the new level of available or expected funding. BDCP has been designed to address the expected effects of climate change, as described in the BDCP under Changed Circumstances, Section 6.4.2.2.8, Climate Change. Biological goals and objectives are strictly an HCP component, and therefore not carried forward for the new preferred alternative, 4A. For more information regarding BDCP issues, including costs, please see Master Response 5. For more

DEIRS Ltr#	Cmt#	Comment	Response
		what would the export limitations be? If climate change amplifies the effect of the BDCP and ecological strain on covered species, what incentive would be in place to implement changes to offset the amplified impacts?	information regarding climate change and GHGs please see Master Response 19.
1527	379	[From ATT 3:] Section: 3.3.2 Page: 3.3-3 Line: 3-8 Type: CM19 Reference Document Text: "Biological objectives are expressed as specific outcomes that are expected to be achieved by the Plan for ecosystems, natural communities, covered species or species' habitat, or stressor attributes. Biological objectives are "SMART" - specific, measurable, achievable, relevant, and time-bound - to the maximum extent possible. Where a high level of uncertainty is associated with the measurability or achievability of an objective, that uncertainty is explicitly acknowledged in the objective, its associated rationale, or in both locations." Comment: CM19 does not sufficiently address SMART objectives as stated. There is not a specific linkage to specific water quality improvement needs and goals for urban stormwater. Since there's uncertainty in sources and goals for contaminant related stressor impacts and solutions, the BDCP should provide for additional research, evaluations, and modeling to provide a basis for urban stormwater treatment or other source reduction efforts.	Please see comment response number 38.
1527	380	[From ATT 3:] Section: 3.3.4 Page: 3.3-7 Line: Table 3.3-1 Type: CM19, WQ Reference Document Text: "Objective L2.4: Support improved ecosystems function in aquatic natural communities by implementing actions to improve water quality, including reducing dissolved oxygen impairments in the Stockton Deep Water Ship Channel, reducing pollutant loading by urban stormwater, and minimizing mobilization of methylmercury from lands in the reserve system." Comment: The basis for the urban runoff loading reduction objective is not provided in an assessment that evaluates sources of pollutants, their fate and transport, and benefits to Delta aquatic life. The objective combines the lack of preciseness in the potential benefits of the measure with a precise identification of one source. While pollutant reductions are an existing goal of Municipal Separate Storm Sewer System programs, inclusion as a conservation measure is not necessary, provides no new benefits, and is not evaluated against other source control efforts. The general reference to urban runoff in this text	Please see comment response number 38 and 40.

DEIRS Ltr#	Cmt#	Comment	Response
		should be removed.	
1527	381	[From ATT 3:] Section: 3.3.4 Page: 3.3-5 to 3.3-34 Type: CM19, WQ Reference Document Text: various Comment: There are many references to CM19 and justification based on pollutant loading, which is not supported in the BDCP. See previous comments on Objective L2.4 and its rationale.	Please see comment response number 38.
1527	382	[From ATT 3:] Section: 3.3.4 Page: 3.3-15 to 3.3-23 Line: Table 3.3-1 Type: CM19 Reference Document Text: "Table 3.3-1. Conservation Strategy Goals and Objectives with Associated Conservation Measures" Comment: CM 19 also is listed as being applicable to ten (10) 'Species-Specific Goals and Objectives' between pages 3.3-15 and 3.3-23. Because the listed contaminants were selected based on, '…the types of contaminants that have effects on fish.' (page 5.D-5), and stormwater (as shown in Table 5.D.2-1 and the rationale provided above) is not a significant source of those contaminants, CM19 should be deleted from each/all of the 'Species-Specific Goals and Objectives' namely: DTSM1.1, DTSM2.1, LFSM1.1, WRCS1.1, SRCS1.1, FRCS1.1, STHD1.1, GRST1.1, WTST1.1, and WTST3.1.	Please see comment response number 40.
1527	383	[From ATT 3:] Section: 3.3.5.2 Page: 3.3-43 Line: 10-28 Type: CM19, WQ Reference Document Text: "As stormwater runoff flows to the Delta, it accumulates sediment, oil and grease, metals (e.g., copper and lead), pesticides, and other toxic chemicals. Unlike sewage, stormwater is often not treated before discharging to surface water. Despite stormwater regulations limiting discharge volumes and pollutant loads, many pollutants still enter Delta waterways in stormwater. Of particular concern for fish species is the overuse of pesticides, some of which can have deleterious effects on the aquatic food	Please see comment response number 38, 40, and 46.

DEIRS Ltr#	Cmt#	Comment	Response
		chain (Weston et al. 2005; Teh et al. 2005). Pyrethroid chemicals used as pesticides on suburban lawns are of particular concern and are delivered to the Delta system by runoff. These chemicals at very low concentrations can have lethal effects on low trophic levels of the food chain (plankton), and mainly sublethal effects on covered fish species (Weston and Lydy 2010). Other urban pollutant sources, which can be transported directly or indirectly by stormwater runoff to the Delta, include nutrients from failing septic systems, and viruses and bacteria from agricultural runoff. As described in CM19 Urban Stormwater Treatment, the Implementation Office will provide a mechanism for implementing stormwater treatment measures that are intended to result in decreased discharge to the Delta of contaminants derived from urban stormwater, which is intended to improve water quality conditions in the Plan Area to the benefit of covered species. The stormwater treatment measures to be implemented as part of CM19 Urban Stormwater Treatment will help the local jurisdictions within the Plan Area achieve compliance with NPDES [National Pollutant Discharge Elimination System] MS4 [Municipal Separate Storm Sewer Systems] Phase I and Phase II permit conditions, which is expected to reduce pollutant loads of point and non-point source effluent discharged within the Plan Area." Comment: The provided rationale for the objective does not link urban runoff to downstream effects in the Delta, but rather the effect of pesticides on aquatic species. A more complete computational rationale is feasible and should be required before identifying one source of pollutants or pesticides for a conservation measure. Much of the Weston et. Al. work is limited to upstream tributaries that primarily convey urban runoff; study work downstream did not identify the same magnitude of effects. Again, there is a lack of precision on the understanding of the sources, fate and transport, and impact to aquatic life that does not support the source focus of CM19. Also, as stated, the objective accurately describes that Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System permits already include provisions for pollutant reduction requirements and then states that CM19 will "help local jurisdictions ... Achieve compliance with NPDES Permits". Please provide additional information on which parts of NPDES permits CM19 will assist compliance efforts. Please also provide a specific designation of the areas to which CM19 is intended to apply.	
1527	384	[From ATT 3:] Section: 3.3.5.2 Page: 3.3-165 Line: 14-20 Type: CM19, WQ Reference Document Text: "Exposure to toxins. Toxic chemicals are widespread throughout the Delta and may be present at a more localized scale in response to episodic events (e.g., stormwater runoff, point-source discharges). These toxic substances include mercury, selenium, copper, pyrethroids, and endocrine disruptors with the potential to affect fish health and condition and negatively affect steelhead distribution and abundance directly or indirectly. Sublethal concentrations may interact with other stressors (e.g., seasonally elevated water temperatures, predation, or disease) to increase vulnerability of steelhead	Please see comment response number 38 and 46.

DEIRS Ltr#	Cmt#	Comment	Response
		to mortality." Comment: As described, a number of contaminant sources are present and act in a complex fashion. While reductions in the toxins noted are likely beneficial to downstream species, a better understanding of how the benefits of control programs can be measured is necessary to best understand the opportunities for effectively protecting covered species and other beneficial uses. More comprehensive evaluations should be performed by the BDCP prior to initiating actions with unknown benefits and high costs.	
1527	385	[From ATT 3:] Section: 3.3.7.8.3 Page: 3.3-195 Line: 10-13 Type: CM19 Reference Document Text: "Reducing pollutants in the Plan Area will be accomplished by implementing CM12 Methylmercury Management and CM19 Urban Stormwater Treatment, which will contribute to improving water quality and physical habitat parameters within the Plan Area, thus contributing to an increase to the extent of habitat potentially suitable for green sturgeon." Comment: The pollutant reduction strategy should be more carefully considered, especially as it relates to source control in Conservation Measure 12 and CM19. The relative benefit of reduction of any source categories to covered species was not performed. A detailed assessment should be performed to establish benefits to costs for a variety of sources.	Please see comment response number 38.
1527	386	[From ATT 3:] Section: 3.4.12.3 Page: 3.4-264 Line: Table 3.4.12-1 Type: WQ Reference Document Text: "Effectiveness Monitoring Relevant to CM12" Comment: The conservation measure only evaluates the wasteload leaving the restoration areas and not the effect on downstream methylmercury concentrations in the water column or fish tissue. An additional assessment is necessary to support the BDCP and evaluate the effect on fish tissue concentrations.	Please see comment response number 67.Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	387	[From ATT 3:] Section: 3.4.19.1 Page: 3.4-327	Please see comment response number 40.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 4-6 Type: ERROR, CM19 Reference Document Text: "Stormwater runoff is a leading source of water pollution in the United States and is a large contributor to toxic loads present in the Delta (Weston et al. 2005; Amweg et al. 2006; Werner et al. 2008)." Comment: The Weston and Amweg studies cited neither evaluate the pesticide loading to the Delta nor conclude stormwater as a "leading source of water pollution". These initial studies looked at creek sediments outside of the Delta. Additional studies by the same researchers that evaluated instream water column concentrations did not find the same toxicity signal in the downstream Delta. To date, the connection between urban runoff pyrethroid concentrations and toxicity in the Delta has not been well understood. It is an unfounded technical leap to assume that urban runoff is a large contributor to toxic loads in the Delta. The 2004 EPA 305(b) (EPA 2009) report, which is likely the basis for the assertion that stormwater runoff is a leading source, though it is not specifically cited, is inappropriately used. The report does not show urban stormwater runoff as the leading source for any of the receiving water types.	
1527	388	[From ATT 3:] Section: 3.4.19.1 Page: 3.4-327 Line: 11-12 Type: ERROR, CM19 Reference Document Text: "Pyrethroid chemicals used as pesticides on suburban lawns are of particular concern, and are delivered to the Delta system by runoff." Comment: No reference is provided for the statement. Pyrethroid transport over long distances is not established in current literature. Pyrethroids are legal for consumers to use as regulated by Environmental Protection Agency and the Department of Pesticide regulation. It is not clear what studies identified this source as an impact to the Delta and why lawn use is described to be of more concern.	Please see comment response number 12 and 14.
1527	389	[From ATT 3:] Section: 3.4.19.1 Page: 3.4-327 Line: 14-16 Type: ERROR, CM19 Reference Document Text: "Other urban pollutant sources, which can be transported directly or indirectly by stormwater runoff to the Delta, include nutrients from failing septic	Please see comment response number 368.

DEIRS Ltr#	Cmt#	Comment	Response
		systems, and viruses and bacteria from agricultural runoff." Comment: The last sentence incorrectly incorporates non-urban and non-runoff sources into urban runoff. A more effective approach would be to evaluate all contaminant sources to develop an approach that could effectively improve Delta conditions and protect beneficial uses. Source control should be strategic and informed rather than arbitrarily focused on limited data and generalizations. The Sacramento Stormwater Quality Partnership participated in the Central Valley Drinking Water Policy development that included the modeling, downstream benefit, and cost of control measures. This approach is recommended for the BDCP to characterize contaminants and their sources and to identify opportunities for effective management.	
1527	390	[From ATT 3:] Section: 3.4.19.1 Page: 3.4-327 Line: 21-24 Type: SCOPE Reference Document Text: "These permits require municipalities to develop and implement a stormwater management plan or program with the goal of reducing the discharge of pollutants to the maximum extent practicable under Section 402(p) of the Clean Water Act. Conservation Measure 19 will be implemented within the context of these comprehensive plans. Phase II of the regulations that established Municipal Separate Storm Sewer System permits requires smaller municipalities and construction sites, referred to as Small MS4s, to comply with similar requirements." Comment: Municipal Separate Storm Sewer System permitted agencies already have management programs and contaminant reduction programs in place, and CM19 is not necessary. An evaluation of the benefit to downstream covered species for a variety of source control measures is necessary to prioritize actions before they are required for any source types.	Please see comment response number 38 and 40.
1527	391	[From ATT 3:] Section: 3.4.19.2.1 Page: 3.4-327 Line: 27-36 Type: CM19 Reference Document Text: "Proposed actions will be reviewed by technical staff in the Implementation Office or by outside experts supporting the Implementation Office. Projects will be funded if the Implementation Office determines that they are expected to benefit covered species." Comment: Conservation Measure 19 does not provide any detail on how the determination	Please see comment response number 38 and 46.

DEIRS Ltr#	Cmt#	Comment	Response
		would be made that an action could benefit covered species. A major concern is that CM19 could lead to actions required in National Pollutant Discharge Elimination System permits that are not beneficial or are inconsistent with existing water quality policies and permits. Such control measures may be costly with little effect, and there is no process discussed in the BDCP to make these cost/benefit assessments for control measures. Moreover, local agencies (stormwater entities) are not specifically represented in the Implementation Office and would not be able to directly participate in identification of the most effective control options. This essentially adds another layer of regulation for NPDES dischargers. Expertise in urban runoff control and a sophisticated understanding of local drainage systems is necessary to effectively manage control measures.	
1527	392	[From ATT 3:] Section: 3.4.19.2.1 Page: 3.4-327 Line: 27-36 Type: CM19 Reference Document Text: Omission from text Comment: The conservation measure does not specify whether it is intended to be a retrofit of existing development or new construction. The Municipal Separate Storm Sewer System [(MS4)] can only affect land use through new building permits and new land development. Conservation Measure 19 does not provide enough detail on how it would be implemented by a MS4 agency area such that a reasonable cost estimate could be prepared. Large scale retrofit is costly and does not always provide a water quality benefit. These costs can be better developed with available information such as the Central Valley Drinking Water Policy Workgroup urban runoff report (http://www.waterboards.ca.gov/central valley/water_issues/drinking_water_policy/dwp_urban_sources_study.pdf).	DWR would develop guidance for use by local authorities seeking grant monies provided under CM19. Such guidance has not yet been prepared and will not be prepared until and unless BDCP is approved and implemented. However, it is anticipated that funds for CM19 implementation would be disbursed under a competitive grant process, awarding funds to those projects showing the greatest likelihood of achieving measurable reductions in stormwater pollutant loading. It is currently expected that the means used to achieve and demonstrate that benefit would be chosen by the grant applicant, but consistency of that approach with currently applicable regulatory standards would likely be considered in the evaluation of grant applications. Please see comment response number 38 and 46.
1527	393	[From ATT 3:] Section: 3.4.19.3 Page: 3.4-329 Line: 1-7 Type: CM19 Reference Document Text: "Effectiveness monitoring will be conducted to evaluate progress toward advancing the biological objectives discussed below in Section 3.4.19.4, Consistency with the Biological Goals and Objectives. Individual stormwater entities will be responsible for conducting the monitoring necessary to assess the effectiveness of BDCP-supported elements of their stormwater management plans." Comment: The Conservation Measure requires the stormwater agencies to perform the effectiveness assessments without funding support from the BDCP proponents or the State of California and without a direct means to evaluate the effect of projects on covered	Please see comment response number 38 and 46.

DEIRS Ltr#	Cmt#	Comment	Response
		species. The BDCP only suggests evaluating decreases in loads and improving urban runoff water quality. These assessments are too general to understand more complex downstream effects. Before conservation measures are initiated, a more detailed fate and transport model and a beneficial use assessment tool are necessary and should be developed by the BDCP to establish baseline conditions and effects. It is unreasonable to expect that one source group would develop these tools.	
1527	394	[From ATT 3:] Section: 3.4.19.3 Page: 3.4-329 Line: 9-12 Type: CM19 Reference Document Text: "The Implementation Office will provide ongoing review of monitoring, progress, and other relevant reports from the stormwater entities and will coordinate with the stormwater entities to adjust stormwater pollution reduction strategies and annual funding levels through the adaptive management process, as appropriate, based on this review." Comment: The role of the Implementation Office includes recommending changes to the stormwater entity programs. Further, the Adaptive Management Team provides the analysis of the stormwater entity-collected data. As stated, the burden of further data collection falls on the stormwater agencies, while the decision making and conclusion drawing power is elsewhere. Local agencies should be allowed meaningful advisory or oversight roles within the Implementation Office for those issues that affect them.	CM19 is voluntary. Local agencies would presumably participate in the CM19 stormwater program in order to access the funding that would be provided by the Implementation Office. The Implementation Office therefore has the authority to require such information as may be necessary to ascertain what work has been done with the provided funds and to verify whether progress is being made relative to conservation measure objectives.
1527	395	[From ATT 3:] Section: 3.4.19 Page: 3.4-330 Line: Table 3.4.19-1 Type: CM19, LOCAL Reference Document Text: "Implement Best Management Practices for urban stormwater runoff through local jurisdictions within the Plan Area (e.g., cities and towns) to achieve compliance with National Pollutant Discharge Elimination System [(NPDES)] Municipal Separate Storm Sewer System and Phase II NPDES MS4 permit conditions." Comment: The description of the Conservation Measure references National Pollutant Discharge Elimination System requirements several times, which suggests and could be interpreted by Regional Water Quality Control Board permit writers and enforcement staff to mean that the Conservation Measure participation is not voluntary. [Sacramento County] agrees that NPDES Municipal Separate Storm Sewer System programs have successfully improved urban runoff quality and request that no new requirements be implemented	Please see comment response number 46.

DEIRS Ltr#	Cmt#	Comment	Response
		within NPDES permits as they have not been justified.	
1527	396	[From ATT 3:] Section: 3.4.19 Page: 3.4-330 Line: Table 3.4.19-2 Type: CM19, ERROR Reference Document Text: "Reduction of pollutant loads in stormwater discharges will reduce a substantial source of nonpoint source pollutant loading in Delta tributary watersheds." Comment: Urban runoff (Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System) is not part of the non-point source (NPS) classification. Even if urban runoff load sources are reduced, it is not established that there would be a downstream Delta benefit as degradation, dilution, and other fate and transport process may sufficiently reduce the net effect. Moreover, for many aquatic life impacts, it is the concentration rather than the load that is "experienced," and urban runoff may dilute some pollutants or cause only an intermittent exposure period.	Please see comment response number 38.
1527	397	[From ATT 3:] Section: 3.4.19 Page: 3.4-332 Line: 2-16 Type: CM19 Reference Document Text: "Delta Regional Ecosystem Restoration Implementation Plan (DRERIP) analysis indicates that actions to reduce the amount of pollution in stormwater runoff entering Delta waterways will be of high benefit to delta smelt, white sturgeon, steelhead, and Chinook salmon (Essex Partnership 2009)." Comment: The cited Delta Regional Ecosystem Restoration Implementation Plan documents were reviewed, and there was no indication that "reductions in the amount of pollution in stormwater runoff entering Delta waterways will be of high benefit". Those documents discuss the potential impacts to some aquatic life, but they do not evaluate the fate and transport from urban areas to the Delta. Much of the Sacramento urban runoff does not directly enter the Delta, and the conclusion does not consider the fate and transport to points where impacts to covered species are of concern. While reductions in pollutant and improvements to water quality are generally beneficial, this summary oversimplifies the discussion in the referenced document. Some of the Table 3.4.19-2 information references dissolved oxygen depression as the water quality impact; however, urban runoff likely does not contribute significantly to the downstream oxygen impairments (http://water.epa.gov/scitech/wastetech/guide/stormwater/upload/2006_10_31_guide_stormwater_usw_b.pdf). The reference documents also refer to a number of other pollutants	Please see comment response number 38.

DEIRS Ltr#	Cmt#	Comment	Response
		that are not known to be significant effects from urban runoff or those that have other sources.	
1527	398	[From ATT 3:] Section: 3.4.23.3 Page: 3.4-356 Line: 10-15 Type: AM Reference Document Text: "Conservation measures that have been funded and implemented properly and, nonetheless, are not achieving their intended outcomes may be considered less than effective and not worth continuing to implement (or continuing at a reduced effort). Funding dedicated for conservation measures that later prove less than effective could be reallocated to further support more effective conservation measures, within the scope of the Plan commitments and consistent with available funding." Comment: The process of review and reallocation of funding seems reasonable and pragmatic. However, additional language is necessary to protect the agencies and programs that are implementing programs such as Conservation Measure 19. Given the potential costs for CM19 implementation, a more substantial role in oversight of adaptive management is reasonable for those issues that affect local agencies. The BDCP should provide conservation measure funding assurances for the take permit period or assurances to fund the cost to remove or demobilize a conservation measure that is identified as not worth continuing.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process. Please see comment response number 46.
1527	399	[From ATT 3:] Section: 3.6.3.2 Page: 3.6-11 Line: 38-45 and 3.6.12 line 1 Type: COST Reference Document Text: "The BDCP includes adequate budget for and assurances that sufficient funds will be available to carry out the monitoring and research activities necessary to implement the adaptive management and monitoring program (See Chapter 8, Implementation Costs and Funding Sources, for an accounting of costs and funding assurances). Integration of the BDCP monitoring and research program, where practicable, with the common activities of the IEP, Delta Science Program and other relevant programs has been factored into the cost estimates. The funding structure and integration efforts are important elements of this Plan. Inadequate funding for the ecological monitoring needed to compare the outcomes of the alternative policies has proven to be a common impediment to successful implementation of other adaptive management programs (Walters 2007)." Comment: We support that the BDCP should provide adequate funding of science programs	Please see Master Response 5 regarding BDCP funding.

DEIRS Ltr#	Cmt#	Comment	Response
		that will develop independent and reliable science and assessments. We recommend including a detailed discussion of the role of the Delta Science Program and processes anticipated for evaluating BDCP assessments and adaptive management. The proposed budget is inadequate to properly manage adaptive management and be inclusive to local agencies. Commitment to funding and providing funding opportunities to groups like the Delta Regional Monitoring Program are critical to successful adaptive management and science programs.	
1527	400	[From ATT 3:] Section: 3.6.3.4.8 Page: 3.6-18 Line: entire Type: LOCAL Reference Document Text: "Step 8: Communicate Current Understanding" Comment: We appreciate the approach discussed in this section to provide unbiased study products to be made available to the public. We note that the organizational structure does not provide for local agency participation in review of the products, and the process does not provide a clear description of how the scientific peer review will be objective and coordinated with other programs related to Delta science.	This comment addresses analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For additional detail on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5. Also, please refer to Chapter 3, Description of Alternatives and Master Response 33 which addresses the current approach for the California WaterFix adaptive management and monitoring program. Please see Master Response 40 regarding Public Outreach Adequacy.
1527	401	[From ATT 3:] Section: 3.D Page: 3.D-2 Line: Table 3.D- 1 Type: CM19 Reference Document Text: "Compliance Monitoring Actions" Comment: The table does not indicate that there are existing stormwater programs to address contaminants. Stormwater programs already include a wide range of program elements such as construction, industrial, illicit discharge, municipal operations, public outreach, and new development post construction standards and programs to control pollutant sources.	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	402	[From ATT 3:] Section: 3.D Page: 3.D-9 Type: AM Reference Document Text: "Precise details of each of the effectiveness monitoring actions	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.

DEIRS Ltr#	Cmt#	Comment	Response
		are not presented here and will be developed and then periodically updated through the adaptive management and monitoring program (Chapter 3, Section 3.6)." Comment: While precise details may not be possible at this time, the discussion should include a range of possible effectiveness monitoring actions to present an anticipated level of effort and outcomes.	
1527	403	[From ATT 3:] Section: 3.D Page: 3.D-10 Line: Table 3.D-2 Type: WQ Reference Document Text: "Effectiveness Monitoring Actions" Comment: The BDCP should monitor and assess downstream methylmercury concentrations and fish tissue concentrations to assess the effectiveness of the control measure meeting the regional wasteload allocations and the Total Maximum Daily Load fish tissue targets.	Please see comment response number 67 and Chapter 8 and 11 of the FEIR/EIS for information regarding fish tissue concentrations and impacts to aquatic resources.
1527	404	[From ATT 3:] Section: 3.D Page: 3.D-25 Line: Table 3.D- 2. Type: CM19 Reference Document Text: "Metric: Decreases in stormwater constituents/pollutant loads such as total suspended sediment, oil and grease, total and dissolved metals (i.e., copper and zinc), pesticides and other toxic chemicals" Comment: Decreases in urban runoff loads of these constituents already occurs through existing programs. What would the baseline be for the comparisons? How would the metric account for year-to-year differences in rainfall? What tools would be used for calculation of loads and assessment of trends? The BDCP should provide the assessment funding and tools, as well as address both in Adaptive Management.	Details of CM19 implementation monitoring have not yet been finalized, but the intent is to establish minimal requirements supplemental to existing monitoring and reporting requirements. The costs of any additional monitoring needed to establish progress toward BDCP water quality objectives would be borne by local agencies seeking funding support through CM19. Please see comment response number 46. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	405	[From ATT 3:] Section: 3.D Page: 3.D-25 Line: Table 3.D- 2 Type: Conservation Measure 19	Please see comment response number 63.

DEIRS Ltr#	Cmt#	Comment	Response
		Reference Document Text: "Implement Best Management Practices for urban stormwater runoff through local jurisdictions within Plan Area (e.g., cities and towns) to achieve compliance with National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System and Phase II NPDES MS4 permit conditions." Comment: It is not clear what specific areas are included. The Plan Area only intersects with a relatively small urban area, especially in the Sacramento urban area. Also, Best Management Practices for stormwater are already implemented; how would the BDCP affect BMP implementation requirements?	
1527	406	[From ATT 3:] Section: 3.D Page: 3.D-26 Line: Table 3.D-2 Type: CM19 Reference Document Text: "Annual effectiveness monitoring and reporting, performed by the individual stormwater entities, for the duration of the BDCP permit term" Comment: The effectiveness of stormwater programs is already determined as part of National Pollutant Discharge Elimination System permit requirements, though the methods and approach continue to adapt and evolve to allow for better assessments. This should not be required as part of the BDCP as it is an overall activity of the Municipal Separate Storm Sewer System agency that is not tied to specific BDCP activities.	Please see comment response number 46.
1527	407	[From ATT 3:] Section: 3.D Page: 3.D-26 Line: Table 3.D-2 Type: CM19 Reference Document Text: "Individual stormwater entities will be responsible for performing annual monitoring of Best Management Practices (BMPs) implemented at the local level for the duration of the BDCP permit term." Comment: Requirements for Best Management Practices monitoring may unnecessarily restrict agency resources over the BDCP permit term, as the performance of individual BMPs may be less important than the extent of implementation, an understanding of how the BMPs benefit downstream beneficial uses, or how the BMP affects covered species. Municipal Separate Storm Sewer System (MS4) agencies already know much about the effectiveness of these activities and need flexibility over the next 50 years to adapt to changing conditions and improve programs. Strict annual reporting schedules should be removed as they will constrain resources and slow the adaptive management of stormwater. Because of the variability of stormwater quality and quantity, 5-10 year time	Please see comment response number 404.

DEIRS Ltr#	Cmt#	Comment	Response
		frames are necessary to implement effective programs. The 50 year term is unreasonable to apply to these MS4 programs that do not benefit from the BDCP.	
1527	408	[From ATT 3:] Section: 3.D Page: 3.D-26 (Table 3.D- 2) Line: CM-19, first occurrence in table Type: CM-19, AM Reference Document Text: "Effectiveness Monitoring Actions: Conduct ongoing review of monitoring progress, and other relevant reports from the stormwater entities. Metric: Decrease in stormwater constituents/pollutant loads such as total suspended sediment, oil and grease, total and dissolved metals (i.e., copper and zinc), pesticides and other toxic chemicals. Success Criteria: Reductions in stormwater constituents and pollutant loads within the Plan Area over time. Timing and Duration: Annual effectiveness monitoring and reporting, performed by the individual stormwater entities, for the duration of the BDCP permit term." Comment: The specified "monitoring action" is a review of reporting by others. The metric is vague and cannot be directly tied to effects on covered species. More robust tools and assessment methods are necessary to adequately assess changes in loads, improvements in water quality, and downstream benefits to covered species. The required monitoring and reporting over the entire BDCP permit term is a significant cost liability for local agencies and is not guaranteed to have benefits. Sacramento has only a small area in the Plan Area, and it is not clear how this requirement would be applied to just that area. The BDCP should perform a detailed evaluation of the benefit of all contaminant source controls on the covered species so that control actions can be prioritized relative to their cost.	Please see comment response number 38 and 404.
1527	409	[From ATT 3:] Section: 3.D Page: 3.D-26 (Table 3.D- 2) Line: CM-19, second occurrence in table Type: CM19, AM Reference Document Text: "Effectiveness Monitoring Actions: Fund individual stormwater entities in the Plan Area to implement best management practices (BMPs). Metric: Implement BMPs for urban stormwater runoff through local jurisdictions within the Plan Area (e.g., cities and towns) to achieve compliance with National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System and Phase II NPDES MS4 permit conditions.	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process. Please see comment response number 38 and 46. For more information regarding project versus program level planning please see Master Response 2.

DEIRS Ltr#	Cmt#	Comment	Response
		Success Criteria: Reductions in pollutant loads in urban stormwater effluent generated by local jurisdictions. Timing and Duration: Individual stormwater entities will be responsible for performing annual monitoring of BMPs implemented at the local level for the duration of the BDCP permit term." Comment: The Best Management Practices would be implemented for the 50 year BDCP permit term, but the funding plan only covers 15 years and is insufficiently scoped and funded. The description does not acknowledge the issue of modifying privately owned land. The vagueness of the success criteria does not acknowledge the lack of nexus with benefits to covered species in the Delta. Conservation Measure 19 should be removed and replaced with a program to better identify contaminant management actions that can cost effectively benefit covered species.	
1527	410	[From ATT 3:] Section: 3.D Page: 3.D-35 Line: Table 3.D-3 Type: CM19 Reference Document Text: "Does reducing stormwater pollution loads result in measurable benefits to covered fish species or their habitat?" Comment: The BDCP does not specify how the measurable benefits to covered species will be evaluated. This evaluation process should be performed before implementation of the BDCP to understand the current effect of urban runoff and other sources on current species. If this cannot be performed before implementation of the BDCP, what guarantees will be made to ensure that an adequate assessment is made beyond the current non-specific BDCP finding that "lower contaminant loads are better?" The BDCP should provide the assessment funding and tools, as well as address both in Adaptive Management.	Please see comment response number 38, 46, and Master Response 33 Adaptive management and monitoring.
1527	411	[From ATT 3:] Section: 4.2.4.8 Page: 4-82 Line: 2-7 Type: CM19 Reference Document Text: "Conservation Measure 19 funds local projects that improve treatment of urban stormwater, but does not permit or authorize such projects. A project that requires in-water work is required to secure appropriate permits, including appropriate ESA consultation for any action with a federal nexus. Projects that do not require in-water work are expected to occur in developed areas that do not provide habitat for covered species. Accordingly, this Conservation Measure is not expected to result in incidental take of covered species or adverse modification of critical habitat."	Please see comment response number 40, 46, and 404.

DEIRS Ltr#	Cmt#	Comment	Response
		Comment: CM19 would further burden local agencies with additional environmental documentation and permitting costs. If CM19 is not removed, it should be significantly modified to require an evaluation of all contaminant sources and the cost/benefit of control strategies. For any identified control strategies, the BDCP should provide funding.	
1527	412	[From ATT 3:] Section: 4.2.6 Page: 4-89 Line: 9-14 Type: CM19, AM, WQ Reference Document Text: "All BDCP monitoring activities undertaken by the Implementation Office are covered activities. All covered monitoring activities will be carried out in a manner consistent with protocols recommended by the Adaptive Management Team and approved by the fish and wildlife agencies. Monitoring activities currently proposed are detailed in Appendix 3.D, Monitoring and Research Actions." Comment: Conservation Measure 19 appears in Table 3.D-2. This excerpt implies that the Adaptive Management Team will have oversight over the monitoring and effectiveness assessments for CM19 and its "covered activities". Much of the Sacramento and Stockton urban areas are outside of the Plan Area, though the definition of a covered activity specifies that it must be in the Plan Area. Moreover, covered activities refer to actions for which "take is authorized". Overall, the wording and document structure have these kinds of confusing ambiguities that should be fixed to ensure that the Municipal Separate Storm Sewer System agencies are not obligated to participate in the take permit.	Please see comment response number 63 and 404. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	413	[From ATT 3:] Section: 5.2.7.1 Page: 5.2-14 Line: Table 5.2-4 Type: CM19, WQ Reference Document Text: "Covered Action: Conservation Hatcheries Facilities Facilities construction Relevant Conservation Measure(s): CM19 Urban Stormwater Treatment Appendix: 5.H" Comment: It is unclear why Conservation Measure 19 is the only Conservation Measure listed under this covered activity. It is an imbalanced approach to only consider one of many effects, especially when the relative impact of the selected source is not known compared to others.	Please see comment response number 40. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.

DEIRS Ltr#	Cmt#	Comment	Response
1527	414	[From ATT 3:] Section: 5.2.7.2 Page: 5.2-15 Line: 41-43 & Table 5.2-4 Type: CM19, AM, WQ Reference Document Text: "Models used in the BDCP are listed and described in Table 5.2-5 along with a reference to the appendix where the models are applied. The models are categorized based on their general scope and intent. In addition, benefits and limitations of each model are listed in Table 5.2- 5." Comment: Pollutant concentrations and loading from watershed areas where Conservation Measure 19 is proposed are not included in the modeling domain. Watershed sources and fate and transport are not adequately addressed in the selected models. Watershed Analysis Risk Management Framework or Hydrological Simulation Program FORTRAN type model is necessary to understanding at least relative impacts from sources and fate and transport of the key pollutants addressed by this conservation measure.	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	415	[From ATT 3:] Section: 5.2.7.4 Page: 5.2-16 Line: 16-19 Type: CM19, AM, WQ Reference Document Text: "Environmental models set the stage for the analysis of biological effects by describing key physical and chemical conditions across the Study Area. These conditions include flow, temperature, salinity, and turbidity. In the Delta, the analysis of physical conditions and biological effects is most often based on CALSIM II and Delta Simulation Model (DSM) 2 (Figure 5.2-3)." Comment: The environmental and biological models should consider the effects of pollutants referenced by the conservation measures as stressors, including metals, pesticides, and others.	There are few models available to evaluate effects of contaminants in the Delta. However, both a conceptual model and a quantitative model were applied to assess the effects of the project on exposure of these contaminants on sensitive species.
1527	416	[From ATT 3:] Section: 5.2.7.5 Page: 5.2-23 Line: 2-14 Type: CM19, AM, WQ Reference Document Text: "Biological models are often linked to environmental models and	Please see comment response number 415.

DEIRS Ltr#	Cmt#	Comment	Response
		characterize a biological change expected from the modeled change in physical conditions. Figure 5.2-4, for example, shows the biological models used to assess entrainment effects on delta smelt and the relationship to CALSIM II and DSM2. This figure also shows how biological models relate to specific life stages and reflect unique hypotheses about stressors and biological performance. Models used to evaluate entrainment (Appendix 5.B, Entrainment) and the effects of flow, temperature, salinity, and turbidity (Appendix 5.C, Flow, Passage, Salinity, and Turbidity) on biological performance fall into this category." Comment: The environmental and biological models should consider the effects of pollutants referenced by the conservation measures as stressors, including metals, pesticides, and others.	
1527	417	[From ATT 3:] Section: 5.2.7.10 Page: 5.2-29 Line: 8-10 Type: CM19, AM, WQ Reference Document Text: "Although noting that assessing or ranking attributes (stressors) is very complex, the (2011) suggested that the relative importance of stressors cannot be assessed, or prioritized, independent of the relative importance of the objective that is stressed." Comment; It should be noted that although the Delta Independent Science Board concluded that the ranking of stressors is feasible, this implies that contaminant control measures can be evaluated for at least their relative importance to water quality and for effects to the covered species. The Effects Analysis should evaluate any contaminant control measures before they are implemented as part of the BDCP.	Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5
1527	418	[From ATT 3:] Section: 5.2.7.10.3 Page: 5.2.35 Line: 14-22 Type: WQ, AM Reference Document Text: "The overall conclusions regarding the effect of the conservation measures on covered fish species was made by weighting the conclusion regarding the environmental effects of conservation measures by the assumed importance of environmental change to the species. The logic of this process is illustrated in the following example: On the basis of quantitative and qualitative analyses in the appendices to this chapter, it is concluded that the BDCP will result in a positive (toward natural) change in an attribute, and, on the basis of the species attribute importance, change in that attribute is important to one or more life stages of a species. Therefore, it is concluded that the BDCP has a high change on that species/life stage. This conclusion is documented by computing a	Chapter 8 of the FEIR/EIS includes a cumulative analysis. For more information regarding modeling please see Master Response 30 and Appendix 5A of the FEIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		simple score: BDCP effect on an attribute times the importance of the attribute to the species/life stage." Comment: The proposed weighted scoring system is insufficiently described. A transparent and understandable evaluation process should be presented in the BDCP. The BDCP should develop computational water quality models for the cumulative effect of all combinations of conservation measures. The outputs of the models can be used for effect modeling on the covered species. The effects should then be compared to a baseline of current conditions without the take permit.	
1527	419	[From ATT 3:] Section: 5.2.7.11 Page: 5.2-47 Line: Table 5.2-8 Type: WQ, AM Reference Document Text: "Qualitatively discussed in Appendix 5.D, Contaminants. Some uncertainty regarding white sturgeon sensitivity to water quality and whether current water quality conditions negatively affect white sturgeon. Thus, evaluating the response of white sturgeon to improved water quality conditions is difficult, and may be somewhat negative (low potential for effect). However, certain conservation measures to be implemented as part of BDCP will contribute to improved water quality, including CM19 Urban Stormwater Treatment, CM12 Methylmercury Management, and CM14 Stockton Deep Water Ship Channel Dissolved Oxygen Levels. So while the BDCP has a low potential for negative effects, certain conservation measures will be implemented to provide a benefit to covered fish species." Comment: The conclusion that the BDCP has a low potential for negative effects does not consider the area-specific impacts of the increased influence of the San Joaquin River and effects near to the BDCP intakes on the Sacramento River.	Please see comment response number 67.
1527	420	[From ATT 3:] Section: 5.D.0 Page: 5.D-ii Line: 14-20 Type: CM19, AM, WQ Reference Document Text: "Modeling results presented in Appendix 5.C, Flow, Passage, Salinity, and Turbidity, indicate that reduced dilution capacity in the Sacramento River at the Sacramento Waste Water Treatment Plant will result from changes in upstream reservoir operations associated with the ESO, not from diversion of water to the Yolo Bypass or from north Delta intakes located downstream of the WWTP. Quantitative analysis presented in this appendix indicates that the Sacramento River will have sufficient dilution capacity under the Evaluated Starting Operations for both ammonia and pyrethroids to avoid adverse	Please see comment response number 116 and the Cumulative Analysis in Chapter 8 of the FEIR/EIS. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		effects from these contaminants on the covered fish." Comment: The BDCP should look at water quality impacts due to changes in reservoir operations associated with operation of the Delta water diversions for the BDCP water agencies. The last sentence in essence states that pyrethroids will not be an issue.	
1527	421	[From ATT 3:] Section: 5.D.0 Page: 5.D-ii Line: 21-26 Type: CM19, AM, WQ Reference Document Text: "Restoration actions will result in some level of mobilization and increased bioavailability of methylmercury, copper, and pesticides (including organophosphate, organochlorine, and pyrethroid pesticides). Given current information, it is not possible to estimate the concentrations of these constituents that will become available to covered fish species, but review of the conceptual models for each of these contaminants indicates that the effects should be limited both temporally and spatially. The most problematic of these potential effects is methylmercury. To address this issue, the Plan includes Conservation Measure (CM) 12 Methylmercury Management." Comment: This discussion demonstrates the insufficiency of evaluation of the multiple sources of contaminants that should be considered, including the potential for restoration activities to contribute towards contaminant related issues for covered fish species. Conservation measures should be considered for other potential water quality impacts from the restoration projects, in addition to methylmercury.	Please see comment response number 368.
1527	422	[From ATT 3:] Section: 5.D.1 Page: 5.D-1 Line: 11-12 Type: CM19, AM, WQ Reference Document Text: "This analysis focuses only on changes in contaminants that are directly attributable to the covered activities that could affect covered fish species." Comment: The analysis should include reservoir operational changes for the Evaluated Starting Operations.	Please see comment response number 67 and 116.
1527	423	[From ATT 3:] Section: 5.D.2.1 Page: Table 5.D.2-1	Please see comment response number 40 and 116.

DEIRS Ltr#	Cmt#	Comment	Response
		Line: 27 Type: CM19 Reference Document Text: "Table 5.D.2-1 Land Use and Typically Associated Containment Issues" Comment: The inclusion of urban stormwater as a Conservation Measure in the absence of the other contaminant sources (e.g. historic mining, agriculture, and wastewater) discussed in Appendix 5.D implies that urban stormwater is the only significant source of contamination impacting native fish habitat; and, that improving urban runoff (in the absence of control strategies for other sources) will improve water quality sufficient to obtain the Objective (L2-4). In that significant water quality improvements for the selected contaminants of concern (listed below) cannot be effected by local stormwater programs (see rationale below), the rationale for inclusion of CM 19 in Objective L2.4 needs to be re-evaluated. As supported by literature and Table 5.D.2-1 'Land Use and Typically Associated Containment Issues' (page 5.D-2, Line 27): --Mercury and methylmercury: Legacy mining sources are recognized as the primary source, and reductions in stormwater concentration would have negligible benefit. --Selenium: Agricultural sources from areas with certain geologies are recognized as primary sources, and reductions in stormwater concentration would have negligible benefit. --Copper: Agricultural pesticides are recognized as a key source. Brake pads, which were identified as the primary source of copper in urban stormwater discharges, have been effectively addressed by the State of California through passage of SB 346. This legislation requires brake pad manufacturers to reduce the use of copper in brake pads sold in California to no more than 5% by 2021 and no more than 0.5% by 2025. --Ammonia/um: Agricultural and wastewater sources are recognized as the primary sources. Reductions in stormwater concentrations would have a negligible benefit.	
1527	424	[From ATT 3:] Section: 5.D.2.1 Page: 5.D-3 Line: 24-25 Type: CM19, WQ Reference Document Text: "Historically, polychlorinated biphenyls (PCBs) often were associated with urban discharge, and these contaminants have been detected in fish tissues in San Francisco Bay, although there is little research on PCB levels in the Delta" Comment: In Sacramento, Polychlorinated biphenyls are rarely detected in urban runoff, but are more frequently found in creek sediment from legacy sources. Urban runoff is not the current known source in the region, and any control measures would need to consider the clean-up issues in the creeks more than assessing urban runoff.	There are two portions of the study area that are on the Section 303(d) listing for impairment with respect to dioxins, furans, and PCBs. The Stockton Deep Water Ship Channel is listed for dioxins/furans for the overall channel, and 3.3 miles of the channel are listed for PCBs. The north Delta has a PCB impairment listing for 15.5 miles of drainage canal near Sacramento. Please see comment response number 40.Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
1527	425	[From ATT 3:] Section: 5.D.3 Page: 5.D-6 Line: 13-22 Type: CM19, AM, WQ Reference Document Text: "Where available field data and quantitative modeling tool were deemed sufficient to capture the relevant aspects of the constituent in estimating impacts, quantitative model results are presented along with a full discussion of the conceptual model for each constituent. Where quantification would lead to results with very high margins of error and uncertainty and would not appropriately inform or define the effects on covered fish species, effects were discussed only qualitatively with the objective of determining the probability of effects on covered fish species." Comment: Regardless of margin of error, relative impacts can be assessed between alternatives and the baseline. The BDCP should include a more detailed discussion of the modeling including the basis for finding quantitative modeling "inappropriate".	For more information regarding modeling please see Appendix 5A of the FEIR/EIS and Master Response 30.
1527	426	[From ATT 3:] Section: 5.D.3.2.2 Page: 5.D-9 Line: 7-8 Type: WQ Reference Document Text: "Reduction of flows in the Sacramento River downstream of the north Delta intakes also may result in decreased dilution of contaminants in the Delta." Comment: We appreciate inclusion of this statement. This issue should be further evaluated in the BDCP.	To the extent information and models are available to understand this, the Final EIR/EIS incorporates the effects of this potential dilution reduction.
1527	427	[From ATT 3:] Section: 5.D.3 Page: 5.D-10 Line: Figure 5.D.3-1 Type: CM19, AM, WQ Reference Document Text: "Generic Conceptual Model to Evaluate BDCP Contaminant Effects" Comment: The conceptual model does not evaluate the degradation of contaminants or their binding to organic carbon. For example, copper and trace organics are known to bind	Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. For more information regarding water quality analysis please see Chapter 8 of the FEIR/EIS and Master Response 14.

DEIRS Ltr#	Cmt#	Comment	Response
		in such a way that removes their bioavailability.	
1527	428	[From ATT 3:] Section: 5.D.4.3.1 Page: 5.D-38 Line: 14-20 Type: WQ Reference Document Text: "Bruns et al. (1998) conducted water sampling between 1993 and 1995, compared both dissolved and total copper results against EPA AWQC and other criteria, and reported concentrations below criteria from almost all locations, including the Sacramento River. Because the criteria are dependent on sample-specific water quality measurements (including hardness), the criteria varied between sampling episodes. Significantly higher copper levels (at least an order of magnitude higher than all other results) that exceeded criteria were reported for Prospect Slough at the head of the Yolo Bypass." Comment: Per the Environmental Protection Agency objective, the copper water quality objective also considers dissolved organic carbon.	Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5.
1527	429	[From ATT 3:] Section: 5.D.4.5.2.2 Page: 5.D-46 Line: 16-20 Type: CM19, WQ Reference Document Text: "Given their affinity for soils, pyrethroids are not expected to spread far from the source area, and any suspension into the water column should be localized." Comment: This conclusion also applies to the urban runoff loading, which is predominantly outside of the Plan Area. When considering the benefit of urban runoff treatment (Conservation Measure 19), this highly attenuated effect on downstream areas should be considered.	Please see comment response number 38, 40, and 67. For more information regarding project versus program level planning please see Master Response 2.
1527	430	[From ATT 3:] Section: 5.D.4.5.2.3 Page: 5.D-46 Line: 12-14 Type: CM19, WQ	Please see comment response number 38 and 46.

DEIRS Ltr#	Cmt#	Comment	Response
		Reference Document Text: "Pyrethroid chemicals are used as pesticides in urban areas for pest control, and stormwater runoff has become an important source of pyrethroids in the Delta system. The purpose of Conservation Measure 19 Urban Stormwater Treatment is to provide treatment for stormwater to reduce input of contaminants. Thus, CM19 will result in decreased loading of pyrethroids to the Delta, although the level of this decrease cannot be defined at this time." Comment: There is not a clear connection between effects on covered species and urban runoff sources of pyrethroids; however, the inclusion of CM19 is based on the potential benefit. A more detailed assessment of the benefit is necessary compared to control of other sources. This assessment should also consider the cost of control measures.	
1527	431	[From ATT 3:] Section: 5.D.4.7.1 Page: 5.D-48 Line: 18-35 Type: WQ Reference Document Text: "Surface water data indicate that concentrations are high for both diazinon and chlorpyrifos in back sloughs and small upland drainages, and concentrations are lower in both the main channels and main inputs to the Delta. High concentrations of chlorpyrifos also are found in Delta island drains, but concentrations of diazinon remain low in the same drains (McClure et al. 2006). In the past, elevated concentrations of diazinon and chlorpyrifos have been detected in the Sacramento and San Joaquin Rivers and in the Delta during particularly wet springs and after winter storm events (McClure et al. 2006). This could suggest that increased flow with accompanying increased suspended loads will result in increased mobilization of both diazinon and chlorpyrifos. Alternatively, the elevated concentrations may be attributable to irrigation or stormwater runoff from late winter/early spring dormant season spraying of orchard crops." Comment: Characterization of Organophosphate pesticides based on data collected prior to 2005 should not be considered as representative of current conditions due to the fact that urban use bans have been effective since 2005. Numerous studies have characterized the lack of urban sources and absence of aquatic life effects from urban source OP pesticides.	While bans on organophosphate pesticides have been in effect since 2005 for urban use, the text cited by this comment is describing relative pesticide levels and sources beyond urban contributions. Therefore, no text change is needed in response to this comment. Please see Master Response 14 for more information regarding water quality analysis.
1527	432	[From ATT 3:] Section: 5.D.4.9 Page: 5.D.50 Line: 21-23 Type: CM19, WQ Reference Document Text: "Major sources of Endocrine-disrupting compounds in the Central Valley are thought to be pyrethroid pesticides from urban runoff (Oros and Werner 2005; Weston and Lydy 2010), WWTPs (Routledge et al. 1998), and rangelands (Kolodziej	Please see comment response number 12 and 67.

DEIRS Ltr#	Cmt#	Comment	Response
		and Sedlak 2007)." Comment: Previously, the document stated that pyrethroids are not mobile from the source site, and the sentence subject is the Central Valley rather than the Plan Area. Because this section is discussing fate and transport, the discussion should clearly discuss the location of the sources relative to the effect area of interest.	
1527	433	[From ATT 3:] Section: 5.D.4.9.1.1 Page: 5.D.51 Line: 3-5 Type: AM Reference Document Text: "Endocrine disruptors are a diverse group of chemicals, and it is not possible to evaluate fully the potential effects on the distribution and bioavailability of these chemicals from Evaluated Starting Operations water operations." Comment: If a quantitative assessment cannot be performed, a relative assessment that alternatives introduce should be performed. This relative assessment would evaluate the direction and rough magnitude of impacts and present results in a format that is easy to discern.	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process. Please see comment response number 67 and Master Response number 14 and 30 for more information regarding water quality analysis and modeling.
1527	434	[From ATT 3:] Section: 5.D.4.10 Page: 5.D.51 Line: 18-21 Type: CM19 Reference Document Text: "Lead, Polychlorinated biphenyls, and hydrocarbons (typically oil and grease) are common urban contaminants that are introduced to aquatic systems via nonpoint-source stormwater drainage, industrial discharges, and municipal wastewater discharges." Comment: Municipal Separate Storm Sewer Systems are typically considered point sources, and it is unclear what is meant by non-point stormwater. Provide clarification of the intended source category.	Section 8.2 of Chapter 8, Water Quality, of the EIR/S defines the term nonpoint source to mean any source of water pollution that does not meet the legal definition of point source in Section 502(14) of the CWA and includes urban and irrigation runoff. In the case of nonpoint sources, constituents of concern may enter receiving waters at multiple discrete and diffuse points throughout a watershed (i.e., not traceable to a single point).
1527	435	[From ATT 3:] Section: 5.D.5.1 Page: 5.D.52 Line: 41, 1-3	Due to the uncertainty of the effects a reduction of ag discharge would have on the plan area due to a reduction of agricultural land, such an analysis would be speculative. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ Reference Document Text: "Important to this picture is that taking lands out of agricultural use will result in an overall reduction of agriculture-related contaminant loading, including pesticides, copper, and in some cases, concentrated selenium in irrigation drainage." Comment: The net benefit of this land conversion should be better quantified and discussed.	BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1527	436	[From ATT 3:] Section: 5.D.5.1 Page: 5.D-53 Line: 5 Type: WQ Reference Document Text: "Evaluated Starting Operations water operations will have few to no effects on contaminants in the Delta." Comment: The evaluation should consider the impact of removing higher quality Sacramento River water and the increased contribution from lower quality San Joaquin River water, especially in the areas downstream from and near to the proposed intakes.	The Final EIR/EIS includes additional analyses pertaining to changes in concentrations of contaminants in the Delta as a result of operations. Please see Chapter 8 of the FEIR/EIS for more information. Please see comment response number 67.
1527	437	[From ATT 3:] Section: 5.D.5.3 Page: 5.D.59 Line: 4-11 Type: WQ, AM Reference Document Text: "As discussed throughout this appendix, the amount of contaminants that will be mobilized and made more bioavailable to covered fish species due to inundation of Restoration Opportunity Areas is uncertain. This uncertainty is most critical for methylmercury, and to a lesser extent for pesticides and other metals. For each of the contaminants, the chemical-specific and site-specific factors that will determine resultant effects vary. CM12 is included in the BDCP to support site specific evaluation and monitoring of methylmercury production in restored areas. Data from this monitoring will assist in evaluating the effects of restoration actions and reduce the uncertainty associated with the potential exposure of covered fish to methylmercury mobilized by these actions." Comment: The evaluation should specify the uncertainties and how they can be evaluated through data collection and analysis. It is within the scope of the BDCP to develop computational models for this analysis and future assessments. Moreover, the BDCP should fully fund a substantial monitoring program for the term of the BDCP to evaluate the unknowns. No evaluation of contaminants was presented in this section or the BDCP that justifies inclusion of CM19. The uncertainties of CM19 were not evaluated, and a	For more information regarding methylmercury analysis please see Master Response 14. 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). For more information regarding adaptive management and monitoring please see Master Response 33. For more information regarding CM19 benefits please see comment response number 38 and 40.

DEIRS Ltr#	Cmt#	Comment	Response
		comprehensive evaluation of the benefit of contaminant reductions from a range of sources was not presented.	
1527	438	[From ATT 3:] Section: 5.D.5.3 Page: 5.D-59 Line: 4-11 Type: AM, WQ Reference Document Text: "5.D.5.3 Uncertainties and Information Needs" Comment: This section is insufficient. The BDCP should have a commitment to the research needed to address mobilization of contaminants due to inundation of Restoration Opportunity Areas and other activities. A comprehensive assessment of the uncertainties and information needs should be prepared so that the efforts can be prioritized for the purpose of inclusion in the BDCP.	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. Please see comment response number 368.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). For more information regarding adaptive management and monitoring please see Master Response 33.
1527	439	[From ATT 3:] Section: 7 Page: 7-1 Line: 37-39 Type: LOCAL Reference Document Text: "In addition, a Stakeholder Council will be created and regularly convened to enable public agencies, nongovernment organizations, interested parties, and the general public to provide ongoing input into the BDCP implementation process." Comment: Local public agencies will have costs associated with the BDCP and will be in the area of greatest impact and, thus, should have a more primary role in the Permit Oversight and/or Adaptive Management Team in cases where assessments or decisions affect these agencies.	For more information regarding issues with the BDCP, including governance structure and cost, please see Master Response 5.
1527	440	[From ATT 3:] Section: 7.1 Page: 7-2 Line: 15-17 Type: LOCAL Reference Document Text: "Various other parties, including the state and federal fish and wildlife agencies, other public agencies, nongovernment organizations, interested parties, and the public will be integral to the process of shaping decisions and effectuating actions	Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process. For more information regarding issues with the BDCP, including governance structure, please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		set out in the BDCP." Comment: This broad statement and usage of "integral" suggests a level of influence that is not supported by the rest of the section. For example, many of the listed entities would only be permitted interaction through the Stakeholder Council. While the Stakeholder Council can comment on BDCP actions, they are not give authority to "effect actions". This sentence should be reworded to specify the authority that these entities are granted in the process (e.g., contribute to, provide non-binding feedback, etc.)	
1527	441	[From ATT 3:] Section: 7.2.8 Page: 7-26 Line: 5-9 Type: LOCAL Reference Document Text: "[Note to reader: At the time of this Public Draft, the California Natural Resources Agency is working with representatives from Delta counties to identify an appropriate mechanism to involve Delta counties in Plan implementation. It is the intention of the agency to incorporate revisions to the implementation structure set forth in this chapter that address further Delta county participation in a final plan]." Comment: Because of its planning area size and proximity, the City of Sacramento and other local cities should also be further incorporated, like the counties, into the implementation structure.	For more information regarding issues with the BDCP, including governance structure and cost, please see Master Response 5.
1527	442	[From ATT 3:] Section: 8.1 Page: 8-1 Line: 39 Type: LOCAL Reference Document Text: "This public contribution is further justified by the fact that there are stressors contributing to the decline of the Delta ecosystem and dependent species that are not directly related to operations of the SWP and Central Valley Project (CVP)." Comment: The benefit of the BDCP to the local public is not clear and should be better quantified. It has not been demonstrated that local stressors would be significant in the absence of the SWP and Central Valley Project (CVP). This statement should be justified based on established science.	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. For more information regarding purpose and need please see Master Response 8. For more information regarding socioeconomics please see Chapter 16 of the FEIR/EIS. DWR strived to use the best available science throughout the effects analysis, consistent with the requirements of the ESA.
1527	443	[From ATT 3:] Section: 8.2.3.12	For more information regarding BDCP issues, including cost, please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		Page: 8-36 Line: 11-12 Type: WQ, LOCAL Reference Document Text: "The cost estimate for site characterization and soil sampling is $2.2 million. Costs are summarized in Table 8-17." Comment: The costs should consider restoration area management costs to minimize methylmercury discharges. CM12 is intended as a methylmercury management action, but the costs only cover initial assessments. For example, compliance with the Total Maximum Daily Load wasteload allocation will incur costs to implement control actions.	
1527	444	[From ATT 3:] Section: 8.2.3.19 Page: 8-46 Line: 14-15 Type: CM19 Reference Document Text: "Estimated costs for urban stormwater treatment are $50 million (Table 8-24)" Comment: The proposed cost is not adequate to implement wide-scale stormwater treatment and would likely have a negligible impact on Delta water quality. Municipal Separate Storm Sewer System agencies would only be legally allowed to implement projects on municipal properties. New development and redevelopment local requirements already generally conform to the requirements in CM19, and the cost is passed on to land developers and homeowners. Effectiveness assessment monitoring in downstream waters would be difficult and expensive. The assessment monitoring for CM19 should be funded by the BDCP.	Please see comment response number 404.
1527	445	[From ATT 3:] Section: 8.2.5 Page: 8-56 Line: Table 8-30 Type: CM19, LOCAL Reference Document Text: "Cost Estimate for Effectiveness and Compliance Monitoring" Comment: The projected costs for methylmercury monitoring and assessments are too low. The BDCP should contribute to wider methylmercury assessments and fish tissue surveys to confirm that restoration areas are not contributing to elevated concentrations and the impairment. Because this is a long-term water quality problem, long term monitoring costs are likely, and an estimate of $2.2M over 50 years is insufficient. If the intent is to consider	For more information regarding BDCP related issues, including cost, please see Master Response 5.

DEIRS Ltr#	Cmt#	Comment	Response
		"potential" research if loading problems are identified, there should be better discussion of the conditions that would trigger these additional research actions.	
1527	446	[From ATT 3:] Section: 8.2.5 Page: 8-56 Line: Table 8-30 Type: CM19 Reference Document Text: "Omission of monitoring costs for Conservation Measure 19" Comment: Demonstration of the effectiveness of stormwater treatment and related benefits to downstream receiving waters can be difficult and expensive. The BDCP should provide funding to support CM19 assessments.	Please see comment response number 404.
1527	447	[From ATT 3:] Section: 8.2.5 Page: 8-57 Line: Table 8-31 Type: ERROR, AM Reference Document Text: "Cost Estimate for Potential Research" Comment: The commitment to "potential" research is not explained. The research program should show a firm commitment to funding studies to support filling current and future information needs. This is important to ensure implementation actions during the near-term implementation period are invested where there is most benefit, and to support adaptive management for later implementation actions.	For more information regarding BDCP related issues, including costs, please see Master Response 5.
1527	448	[From ATT 3:] Section: 9.1.3 Page: 9-3 Line: 1-29 Type: ALT, WQ Reference Document Text: "BDCP development began in 2006. During the development of the BDCP, the participants carried out a focused effort to identify and consider a range of alternative approaches to water conveyance infrastructure and operating criteria (Conservation Measure 13), as well as a number of different approaches to natural community restoration and enhancement. Development and evaluation of a range of alternatives was also guided by the Delta Reform Act. California Water Code Section	Please see comment response 5. Please note that Alternatives to Take is an HCP component, and therefore not carried forward in the new preferred alternative, 4A. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.

DEIRS Ltr#	Cmt#	Comment	Response
		85320(b)(2) specifically requires including a comprehensive review and analysis of seven factors." Comment: The California Water Code Delta Reform Act provides minimum guidance for alternatives to evaluate, and the BDCP alternatives are too narrow. Additional alternative evaluation is required for the EIR/EIS to sufficiently evaluate the impacts of the BDCP. While the California Water Code requirements seem narrow in evaluating the alternatives to take, it is reasonable to evaluate additional alternatives to conveyance. For example, the Alternatives to Take section does not investigate developing and evaluating other means of increasing water supply in the system, which includes more off-line storage, treatment of waste streams for reclamation, and development of regionally independent solutions (seawater filtration, reuse, etc.). In particular, the latter two are much hindered by water rights law, territorial ownership and water agreements, and the complexity of the water quality laws with the Basin Plan, Title 22, and Porter Cologne. Streamlining of the water quality and planning components will better encourage these regionally independent alternatives to take.	
1527	449	[From ATT 3:] Section: 10.3.1 Page: 10-5 Line: 4-12 Type: AM Reference Document Text: "For example, recommendations related to the development of new planning tools (e.g., hydrodynamic, ecosystem, species models) were not deemed practical because they could not be developed to a usable form within the timeframe of BDCP development. These planning tools, however, could be designed during BDCP implementation to inform development and implementation of specific actions in fulfillment of the Conservation Measures. The BDCP adaptive management program (Chapter 3, Section 3.6, Adaptive Management and Monitoring Program) calls for the development and use of such models" Comment: The determination that development of the tools was not feasible should be better explained. By delaying development of these tools and deferring characterization of baseline conditions later, the uncertainty of impacts can be extended until the BDCP impacts cannot be undone. There are existing efforts in the Drinking Water Policy, Central Valley Salinity Alternatives for Long-term Sustainability, and others that could be used at least as a basis for some of the evaluations. If these tools can be developed for projects with smaller scopes, they should be required for the BDCP to remove uncertainty.	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. For more information regarding environmental baselines please see Master Response 1.
1527	450	[From ATT 3:] Section: 10.3.7.3 Page: 10-14 Line: 19-28	Please see comment response number 5. 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 5 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.

DEIRS Ltr#	Cmt#	Comment	Response
		Type: WQ, WS, LOCAL Reference Document Text: "The report also suggests that a broader array of alternatives and options for managing water is needed in Delta water planning efforts, including improvements in water-use technology, reuse technology, economizing on water use, and various degrees of long-term species protection. Clearly, the full resolution of these issues lies beyond the purview of the BDCP, but the BDCP can make important contributions by clearly defining water allocations (as is done in CM1 Water Facilities and Operation), by setting performance goals for conservation of affected species and natural communities (as is done in Chapter 3, Section 3.3 Biological Goals and Objectives), and by active participation in regional decision-making processes (as addressed in many sections addressing cooperation with neighboring HCPs and NCCPs, the BDCP's relationship to the Delta Plan, and the BDCP's relationship with other scientific efforts in the Delta)." Comment: The role of the BDCP and the water exports is fundamental to California water supply and support of all beneficial uses. The BDCP should evaluate the broader array of the alternatives; this evaluation and funding of additional technology and policy programs should in the least be coordinated with the California Water Plan or other state efforts to ensure that there are not oversights or gaps in the needed solutions to California's water challenges.	
1529	1	We submit these comments on behalf of Vintage Production California LLC ("Vintage"), the owner and operator of several oil and gas wells, the owner of surface and mineral estates, and lessee under several oil and gas leases, within the Plan area. As set out below, the Draft EIR/EIS is fundamentally flawed such that certification of the Draft EIR/EIS, in its current condition would, as a matter of law, violate the California Environmental Quality Act ("CEQA"). (Pub. Resources Code [Section] 21000 et seq.) The primary issues with the Draft EIR/EIS identified in this letter relate to the insufficiency of the proposed mitigation measures and the lack of analysis contained in Chapter 26, the Mineral Resources section. Vintage recognizes that Alternative 4 is the preferred alternative and this letter focuses on the insufficiencies contained in that alternative, but the comments set out herein also equally apply to the eight other alternatives analyses. However, where applicable, this letter will identify insufficiencies in other alternatives analyses that are not discussed in Alternative 4, with the understanding that the preferred route may be altered or amended prior to certification of the EIR/EIS. By way of background, Vintage currently owns or leases over 130,000 gross mineral acres of the full 857,258 acres of the Plan study area and over 60,000 gross mineral acres of the 182,146 acres of the restoration opportunity areas. The potential impact to Vintage's current and proposed operations is tremendous and the Draft EIR/EIS must be revised to fully analyze the potential impact of the Project to these important resources.	As of the release of the 2015 RDEIR/SDEIS, the new CEQA preferred alternative is Alternative 4A, which has been developed in response to public and agency input. Alternative 4A, also known as California WaterFix, 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. For more information about the standards governing the adequacy of mitigation measures, please see Master Response 22.
1529	2	Mitigation measures MIN-5 and MIN-6 fail to address the impacts of inundation in restoration areas pursuant to Conservation Measures 2-22. The Draft EIR/EIS states that implementing certain Conservation Measures may result in permanent flooding and inundation of natural gas wells and eliminate access to natural gas fields. Nevertheless, the Draft EIR/EIS concludes that natural gas wells and access to natural gas fields can remain productive in flooded areas because access will be replaced using conventional or directional drilling at a location outside of the inundation zone. (Draft	The construction of protective cages is discussed under the impacts discussion as is the potential that their associated expenses may not make them cost effective. Access roads can also alter circulation patterns that are a fundamental restoration purpose of the tidal marsh and other inundated restoration measures. These effects are also site-specific and need to be accessed with a very detailed knowledge of a particular site including its topography and hydraulic characteristics which are not known at the present time. The quote of Mitigation Measure MIN-5 is not complete. Mitigation Measure MIN-5 states 'During final design of CM4, CM5, and CM10, the project's proponents will avoid permanent inundation of or construction over active natural gas well sites where feasible taking into consideration costs, logistics and project objectives in order

DEIRS Ltr#	Cmt#	Comment	Response
		EIR/EIS pp. 26-77 through 26-79.) The Draft EIR/EIS acknowledges that if a large number of wells have to be abandoned and could not be redrilled adequately and effectively, there would be a locally adverse effect. (Draft EIR/EIS pp. 26-78 - 26-79.) As a result, the Draft EIR/EIS concludes that: a) MM MIN-5 and MM MIN-6 are available to address the permanent elimination of a substantial portion of a county's active natural gas wells and access to natural gas fields; and b) the impact to locally significant wells and access to natural gas fields is significant and unavoidable because MM MIN-5 and MM MIN-6 cannot assure that all or a substantial portion of a county's existing natural gas wells and natural gas fields will remain accessible after implementation of the alternative. (Draft EIR/EIS pp. 26-77 - 26-79.) Mitigation Measure MIN-5 states: During final design of Conservation Measures 4, 5, and 10, the BDCP proponents will avoid permanent inundation of or construction over active natural gas well sites where feasible to minimize the need for well abandonment or relocation. This mitigation applies to three Conservation Measures: CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, and CMJ 0 Nontidal Marsh Restoration. Mitigation Measure MIN-6 states: During final design of Conservation Measures 4, 5, and 10, the BDCP proponents will consider the location and amount of inundation of natural gas fields and will identify means to maintain feasible drilling access to them. These measures could include maintaining non-inundated locales overlying or near individual gas fields and ensuring that inundation zone design provides feasible access to natural gas fields from adjacent and nearby non-inundated lands. This mitigation applies to CM4, CMS, and CMl O. This mitigation measure will ensure that drilling access to natural gas fields is maintained to the greatest extent practicable. (Id.) Simply concluding that permanent inundation of, or construction over, active, natural gas wells will be avoided and deferring the means to maintain feasible drilling access to natural gas fields are improper mitigation measures under CEQA. Public Resources Code section 21002 requires agencies to adopt feasible mitigation measures (or feasible environmentally superior alternatives) in order to substantially lessen or avoid otherwise significant impacts. (Pub. Resources Code, [Section] 21002, 21081 (a).) Feasible mitigation measures must be specific, commit to specific measures, and should not be too speculative, vague, or noncommittal. (See Anderson First Coalition v. City of Anderson (2005) 130 Cal.App.4th 1173, 1188-89; Endangered Habitats League, Inc. v. County of Orange (2005) 131 Cal.App.4th 777, 794.) If, however, a mitigation measure is deferred, there must be a thorough analysis of alternatives to be considered, analyzed, and possibly incorporated into the mitigation plan. (Gray v. County of Madera (2008) 167 Cal.App.4th 1099, 1118.) . The mitigation measures described in MM MIN-5 and MIN-6 simply defer mitigation until after the final design plan period without providing any details or committing to any specific	to minimize the need for well abandonment or relocation. This mitigation applies to three conservation measures: CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, and CM10 Nontidal Marsh Restoration.' The costs, feasibility, construction of cages or other actions, and the effects of roads are part of 'taking into consideration costs, logistics and project objectives in order to minimize the need for well abandonment or relocation.' These evaluations, for individual natural gas wells and natural gas fields, can only be done on a specific site-by-site basis. Also note that Alternative 4A, the preferred alternative, has substantially less inundation that would affect natural gas wells and natural gas fields than many other alternatives. See also response to comment 1529-1. For more information regarding project and program level analysis please see Master Response 2.

DEIRS Ltr#	Cmt#	Comment	Response
		measure, and do not analyze the feasibility of avoiding natural gas wells and fields. While we understand that the specific areas that will be affected by Conservations Measures 4, 5, and 10 have not been determined, in order to comply with CEQA, the Draft EIR/EIS needs to analyze the feasibility of avoiding permanent inundation and provide mitigation measures that specifically identify means to mitigate the potential impacts to access to wells and natural gas fields. The mitigation measures should also describe how displacement of wells will be avoided and how access to oil and gas fields will be maintained. One way to accomplish this requirement would be to have the mitigation measures require certain modifications , including construction of a protective cage and platform above the well. Another example is requiring construction of drill pads and access roads in such a way that provides access to minerals in cooperation with the oil and gas rights owners. As part of that analysis, the impacts of constructing the drill pads, access routes to the drill pads, and the dimensions of these pads should be considered. For example, Vintage's gas wells are located on drill pads that are accessed by a drilling rig using a closed-loop system via an access road that is 22-feet wide. The closed-loop system is approximately 720 feet x 250 feet and is enlarged to approximately 900 feet x 400 feet, if a pit sump is placed on the drill pad. This type of location size allows for simultaneous drilling and completion operations, and could be feasible with the mitigation measure incorporated into the Project. The Draft EIR/EIS makes a cursory conclusion without sufficient facts or analysis to support its conclusion of significance, nor do the mitigation measures properly analyze the potential impacts of inundating the natural gas wells and fields. Therefore, the Draft EIR/EIS should be revised and recirculated to include this information.	
1529	3	The Draft EIR/EIS misstates the ease and likelihood of relocating access to mineral resources. The Draft EIR/EIS examines the accessibility of natural gas wells and gas fields and concludes that the alternatives do not pose a substantial loss of existing production because active wells and natural gas fields can be accessed using conventional or directional drilling techniques. (Draft EIR/EIS pp. 26-21; 26-24; 26-25; 26-77 - 26-79.) Accordingly, the Draft EIR/EIS concludes that no mitigation is required. (Id. At pp. 26-31; 26-32.) The Draft EIR/EIS also concludes that production in 2005-2009 from natural gas wells and fields located in the Plan area were "small" compared to the total annual natural gas production in the county where the well and field are located,[footnote 2: These percentages range from less than 1% to 6% depending on the county.] and therefore, the Project will have no adverse effect on natural gas wells and production from natural gas fields and the impact is less than significant. (Tables 26-4 & 26-5; Draft EIR/EIS pp. 26-25; 26-27; 26-28.) This is an inappropriate and impermissible standard and comparison to establish a level of significance. In making conclusions of significance, the lead agency must submit substantial evidence in the record to support its conclusions. (Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova (2007) 40 Cal. 4th 415, 435; Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal. 3d 553, 566.) "Substantial evidence" includes, "reasonable assumptions predicated upon facts, and expert opinion supported by facts." (14 C.C.R. [Section] 15384.) In other words, an EIR must explain the basis of its conclusions, a bare conclusion without an explanation of its factual and analytical basis is insufficient for an EIR. (Laurel Heights Improvement Ass 'n v. Regents of Univ. of	Discussion of the conditions that would result in adverse (NEPA) or significant (CEQA) impacts are presented in Section 26.3.2 Determination of Effects. As discussed under Impact MIN-1 for the various alternatives, there would be a potential loss of less than 1 percent to 6 percent of Sacramento County's annual natural gas production if not a single well was replaced. These county-level values are the most conservative because they consider only a very local area of production. However, the analysis also states that for the 6 percent Sacramento County value "…the lost natural gas production would not represent a substantial portion of the county, regional or statewide natural gas production…". Each of these larger areas of consideration further reduces the potential impact and we consider the EIR/EIS analysis to be appropriate with respect to the stated determination.

DEIRS Ltr#	Cmt#	Comment	Response
		Cal. (1988) 47 Cal. 3d 376, 404.) Simply because the percentage is a small number does not support the conclusion that the impact will be small. There must be a thorough analysis of the factual and scientific data to support this conclusion.	
1529	4	There is a complete lack of analysis regarding the possibility or availability of conventional and directional drilling and the Draft EIR/EIS fails to acknowledge that feasibility of access is contingent on the availability of adjacent drilling sites and whether the operator will have the legal rights to directionally drill. [footnote 1: In short, an owner or lessee on one parcel of property is not entitled to access those minerals from an adjacent parcel unless it has the right to do so (e.g., obtained pass through rights).] Certain considerations such as price, technology, future provable production, and the feasibility of leasing or accessing adjacent lands should also be considered to determine whether conventional or directional drilling techniques are available to natural gas operators in the Plan area.	The analysis in the Draft EIR/EIS correctly addresses the physical availability of directional drilling access to natural fields from other locations if individual natural gas wells are displaced. Analysis of an individual operator's ability to relocate a well due to the adjacent property being under contract to another lease or that property owner not desiring to have such a well on their property is not an environmental issue and is beyond the scope of the analysis. With respect to price, technology and other items see the response to Comment 1529-2. Also note that Alternative 4A, the preferred alternative, has substantially less inundation that would affect natural gas wells and natural gas fields than many other alternatives.
1529	5	Natural gas production is contingent on fluctuating market prices, and providing production numbers from 2005-2009 is not an accurate evaluation of the availability of resources. A comparison to the overall production in the county that the well is located is also misleading because it does not accurately reflect whether the resource may be available to the operator from a different location if the well is displaced and relocated. A more appropriate benchmark is provable production data from the Department of Conservation, Division of Oil, Gas, and Geothermal Resources, to determine the true potential for future loss.	As noted in response to comment 1529-2, the EIS/EIR analysis considers not only county level but regional and statewide natural gas production. In that context, consideration of the provable production data would not alter the determination.
1529	6	The Draft EIR/EIS inaccurately concludes that the impacted wells, either those within the path of the tunnels or those inundated, can be simply relocated. (Draft EIR/EIS, p. 26-32.) Relocating a well is a difficult process requiring complicated engineering plans at great expense to the operator over a number of months, and which can result in loss of production while the wells are shut-in. There also may be legal hurdles that will prevent the operator from relocating its wells and pipelines and also could result in a potentially significant and permanent loss of mineral resources if replacement wells are not able, for a number of geologic or construction-related reasons, to access the hydrocarbons that the existing wells now are able to produce.	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.
1529	7	Notwithstanding the logistical impacts of relocating wells and gaining new access to natural gas fields, the analysis regarding the potential hazardous impact to the wells and natural gas fields is insufficient. Chapter 24, the Hazards and Hazardous Materials section, concludes that "[t]he potential for disturbing oil and gas fields during excavation or tunneling activities is minimal because these fields are typically located at depths greater than 3,000 feet ...Implementation of pre- construction surveys, and then utilizing avoidance or relocation if necessary, would minimize any potential disruption and hazardous effects due to disruption." (Draft EIR/EIS p. 24-51.) Deferring this mitigation and failing to establish specific measures and/or specific performance criteria, without a thorough analysis of alternatives to be considered, is a	Please note that Chapter 26 of the RDEIR/SDEIS, Mineral Resources, identifies how many natural gas wells would be impacted (both temporarily and permanently) by the construction of water conveyance facilities (Table 26-4). For the preferred alternative, i.e., Alternative 4A, there are no producing wells within the construction footprint, and therefore this alternative would not affect natural gas wells or gas production. Where habitat restoration and enhancement may impact locally important natural gas wells, Mitigation Measure MIN-5 would address this impact. This mitigation measure calls for Environmental Commitments 4 and 10 to avoid displacement of active natural gas wells to the extent feasible to minimize the need for well abandonment or relocation. Mitigation Measure MIN-6 (Design Environmental Commitments 4 and 10 to Maintain Drilling Access to Natural Gas Fields to the Extent Feasible) calls for Environmental Commitments 4 and 10 to maintain drilling access to the greatest extent practicable through project design. Because locations for activities under Environmental Commitments 4 and 10 have not been determined, the extent of the effect of implementing restoration actions on locally important natural gas wells and fields cannot be precisely determined at this time. Accordingly, because implementation of Mitigation Measures MIN-5 and MIN-6 cannot assure that all or a substantial portion of existing natural gas wells and gas fields will remain accessible after implementation of this alternative, these impacts would significant and unavoidable .Please

DEIRS Ltr#	Cmt#	Comment	Response
		violation of CEQA. (Gray v. County of Madera, 167 Cal.App.4th at 1118.) If relocation is not possible, the operator will be forced to abandon the wells. Abandoning wells for purposes of a public use raises eminent domain issues and the Draft EIR/EIS must acknowledge that potential takings may occur and consider the potential impacts to natural gas resources. Vintage Production California LLC has firm plans to further develop the Plan area and this problem will only worsen as time goes on. These types of considerations must be analyzed in the revised Draft EIR/EIS.	see response to comment 1529-9. For additional information related to mitigation and performance measures/environmental commitments please refer to Master Response 22.
1529	8	The impacts of the project to natural gas distribution lines are not fully analyzed under CEQA. As noted in the Draft EIR/EIS, certain alternatives include proposed electric transmission lines that "could conflict with existing natural gas wells or gas distribution lines." (Draft EIR/EIS, p. 26-19.) But the Draft EIR/EIS concludes that the transmission lines in these areas of additional analyses are not expected to have any effects on natural gas wells, natural gas fields, or natural gas distribution pipelines because these resource features could easily be avoided or accommodated. (Draft EIR/EIS, p. 26-20) Therefore, no adverse effects are anticipated, and this issue is not addressed further in the Draft EIR/EIS. The Draft EIR/EIS also states that natural gas distribution lines are small in diameter (approximately 2 inches) and shallowly buried (approximately 2 - 3 feet) and their relocation would not impact the production from their associated natural gas wells. (Id.) Such an analysis is superficial and inappropriate to meet the required significance threshold. (See 14 C.C.R. [Section] 15384.) There is no consideration of the possibility that Vintage or any other natural gas operator may not have the appropriate legal authority to relocate its distribution lines. Furthermore, the Draft EIR/EIS completely avoids analyzing the potential adverse environmental impacts of relocating these lines.	Because relocation and disruption of existing utility infrastructure, including water, sewer, storm drain, natural gas, oil, electric, and/or communication lines could be required under the proposed project, this would be an adverse effect. Mitigation Measures UT-6a, UT-6b, and UT-6c (Chapter 20, Public Utilities) are available to reduce the severity of this effect. If coordination with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to communities were successful under Mitigation Measure UT-6b, the effect would not be adverse.
1529	9	Vintage Production California LLC does not oppose the construction and development of the Bay Delta Conservation Plan. However, Vintage's concerns and the Project's impacts on resources vital to Vintage's operations have not been adequately addressed in the Draft EIR/EIS. We request that the appropriate agencies comply with CEQA and NEPA and accommodate the highly productive mineral resource development within the Plan Area. For these reasons, the Draft EIR/EIS must be revised and recirculated.	The Lead Agencies respectfully disagree with the assertion that the documentation is fundamentally flawed for the mineral resources analysis. The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. In compliance with CEQA and NEPA, thorough analyses were conducted for the action alternatives in Chapter 26 (Mineral Resources) of the Draft EIR/EIS and for the California WaterFix alternatives and a modified Alternative 4 (BDCP) in Appendix A (Chapter 26) of the RDEIR/SDEIS. Table 26-2 of the Draft EIR/EIS lists oil and gas wells within the study area that would also include the interests of Vintage Production California LLC, including San Joaquin and Sacramento counties. The commenter is referred to the evaluations for the following impacts for each of the alternatives in the original Draft EIR/EIS and the RDEIR/SDEIS: • The potential for construction and the physical footprint of the conveyance facilities to directly or indirectly affect fuel and nonfuel mineral resource availability and extraction was evaluated. • In general, operation of the conveyance facilities would involve the movement of water in the constructed facilities; hence, these actions would not affect availability of mineral resources. • Because restoration activities have been developed at a coarse, conceptual scale, a programmatic approach was used to evaluate impacts on mineral resources. Important mineral resource sites and mineral extraction operations were identified within potential ROA footprints using the same methodology as was used for assessing the effects of the conveyance facilities. Such impacts will be discussed in greater detail

DEIRS Ltr#	Cmt#	Comment	Response
			and specificity in subsequent project-level environmental documentation after the restoration activities are finalized. For those impacts deemed significant, mitigation has been proposed in the environmental documentation.
1530	1	City of Sacramento have lingering concerns regarding water supply assurances, governance, and financing. It is our desire to work with Governor Brown's Administration to develop a comprehensive long term water plan that addresses water supply and environmental challenges faced by all of the residents of California. The BDCP attempts the laudable goal of improving the water supply reliability to regions in Southern California, San Joaquin Valley and a portion of the Bay Area while trying to improve the Delta ecosystem. However, the proposed BDCP likely will result in continued conflict while not providing the reliability to the export regions or other regions of California. An example of potential conflict is providing water supply assurances to the BDCP proponents in the form of long-term operating permits without a clear understanding of how the BDCP will affect the Delta ecosystem. In our view, these assurances would result in the North State having to provide water or funding if the goals of the BDCP are not met.	Further clarification on governance structure and implementation is provided in Master Response 5 as well as in the 2013 Draft BDCP Chapter 7 (Implementation Structure). For more information on funding and costs, see BDCP Chapter 8, cost-benefit analysis on the BDCP website, and Master Response 5. Additionally, the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. Other issues noted by the commenter as key decisions are further discussed in the following Master Responses: Master Response 28 (Operational Criteria), Master Response 44 (Decision Tree), Master Response 33 (Adaptive Management and Monitoring), Master Response 5 (Overview of Restoration and Enhancement Activities), Master Response 45 (Permitting), Master Response 26 (Changes in Delta Exports), and Master Response 35 (Southern California Water Supply).
1530	2	City of Sacramento stands ready to help craft a solution that provides water supply reliability for all residents of California. We need a statewide water plan that does not sacrifice one region of the state to benefit another. The solution must protect, restore, and enhance the Delta ecosystem. As the most innovative state in the nation, we can find solutions to address the many water challenges before us, including increasing California's water supply rather than simply redistributing existing supplies. The solution must include modem water management strategies including increased conservation, recycled water, desalination, investments in technology and managing surface water and ground water conjunctively. And lastly, a solution must provide a long-term governance role for stakeholders throughout the state, including local government. The solution must not pre-empt local control. Leaders in the Sacramento region are committed to working with the Governor, our local partners and statewide water interests to find common sense solutions. We need ways to add water supply into the system and improve the fragile Delta habitat and species while maintaining a high quality of life and ensuring economic opportunities for future generations.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. 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 threatened and endangered species that depend on the Delta. 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 proposed project. 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. For more information regarding alternatives to the proposed project please see Master Response 4. For more information regarding demand management please see Master Response 6.
1531	1	I see little discussion of the impact of the proposed twin tunnels on the lower American River fishery. My concern is the potential need to use the larger quantities of water from Folsom Lake to counter saline intrusion in the Delta. Being the closest major water storage facility in the Delta, Folsom-stored American River water can reach the Delta in a day, while water from the other reservoirs in the Sacramento River system take a minimum of three days to reach the Delta.	The discussion in this comment is consistent with the assumptions used in the CALSIM II model in the Draft EIR/EIS to release water to meet the Spring X2 requirements in accordance with the State Water Resources Control Board Decision 1641. Water is not preferentially released in the model during other periods of the year to comply with other requirements in Decision 1641 or other regulatory requirements, as described in Appendix 5A, Section B, CALSIM II and DSM2 Model Simulations and Assumptions. These same assumptions are included in the Existing Conditions and the No Action Alternative, as well as most of the alternatives. The effects of each alternative on fish that use the lower American River are included in Chapter 11 for migratory, rearing and spawning effects upstream for applicable species.
1531	2	The American River currently maintains a run of threatened American River Steelhead Trout, and supports a large run of Chinook Salmon. Cold water from Folsom Dam storage	The Final EIR/EIS evaluates impacts, including changes in water temperature, to fall-run Chinook and Central Valley Steelhead on the American River for the new preferred alternative, Alternative 4A. When comparing

DEIRS Ltr#	Cmt#	Comment	Response
		is a necessary ingredient to the successful reproduction of American River Steelhead and Salmon. If the twin tunnels divert flows of water from through the Delta to under the Delta, is highly likely to sharply increase requirements for water quality (salinity) releases from the American and reduce the quantity of cold water needed to protect American River Steelhead and Salmon spawning. This is of major concern to all who fish, be they American River or are fishers off-shore commercial Salmon fisherman, and there is an associated economic impact on them.	impacts in the American River from the preferred alternative against impacts in the No Action Alternative (NAA), it was determined there would no adverse impacts to salmonids in the American River. In addition, Mitigation Measure AQUA-78d commits to using real-time operational adjustments at Folsom, Shasta, and Oroville Reservoirs, whenever possible, to slightly adjust operations, within all existing regulations and requirements, to reduce migration-related effects to Fall-run Chinook salmon. Modifications of Folsom Reservoir operational criteria are not proposed under Alternative 4A, and the preferred alternative would continue to comply with existing fish and wildlife regulatory requirements in the American River. Adaptive management under the preferred alternative would also have the ability to inform and improve operations of SWP/CVP facilities to minimize and avoid impacts to fish species similar to Mitigation Measure AQUA-78d. For impacts to recreational fisheries under the new proposed project, please see Final EIR/EIS Chapter 15, Recreation. Also see Chapter 11, Fish and Aquatic Resources, for an analysis on impacts to Fall-run Chinook salmon under the proposed project, which concluded impacts to the fall-run Chinook salmon commercial fishery would be less than significant.
1532	1	Development of the Draft EIS/EIR (Draft) for the Bay Delta Conservation Plan (BDCP) has gone forward despite severely limited participation by the Hoopa Valley Tribe (Tribe). A consequence has been to substantially disregard the Tribe in spite of its position as holder of senior water rights in the Trinity River Basin. Those rights reserve from diversion to the Central Valley all water necessary for conservation of fisheries of the Klamath-Trinity Basin including salmon, steelhead, lamprey and sturgeon on which the Tribe has depended for millennia. Restoration of Trinity River fisheries is unlawfully long overdue as a result of delays since the signing of the Trinity River Mainstem Fisheries Restoration Record of Decision in 2000. Now, plans to increase conveyance of water to areas south of the Delta are moving forward, encouraged by the Governor of California and those contractors who would benefit from increased trans-Delta exports.	The lead agencies' 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. The proposed project would not affect upstream water rights. 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. Regarding water rights please see Master Response 32. With regards to upstream reservoir effects, please see Master Response 25. For more information on area of origin see Master Response 26.
1532	2	In regards to the analyses that underpin the Draft, brief technical meetings between Tribal Fisheries staff and federal/state partners have taken place on two occasions. However, Hoopa Tribal government has not been directly engaged, and requirements for government-to-government consultation between the Hoopa Valley Tribe and the federal government have not been met as required under federal policies (see White House-Indian Affairs Executive Working Group, Consultation and Coordination Advisory Group, January 2009 [footnote1: While the statutory language of NEPA does not mention Indian tribes, Section 40 CFR 1501.2(d)(2) requires that Federal agencies consult with Indian tribes "early in the NEPA process."]) A government-to-government consultation must be completed prior to any further federal action, such as contemplated under BDCP alternatives.	As noted in Master Response 21, DWR has hosted meetings with the tribal community throughout the Plan Area. An informational meeting was held in Sacramento in December 2013. This meeting was followed by regional consultation meetings held in Corning in April 2014, in Sacramento in June 2014, and in Clovis in June 2014. Consultation is on-going. In July of 2015, DWR continued outreach to the Tribes to assess interest and provide updates on the proposed project changes. DWR has also begun 1:1 dialogue with the interested tribes and held an informational meeting on August 12, 2015. DWR has solicited input from Tribes on the consultation process, including the potential development of a Tribal Advisory Working Group for the proposed project. Currently, information from Tribes is being gathered and will be used to guide future meetings and work with the tribal community.
1532	3	Funding requested under the Tribe's [Hoopa Valley Tribe] Annual Funding Agreement with Reclamation to support participation in BDCP compliance was denied. Consequently, the Tribe has not been able to take part in distant public scoping meetings, negotiations, and technical briefings. Also, it has been impossible for the Tribe's scientists to undertake comprehensive technical reviews of the numerous Habitat Conservation Plan and Draft	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, 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

DEIRS Ltr#	Cmt#	Comment	Response
		EIS/EIR documents available online -- amounting to hundreds of pages of text and figures.	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. 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. The Lead Agencies for the proposed project have provided all public notices required by law under both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) in the preparation and publication of the 2013 Public Draft EIR/S and RDEIR/RSEIS. Additional public notice to potentially interested stakeholders, beyond what is required by law, was also provided through an extensive scoping process which included public notice and public participation, the placement of copies of the environmental documents for review at 125 libraries throughout the state and through six public comment hearings which were held throughout the Plan Area. Overall, more than 600 public meetings, working group meetings and stakeholder briefings have been held during the preparation of the proposed project's environmental documents. All of the documents, studies, administrative drafts and meeting materials – more than 3,000 documents in total, have also been posted online in an unprecedented commitment to public access and government transparency. Further, the proposed project raised the standard for proactive outreach and engagement with communities and the public overall by efforts such as establishing a multilingual toll-free phone line for questions which includes information in Spanish, Tagalog, Vietnamese and Chinese (Mandarin) in addition to English, providing translators upon request to respond to requests, and having a Spanish-language translator at every open house public meeting on the Draft EIR/S and Draft BDCP among other efforts. For information on consultation please see response to comment 1532-2. In addition, in order for the Lead Agencies to effectively communicate with the public, several different types of summary documents and presentations on the BDCP, Draft EIR/EIS, and related documents were made available on the BDCP website. For instance, lay-friendly highlight documents for both the BDCP and the EIR/EIS were published to provide summary information about the documents and to help readers get acquainted with the documents. The BDCP Highlights and the EIR/EIS Highlights were posted online at http://baydeltaconservationplan.com/AboutBDCP/InformationalMaterials.aspx. Short one-page factsheets on the BDCP and EIR/EIS, as well as California Water Fix, were also provided online and by request. In addition, 17 narrated informational webinar episodes were posted to the website for both the BDCP and EIR/EIS. These webinars were developed to provide short, easy to understand summaries of key elements of the BDCP and EIR/EIS. Background documents, additional factsheets, and FAQs continue to be available on-line. For more information, please see Master Response 38 regarding the length and complexity of the documents. Also see Master Response 27, Environmental Justice, and Master Response 40 regarding public outreach efforts.
1532	4	The Draft [EIS/EIR] reflects the lack of Tribal participation in its grossly inadequate consideration of tribal fishing and water rights, and abundant inaccuracies regarding the practice and significance of tribal fisheries relative to potential environmental impacts.	The commenter's opinion related to the DEIR/S is acknowledged. Section 106—and in extension Native American consultation and involvement—was addressed in the Recirculated DEIR/S 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 and addressing effects. Native American consultation in the development of the Programmatic Agreement is currently underway. For additional information about Native American outreach efforts, please see Master Response 21. Also see response to comment 1532-2 and response to comment 1532-3.

DEIRS Ltr#	Cmt#	Comment	Response
1532	5	Environmental impacts to the Trinity River and its fishery, including impacts attributable to climate change are shown in the analyses; both water supply and water temperature impacts are anticipated. The analysis falls short of fundamental requirements under NEPA, as best available information is ignored or misinterpreted in regards to the law of the Trinity River, and as relates to the biology of Trinity River trust resources. In sum, the analyses provide a basis unsuitable for interpreting impacts to tribal fishery assets held in trust by the United States.	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. 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. 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 2013 Public Draft BDCP, 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." For additional information on proposed project modeling please see Master Response 30.
1532	6	Requirements of the 2000 Record of Decision and 2000 Biological Opinion for Coho salmon are not accounted for in CALSIM, as is also the case for the 1959 water contract between Humboldt County and the Federal Government for annual releases of 50,000 acre feet. In addition, water releases foreseeably required to mitigate fish kills in the lower Klamath flows are ignored. Modeling of flows in several alternatives shows decreases in Lewiston releases from ROD [Record of Decision]-required rates. Minimum carryover storage behind Trinity Dam drops below required levels and minimum flows required by the Record of Decision in Trinity are modeled - erroneously - as equivalent in priority to instream flow targets for other CVP waters. A result of modeling errors is to overestimate volumes of water available for diversion to the Central Valley. In years where both the annual contract water (50TAF) and the lower Klamath supplemental flow volumes (36TAF+) would be required, this overestimate exerts a powerful bias on modeling output, misleading users of the document. Both reliability and volume of water supplies are overstated.	As described in the response to 1532-1, the Draft EIR/EIS recognizes the requirements of the Trinity River Main-stem Fisheries Restoration Record of Decision, as described in Section 5.1.2.1 of Chapter 5, Water Supply; and includes the requirements within the CALSIM II model assumptions, as described in Table B-8 of Appendix 5A, Section B, CALSIM II and DSM2 Modeling Simulations and Assumptions. The CALSIM II model analyses were conducted to evaluate changed conditions under the alternatives as compared to the Existing Conditions and the No Action Alternative for the long-term. Therefore, the model did not include assumptions to respond to emergency situations, such as the recent releases into the Trinity River to improve conditions for fisheries in the lower Trinity and Klamath rivers. In 2015, Reclamation published a Notice of Intent to initiate NEPA analysis of the 50,000 acre-foot flow release; however, that analysis has not been fully defined to a level for consideration in the BDCP EIR/EIS. The CALSIM II results that indicate periods when minimum Trinity River flows and/or Trinity Lake storage cannot be met may differ from real-time operations under stressed water supply conditions. Such model results occur due to the inability of the model to make real-time policy decisions under extreme circumstances or in the future when snowpack may be reduced due to climate change. The CALSIM II model makes month-by-month decisions based on values for that month only. These reductions would be lessened in real-time by making decisions in prior months as well as the current month to manage the actual available water supplies within legal and contractual obligations. For more information on modeling, please see Master Response 30. Regarding mitigation measures, please see Master Response 22. Operational Criteria is discussed in Master Response 28.
1532	7	Impacts described as primarily the result of climate change and future water demand, and therefore not attributable to effects of the alternatives, are nonetheless of great	The 2013 Draft EIR/EIS presents the changes in conditions under the alternatives as compared to conditions under the Existing Conditions and the No Action Alternative. The effects of climate change and future water

DEIRS Ltr#	Cmt#	Comment	Response
		significance to the Tribe as we strive to restore fisheries. Rising water temperatures, shifting hydrologic patterns and changes (depletions) in carryover storage behind Trinity Dam combine to threaten Trinity River fish habitat and fish populations. While diversions to the CVP [Central Valley Project] from Trinity do not vary among the alternatives, failure to prevent diversion of water needed to provide adequate (cool) water temperatures in Trinity River leads inevitably to negative impacts. Timing an magnitude of diversions to CVP need to be altered within the planning models in order to mitigate impacts of climate change.	demands occur under the No Action Alternative and Alternatives 1 through 9. Therefore, the changes in conditions under the action alternatives as compared to the No Action Alternative indicate the changes due to the Action alternatives. Potential mitigation measures are presented for implementation of Alternatives 1 through 9. Changes under the No Action Alternative would not be mitigated as compared to the Existing Conditions, including changes due to climate change. For more information on mitigation measures please see Master Response 22. Please also see response to comment 1532-6. The amount of water DWR 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. 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 (FEIR/EIS Executive Summary). In addition to permitting constraints on daily operations of the SWP and CVP, DWR must maintain proper performance and bypass flows across fish screens when endangered and threatened fish species are present within the north Delta facilities area. The intake fish screens drive the overall size of the intake structure on the riverbank, and have been numbered and sized to permit water to flow through the screens within a predetermined flow regime set by California Department of Fish and Wildlife and NMFS fish screen criteria (BDCP Appendix 5B Section 3.B.3.3). 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. 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. Please see Master Response 28 for information on operational criteria.
1532	8	Coho salmon are included in the list of species found in Trinity River. However, the draft is silent on impacts to Coho, leading to piecemeal analysis of environmental impacts. This species is of particular significance to the Hoopa Valley Tribe, and is listed under the federal Endangered Species Act.	The species was originally not included in the list of covered species for the HCP because the Trinity Coho do not overlap well with the BDCP action area. Based on some preliminary physical modeling comparisons it was concluded that there would be no substantial changes in Trinity River flows and, therefore, no need to include SONCC coho in the analysis. Other species in the Trinity (e.g., lamprey) are analyzed in the EIR because they are also found in the Plan Area. See chapter 11 of the Final EIR/EIS describing the project's potential impacts on covered and non-covered fish and aquatic species. Regarding compliance with the Endangered Species Act, please see Master Response 29. For information on how the lead agencies analyzed the project as a whole please see Master Response 8.
1532	9	In regards to Pacific lamprey, it is worthy of note that thee do not home on their natal streams and as such impacts throughout the zone of analysis exert influence on stocks of Pacific lamprey harvested by the [Hoopa Valley] Tribe. A comprehensive analysis of	Please see chapter 11 of the Final EIR/EIS describing the project's potential impacts on covered and non-covered fish and aquatic species, including the Pacific Lamprey.

DEIRS Ltr#	Cmt#	Comment	Response
		impacts throughout Central Valley Project streams and rivers is essential to full disclosure.	
1532	10	11.0.1.1 Coho salmon not listed among species for which impacts are analyzed in this chapter. The ESA [Endangered Species Act] listed Southern Oregon Northern California Coho inhabit the Trinity River downstream from CVP [Central Valley Project] facilities (Trinity River Division's Trinity and Lewiston dams).	Please see response to comment 1532-8.
1532	11	Page 11-35. Discussion of Alternative 2a describes "Flow reductions on several waterways, including … Trinity … when compared to Existing Conditions, could affect lamprey rearing and migration habitat, although the differences would also not be significant or adverse." There is not description s to how flow reductions affecting lamprey habitat have been judged as neither significant nor adverse.	The section referenced in the comment is only a summary. For a full description of effects, see Section 11.3.4.5 Alternative 2A of Chapter 11 of the 2013 Draft EIR/EIS.
1532	12	Page 11-46. Discussion of Alternative 3 describes "Flows generally improve and are beneficial in the Trinity River…l". We do not see the accompanying analysis, only this conclusion.	The text has been modified to better reflect model outputs. Please refer to Chapter 11 of the Final EIR/EIS Section 11.3.4.8, Alternative 3—Dual Conveyance with Pipeline/Tunnel and Intakes 1 and 2 (6,000 cfs; Operational Scenario A), for information about effects of Alternative 3 on fish and aquatic species and Appendix 11C, CALSIM II Model Results Utilized in the Fish Analysis, Section 11C.3, Alternative 3, for CALSIM model output summaries for the Trinity River and elsewhere.
1532	13	Page 11-59. Discussion of Alternative 5 describes "substantial" impacts to Trinity River lamprey as not significant as they are primarily the result of climate change and future water demand, and therefore not attributable to effects of alternatives. This statement would apply equally to all alternatives under analysis, but we do not see this statement in all sections (i.e., in discussion of effects of each alternative.)	The text of the Final EIR/EIS has been updated to include this statement in applicable sections.
1532	14	We believe that the reason the modeling of flows in the Trinity show demand-related reductions has to do with improper weighting/model logic. The model "sees" minimum flow requirements in Trinity River as equivalent in weight to other minimum flow requirements, and as such reducible in the face of demand. However, Trinity flows re protected by the Record of Decision signed jointly by the Hoopa Valley Tribe and Secretary of Interior in 2000. The effect of the ROD [Record of Decision] is to quantify flow requirements under federal law. Trinity minimum flow requirements stand as superior to minimum flows established for other CVP-impacted streams and rivers. The modeling employed by the EIS/EIR (CALSIM II) is blind to this distinction; a simple adjustment to the model, requiring release of ROD volumes whenever physically available is in order.	The CALSIM II model prioritizes all monthly minimum flow requirements, including those on the Trinity River, over CVP water demands. The only time that minimum flows are not met is when the reservoirs are in "dead pool" conditions. Trinity Lake experiences dead-pool conditions in drier years due to climate change conditions with or without the action alternatives. Please see Master Response 30 for more information on modeling. Also see response to comment 1532-1 and response to comment 1532-6.
1532	15	Page 11-99. "Trinity River" description includes the recreational fishery "major recreational activity on the Trinity River throughout the year" but makes no mention at all of tribal harvest. The Hoopa Valley Tribe holds a fully-vested property right to its share of harvestable surpluses, and authorizes each year harvest of fish by tribal members. Failure to acknowledge the tribal fishery and the Federal Governments' trust duty to protect the fishery illustrates a fundamental shortcoming.	Please see Chapter 11, section 11.1.1.2, of the Final EIR/EIS for information on the Trinity River Salmon and Steelhead Hatchery management. As mentioned in this section, this hatchery is co-managed by Reclamation, CDFW, the Hoopa Valley Tribe, and the Yurok Tribe. Harvest and hatchery management is also discussed in section 11.1.5.4.
1532	16	Page 11-99. The name "Clair Engle Lake" is no longer in use, having been officially dropped in favor of "Trinity Lake" some years ago.	The Final EIR/EIS has been revised to reflect the correct name of the lake. Please see Chapter 11, section 11.1.1.2, of the Final EIR/EIS.
1532	17	Page 11-100. Description of changes in habitat consequent to construction and operation of Trinity River Dam fails to include changes in abundance and distribution of large wood within the channel and floodplain.	Text has been added to the document to reflect the comment. Please see Chapter 11, section 11.1.1.2, of the Final EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
1532	18	Page 11-100. "Harvest and Hatchery Management" fails to describe harvest management under federal, state and tribal authorities. Also fails to describe TRH hatchery Co-Management Memorandum of Agreement, detailing tribal role in operations alongside federal and state partners.	Text added to document to reflect the comment. Please see Chapter 11, section 11.1.1.2, of the Final EIR/EIS.
1532	19	Pages 11-578 to 579. Analysis of water temperature-related effects of Alternative 1a on Pacific lamprey ammocoetes describes exposure to temperatures above 71.6 degrees F "in the Trinity River at Lewiston". Such temperatures are in violation of established regulatory requirements. Also, the analysis indicates "increased stranding risk" for lamprey redds in Trinity River. Such effects could only be seen if operations were to vary outside established legal requirements. Together these highlight essential problems within the CALSIM II model, which fails to align with requirements under the Record of Decision of 2000 and federal Endangered Species Act.	The document acknowledges that CALSIM II is a long-term comparative planning tool with some uncertainty in some outputs at a fine scale. The model does include all regulatory requirements. CALSIM II optimizes operations to best meet these various requirements throughout the system. However, future climate change will challenge the ability of the model to meet these requirements. Despite its limitations, CALSIM II has been identified as the best available tool for the purposes of the effects analysis. For more information on modeling, please see Master Response 30. Also see response to comment 1532-1 and response to comment 1532-6. For information on compliance with the Endangered Species Act, please see Master Response 29.
1532	20	Page 11-682, Table 11-1A-102 shows increased incidence of sub-floor carryover (750taf) at Trinity Reservoir. Simulation of years 1922-2003 shows 11 for existing conditions rising to 19 for Alt 1 LLT, and 16 for NAA. We find this information does not square wit h the analysis shown in Appendix 29C at page 29C-6 where water temperature exceedences below Lewiston Dam are analyzed as not likely to exceed water temperature criteria for summer periods or during October/November spawning. Reclamation's own analyses predict temperature exceedences will be more frequent when carryover drops below 1705taf, or perhaps 1,000taf.	A difference of 16 to 19 in 82 years between the NAA and Alt 1A is relatively small and would not constitute an adverse effect. Further, relative to Existing Conditions, the value is fairly small and includes the effects of climate change. When climate change is accounted for, this would result in a less than significant effect. Further, the effects of reservoir levels/releases and water temperature are dependent on time of year. There are times of year (i.e., late fall and winter months like November) when water temperature is not affected by reservoir releases. For more information on modeling, please see Master Response 30 and Appendix 5A of the Final EIR/EIS.
1532	21	Page 5A.2.0-2. The analysis shows at Figure 5.A.2.5-6 violations of established Trinity River water temperature criteria in 17 of the 40 years modeled. Spring Chinook spawners are the fish most threatened by these late-September through early-October violations.	The content of this figure is baseline conditions. Please see Chapter 11 for information on fish and aquatic resources. For more information on modeling, please see Master Response 30.
1532	22	Page 5A2-22. "Water temperatures in rivers below the CVP and SWP reservoirs are expected to increase and exceed water temperature criteria, except in the Trinity River." This conclusion is at odds with discussion of modeling output for years with Trinity Reservoir storage below 1Maf.	For updated river temperature and reservoir storage modeling data for the new preferred alternative, 4A, please see Chapters 11 (Fish and Aquatic Resources) and 5 (Water Supply) in the FEIR/EIS. As shown in Section 11D.10.6, Trinity River temperatures below Lewiston Reservoir would be similar or slightly higher under the No Action Alternative (NAA) (NEPA baseline with climate change assumptions) in the early-long term (ELT) compared to Existing Conditions (no climate change assumptions). Table C-40-1 in Appendix 5A indicates similar to slightly decreased Trinity Lake storage levels (long-term average) in the NAA ELT compared to Existing Conditions, which is consistent with the modeled differences in water temperatures between the NAA and Existing Conditions.
1532	23	Page 5A.2-47. "It therefore does not appear likely that the simulated increase in average air temperature of 2 degrees F would be sufficient to cause the Trinity River temperatures to exceed the water temperature criteria for summer rearing or fall-run Chinook salmon spawning in October and November." This analysis ignores Spring Chinook in Trinity River, which hold from July through September each year and then commence active spawning by mid-September.	This comment is from the BDCP climate change appendix. The section the text was pulled from discusses potential changes due to climate change (scenarios EBC2_ELT (2025) and EBC2_LLT (2060); EBC=existing biological conditions) and not the BDCP or alternatives. Thus, this comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 Draft EIR/EIS.
1532	24	Page 5A.2-52. Figure 5A.2.5-6. Reclamation Temperature Model-Simulated Lewiston Dam Release Temperatures for the EBC2 Climate Change Cases for WY 1963-2003. Figures show multiple Lewiston release excursions above 55 degrees for late long-term condition. We are very concerned at these projected impacts, which are associated with descent into and recovery from dry period, with Trinity storage dropping into sub-1Maf levels. Rules	The conditions described in this comment occur under the No Action Alternative and the action alternatives due to climate change. 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

DEIRS Ltr#	Cmt#	Comment	Response
		internal to CALSIM model should align with legal requirements to protect Trinity River water temperatures; this would most likely lead to reductions in diversions to CVP during onset of dry periods, as greater carryover storage would be needed to maintain the cold-water pool for downstream temperature control.	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 proposed project operations do not require the reoperation of Shasta, Trinity, or Folsom Reservoirs or any San Joaquin River and tributaries water storage facilities. All of the existing reservoir operation criteria will be met with the same frequency as conditions without the proposed project. However, some changes in the seasonal release patterns at Oroville would occur under the proposed project, primarily related to increased spring releases and reduced summer releases. However, this change in reservoir storage release patterns does not affect long-term storage and as with the other reservoirs, does not conflict with existing applicable operational criteria. RDEIR/SDEIS Appendix A Chapter 6 (Surface Water) describes waters of the Sacramento River and the San Joaquin River basins, including the Delta and Suisun Marsh, that could be directly or indirectly affected by SWP and CVP operations and environmental commitments identified in the project Alternatives. Appendix A Chapter 8, Water Quality, describes effects on surface water quality in the Sacramento and San Joaquin River basins. For more information on storage, please see Master Response 37. For information on operational criteria, please see Master Response 28. Adaptive management and monitoring is discussed in Master Response 33.
1532	25	Appendix 11C. CALSIM Modeling used in Analysis of Fisheries Impacts. The analysis shows an abundance of impacts to Trinity River flows below Lewiston including flow reductions under Below Normal, Dry and Critical water supply conditions. In some instances, such as the A5_LLT scenario, flow depletions occur even in the Above Normal water supply condition. Such results illustrate how CALSIM model logic fails to align with the legal requirement -- to provide for Trinity in-basin fishery needs at the expense of trans-basin diversions, even under conditions of high demand within CVP. The CALSIM-based analyses provide a foundation unsuitable for interpreting impacts to tribal fishery assets held in trust by the United States.	See response to comment 1532-24. Please also see response to comments 1532-1, 1531-6, 1532-14, and 1532-19.
1532	26	Appendix 29. Climate Change and the Effects of Reservoir Operations on Water Temperatures in the Study Area. Page 29C-3. Discussion of Trinity River summer temperature objectives (60 degrees F) within text referring to rearing for steelhead and Chinook is misleading. Instead, adult spring Chinook holding below Lewiston Dam are the priority for maintenance of temperatures at this level in summertime. Page 29C-5. Discussion of warming in Lewiston Reservoir of water released from Trinity Dam is inaccurate. The statement "Because the Trinity River flow is controlled at 300 cfs in most months..." is off. During the summer period, flows are controlled at a minimum of 450cfs.	Please see response to comment 1532-14 for discussion of proposed project modeling effort and response to comment 1532-7 for discussion of climate change. The statement regarding Trinity River flow is accurate since Trinity River flow is controlled at 300 cfs from mid-October to late April. For more information on climate change and the proposed project, please see Master Response 19.
1533	1	Many years and hundreds of millions of dollars have been spent on study efforts while the Delta system continues to be used for water conveyance in a manner for which it was not intended. The longer it takes to begin the resolution, the more expensive it will become. This stalemate has been punctuated by droughts, floods, economic losses, environmental degradation and litigation every decade since the construction of the SWP in the 1960s. We can no longer delay action in the Delta, and urge the State and federal government to quickly move forward with the Preferred Alternative. Failing to act and move forward is not	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		an acceptable alternative.	
1533	2	In recent years the endangered species Biological Opinions for protection of Delta and Longfin Smelt and Chinook Salmon have resulted in massive cutbacks in exports by over 1.5 million acre-feet per year and without the BDCP further cuts of another 1.0 million acre-feet per year could occur with new endangered species listings according to the BDCP briefing documents. This situation is untenable and a solution must be found to stop this hemorrhaging of this critical foundational water supply to southern California. The BDCP is the best hope we have and it must be approved and implemented in a timely and cost-effective manner.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1533	3	Yorba Linda Water District strongly supports the BDCP Preferred Alternative (No. 4) and oppose the No Action Alternative: It is critical to the state's economy and environment that both the State and federal government expeditiously follow through with the decision for adopting and implementing the BDCP.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1533	4	Co-Equal Goals: The BDCP must be implemented in a manner consistent with the co-equal goals adopted by the State. Preferred Alternative (No. 4) is consistent with the Delta Reform Act of 2009's co-equal goals.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1533	5	New Facilities and In-Delta Operational Flexibility: The modernization of the Delta conveyance system is essential in order for habitat restoration and conservation to have its intended effect; Preferred Alternative (No. 4), which incorporates the 9,000 cubic feet per second (cfs) three intake, twin tunnel conveyance system, provides the best balance between operational flexibility and modernizing the conveyance system for environmental benefit and water supply reliability.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1533	6	Reduced Future Reliance: The 2009 Delta legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent "self-reliant." While our major efforts in these areas will continue, it is important to note that "reduced reliance" does not equate to and was never intended to require a move to 100 percent "self-reliance" and the notion of co-equal goals was never intended to result in a future with significant reduction in exports from levels achieved before the 2008 bio- opinions.	The efforts completed by Yorba Linda Water District are supportive of the action alternatives and included in the Existing Conditions, No Action Alternative, and Cumulative Impact analysis assumptions. 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

DEIRS Ltr#	Cmt#	Comment	Response
			expand supply and storage (as described in Section 1.C.3 of Appendix 1C, Demand Management Measures).
1533	7	Plan Implementation and Regulatory Assurance: The BDCP must provide the needed implementation and regulatory structure and assurances to help achieve the co-equal goals. To the Yorba Linda Water District, this means that it is virtually impossible to predict the outcome of the BDCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS. Furthermore, this means that changed circumstances under the operation of the BDCP, including the potential for new species listing, be incorporated in such a manner to result in a minimum impact on future water supply exports.	The commenter notes that the effects of tidal habitat restoration are uncertain and cannot be relied upon to secure regulatory assurances. The 2013 Public Draft addresses this uncertainty in several ways: 1) by proving a robust and well-funded adaptive management and monitoring program that will monitor the progress of restoration and adjust its implementation if success criteria are not being met; 2) contingency funding to implement adaptive management actions that may go beyond initial cost estimates; and 3) clear research questions relevant to management and the funding to implement research programs to answer those questions. The combination of these elements of provide the assurances that the state and federal wildlife agencies need to issue regulatory assurances to the participating state and federal water agencies regarding the operational criteria of the state and federal water projects in the Delta. The BDCP covers 54 species, 27 of which are not listed. If these non-listed species become listed during the permit term, no additional conservation or mitigation would be required by the permittees. Note that the proposed alternative (Alternative 4A) no longer includes BDCP. The new regulatory process associated with Alternative 4A no longer includes No Surprises assurances.
1533	8	Sound Science. It is critical that sound science is provided in order to assure the long-term success of the BDCP. We strongly support the inclusion of independent scientific investigation and research to be included in the BDCP process.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1533	9	Cost Allocation: We support the "beneficiary pays principle" in cost allocation for all responsible parties and beneficiaries.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.

DEIRS Ltr#	Cmt#	Comment	Response
1533	10	Implementing Agreement: The Implementing Agreement is a contractual, legally-binding agreement that spells out the commitments and assurances as well as the terms and conditions for on-going implementation of the BDCP. Clarity in this agreement is essential as well as the balance in implementation of the co-equal goals.	This comment addresses the 2014 Draft Implementing Agreement (IA), a document detailing the roles and responsibilities of the various agencies under the BDCP (Alternative 4). For detailed responses on the primary issues being raised with regard to the IA, as well as a discussion of the current status of the IA, please see Master Response 5.
1533	11	Economy, Environment and Water Management: The SWP is critically important to the Orange County economy, environment and water management. Implementation of the BDCP is critical to Orange County's future. Orange County and Yorba Linda Water District have invested heavily to diversify our water portfolio but the SWP remains a critical source of low salinity water supply that is currently unacceptably jeopardized by the unsustainability of the current Bay-Delta system. Orange County relies on the SWP to support groundwater conjunctive use programs and water recycling programs - it is an essential part of our water reliability strategy that sustains our citizens and businesses.	The efforts completed by Orange County and Yorba Linda Water District are supportive of the action alternatives and included in the Existing Conditions, No Action Alternative, and Cumulative Impact analysis assumptions. 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.
1533	12	Yorba Linda Water District support the 9,000 cubic feet per second twin tunnel Preferred Alternative (No. 4) provided reasonable assurances are included regarding governance and future decision-making in the process. We strongly advocate for a seat at the table for the water Permittees in the various oversight groups. The investment and decision-making must be structured to achieve a positive outcome for both the SWP and Permittees and the ecosystem restoration in a collaborative, partnership manner.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1533	13	It is now time for the State and Federal government to adopt and move the BDCP to implementation in order that we can achieve the 2009 legislation's co-equal goals of improving water supply reliability and ecosystem restoration and improved function by implementing the BDCP Preferred Alternative (No. 4).	The comment does not raise any environmental issue related to the 2013 DEIR/EIS.
1534	1	I urge you, protect the Sacramento-San Joaquin Delta: deny the Twin Tunnels permit. The Delta is a resource for all of the citizens of California; the fish and the wildlife that the Delta supports are everyone's heritage.	The Lead Agencies acknowledge your opposition to the proposed project; however, the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. 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. 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 documentation.
1534	2	The Twin Tunnels permit will enable devastating and irreparable damage to the environment for the wildlife the Delta supports, including salmonid fish Chinook and Steelhead Trout, and Sturgeon, local and migratory birds and other wildlife.	The commenter's opinion is acknowledged and does not request specific changes to the fish and wildlife analyses contained in Chapters 11 and 12 of the Draft EIR/EIS. No technical changes to the document have been prepared in response to the comment. The Plan provides for implementing conservation actions that

DEIRS Ltr#	Cmt#	Comment	Response
			are intended to improve ecological conditions for Delta species.
1534	3	The proposed tunnels would greatly reduce water flow throughout the delta: wildlife cannot survive the drought. Without the water the fishes will not survive. Other aquatic species too -- will just die. Wildlife that relies on these species will either never be born, or die also. Because the drought is long-term, the proposal is to create mass-death in the Delta - cutting populations at what will be all-time lows and/or extinctions if this tunnel proposal is implemented.	Each of the action alternatives in the EIR/EIS was developed with different criteria for Delta outflow, instream Delta flows, and limitations on Delta exports at the northern and southern Delta intakes. To improve Delta habitat conditions, Alternatives 1, 2, 3, 4, 6, 7, and 8 evaluated in the EIR/EIS decrease monthly 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 winter months when the river flows are high. For example, long-term average flows in the Sacramento River flows at Freeport under Alternative 4H4 could be up to 3 percent higher in June and 5 percent lower in January as compared to the No Action Alternative (as shown in Table C-20.20 of Appendix 5A, Section C, EIR/EIS). Overall, the average annual Delta exports are less in Alternatives 2, 4 (H2, H3, H4), and 5 through 9 than under Existing Conditions, as shown in Figure 5-17 of Chapter 5, Water Supply, of the EIR/EIS. 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.
1534	4	This water is for everyone -- not just a few big businesses.	No issues related to the adequacy of the environmental impact analysis in the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS were raised.
1534	5	If the argument is made that this water grab in the form of the Twin Tunnels permit is for growing food to sell just -- well, it does not hold water. Why? Because without this precious irreplaceable and defenseless wildlife -- fish and all the other species -- the Delta and the heritage for current and future California residents -- is forever destroyed. These animals will just die -- so quickly -- we will not be able to save the massive amounts of wildlife that Big Agriculture and Water Contractors are proposing to kill with their Twin Tunnels permit request.	The commenter's opinion related to the project is acknowledged. The Plan provides for implementing conservation actions that are intended to improve ecological conditions for Delta species.
1534	6	This is not a temporary or transient 1- or 5-year drought. This is here to stay, and it is going to get worse. This drought is historic, and we are only at the beginning. According to the Union of Concerned Scientists, the entire American West will become dryer and dryer over the coming decades -- so that it is more like Australia, and less like an irrigated dessert. Get the details here: http://www.ucsusa.org/news/press_release/ca-drought-emergency-0388.html	The water supply analysis in the EIR/EIS was conducted using numerical modeling analyses that calculates annual SWP and CVP water allocations for the 82-years of hydrology analyzed in the model simulation. This hydrologic period includes extreme dry periods including 1927 through 1934, 1976 and 1977, and 1987 through 1992. The analysis projects changes in SWP and CVP water allocations.
1535	1	I am providing my feedback and opinion on the BDCP and the tunnel project. I am very concerned that the diversion of water from the North Delta via the proposed tunnels will have a negative effect on the wildlife and water quality downstream.	The preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. The commenter is referred to the following Master Responses: 3 (Purpose and Need), 5 (Overview of Restoration and Enhancement Activities), 5(Compliance with ESA), 34 (Beneficial Use of Water), 14 (Water Quality), 17 (Biological Resources).
1535	2	I am also concerned that property owners will be obligated to pay for this expensive project without putting the project to a public vote. This tunnel project is a fiasco. We need to explore all other options for providing water to central and southern California before we	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

DEIRS Ltr#	Cmt#	Comment	Response
		simply decide to build tunnels that will forever change the salinity in the Sacramento Delta.	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. This comment does not raise an environmental impact requiring a response. The water agencies benefitting from any new facilities will be responsible for the costs of those facilities. For more detailed information on implementation costs and funding sources please see Ch. 8, BDCP and Master Response 5, BDCP. For further information on the purpose and need of the project, please see Master Response 3. With regards to water quality, please see Master Response 14.
1535	3	How did we get from determining whether this is even the right course of action, all the way to funding this project. Let's step back to the analysis of what we are trying to achieve and if that still makes sense, the best way to address Southern California's water needs. Forever altering the saline level in the Sacramento Delta may not be the best course of action. Thirsty Southern California may need to look at other options. With $20 to $25 billion to spend on the problem, how about putting it towards desalination of ocean water? Coming up with a viable product could help may thirsty people around the globe, not just Southern California.	Please see Master Response 6 regarding desalination as an option that could replace the proposed project. Please also see Master Response 4 regarding the alternatives development process and why alternatives that did not include the water conveyance facility were not included.
1536	1	This project is absolutely ridiculous. Save the Delta! Stop the tunnels! I believe that the BDCP should include, and I would support, an alternative that significantly reduces Delta exports and focuses instead on restoring habitat and threatened and endangered species in the Delta, improves Delta water quality by providing sufficient fresh water inflow from both the Sacramento and San Joaquin Rivers, and that includes a pragmatic plan to sustainably meeting California's water needs. This can be done by increasing agricultural and urban water use efficiency, capturing and treating storm water, recycling urban waste water, cleaning up polluted groundwater, and reducing irrigation of desert lands in the southern Central Valley with severe drainage problems. We do not need to build more dams or tunnels.	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. 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 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. 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. 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 1C, Water Demand Management, 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. Please see Master Response 4 regarding the selection of alternatives analyzed, and Master Response 6 regarding demand management. For more information regarding purpose and need please see Master

DEIRS Ltr#	Cmt#	Comment	Response
			Response 3.
1538	1	It is evident to Recreational Boaters of California from review of the BDCP that implementation of the proposed actions and measures set forth in the plan and EIR/EIS will result in major short-term and long-term alternations and impacts to existing Delta waterways utilized by all types and sizes of recreational boats. Depending upon which actions and measures are implemented, there will be adverse impacts that constrain and in many instances even prohibit recreational boaters accessing and utilizing existing Delta waterways. This includes not only adverse impacts during the estimated decade-long construction period but thereafter as well depending upon which action measures and/or alternatives or segments of any are implemented at any time. The plan in many ways results in irreversible changes to the Delta itself as well as to access and enjoyment of Delta waterways relevant to recreational boating and marinas and boat ramps visited by boaters and the general public. Unless mitigated to RBOC's satisfaction, the actions by BDCP and EIR/EIS to modify any Delta waterway is opposed by RBOC. The BDCP needs to fully mitigate-for and to guarantee assurances-of reliable access to all Delta waterways proposed to be altered in any manner under the plan. This must include, for example, constructing boat locks wherever Delta waterways are proposed to have any barriers or gates - whether short-term or long-term - and that all boat locks be constructed and operated at no cost or charge to recreational boaters. RBOC's position is based upon the fact that the burden of producing a comprehensible HCP under federal law, supporting analysis and funding rests not on recreational boaters that navigate Delta waterways but that it is an obligation that rests solely upon the BDCP project proponents. The BDCP and EIR/ EIS also are intended to serve as a NCCP under California law. In this regard, again RBOC asserts its objections to the BDCP and EIR/ EIS as the plan fails to meet the provisions of NCCP.	Please note that 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. The BDCP (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. Waterways will still be navigable during construction and operation of the BDCP. The proposed project would result in temporary impacts to boaters and on-water recreationists. However, the project includes plans to reduce those impacts as much as possible. 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 criteria: • 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
1538	2	The BDCP states that it will need authorizations of the Rivers and Harbors Act of 1899 (RHA) to perform many of its proposed actions to alter existing Delta waterways. The RHA requires authorization from Congress or the California state Legislature, and in addition to that of the U.S. Corps of Engineers in certain cases. The BDCP is defective as it does not specify when or how such authorization will occur and leaves to speculation whether it can attain necessary authorizations and permits for what it proposes to construct (in as much as the plan has such a wide variety of alternative measures and actions with no known specificity of outcomes).	The potential need for permits for each of the EIR/EIS alternatives is discussed in Section 3.6 of Chapter 3, Description of Alternatives, in the EIR/EIS. Permit applications would not be prepared until comments on the Draft EIR/EIS have been reviewed, and a preferred alternative verified. As described in Chapter 3, some of permit information is required by Reclamation (the Federal Lead Agency on the EIS) prior to completion of the Record of Decision, including permits from the U.S. Army Corps of Engineers under the Rivers and Harbors Act.
1538	3	The BDCP's effects on Delta flows and water levels: Changes in Delta flow and water levels as proposed in the plan have the potential to have a very significant and highly negative impact upon boats, marinas and boat ramps and other access point to the waters of the Delta. No analysis appears to exist in the BDCP or EIR/ EIS as to operational impacts and the mitigations for having altered and reduced Delta water levels. Thus no analysis exists as to the severity this impact will have upon recreational boating, marinas and other water-based recreational uses of the Delta. Also, it is clear that if there are reduced water levels in the Delta this will also - from time to time - occur and have negative impact upon marinas and	Operations of Alternative 4 and the new preferred alternative, 4A, 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, for more information. Section C.29 reports changes in the monthly averaged daily minimum elevation of the Sacramento River at Freeport (see tables beginning on page 5A-C1106). 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

DEIRS Ltr#	Cmt#	Comment	Response
		boats and access points along the Sacramento River and American River.	within the Delta. For the full modeling simulation period, the proposed BDCP (Alternative 4) would result in one month during which average daily minimum water elevation would be lower when compared to Existing Conditions. Depending on the operational scenario selected, results indicate that daily minimum water surface elevations would be 0.3 feet or 0.4 feet lower on average during the month of March. However, during other months, the average daily minimum water surface elevation would increase when compared with Existing Conditions. For example, average daily minimum water elevations in September would increase by 0.9 to 1.3 feet under the proposed BDCP, depending on which operational scenario was selected. Throughout the action alternatives, changes follow roughly the same pattern when compared with Existing Conditions. The greatest decrease in monthly average daily minimum water elevation at Freeport would be 0.7 feet (reported for March under Alternatives 6A, 6B, and 6C), while the greatest increase would be 1.4 feet (reported for October under Alternatives 1A, 1B, 1C, and 3).
1538	4	[From Att 1:] Protect the rights of recreational boaters to assure access for continued navigation by recreational boats in the waters of the California Delta wherever any "control structure" (such as, but not limited to gates or barriers whether temporary or permanent) is planned for placement across a navigable Delta waterway.	See response to comment 1538-1.
1538	5	[From Att 1:] As any changes are contemplated which further alter Delta navigable waterways that alternatives are identified and implemented to the satisfaction of boaters that will best preserve and sustain recreational boat passage at each location .	See response to comment 1538-1.
1538	6	[From Att 1:] Have operable boat locks installed as an integral design component to mitigate the placement of any control structure across any navigable Delta waterway. All control structures and boat locks or other alternatives satisfactory to boaters for recreational boat passage are to be installed, maintained and operated without cost or expense to recreational boaters.	It is not anticipated that construction of control structures would impact on-water recreationists. In the proposed project, control structures would be located in waterways where boats are not allowed. Boat locks would be used in Alternatives 2A, 2B, 2C, 4, and 9. Boating access would be restored once construction is complete. 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. Mitigation Measure REC-13b.
1538	7	[From Att 1:] There are proposals in the DRAFT Consultant Administrative Draft EIR/EIS ("draft") that would upset the delicate balance that enables the Delta to be a vigorous recreational opportunity of statewide and national significance . These impacts are not adequately addressed by either mitigations or other plans set forth in the draft. Negative impacts would occur in the immediate construction phase,as well as in the post-construction phase.	The proposed project aims to allow the federal and state water projects to deliver more reliable water supplies, in a way that is less harmful to fish. In the process, recreationists would still notice impacts from the project. However, the proposed project does include mitigation measures to reduce impacts on Delta recreationists as much as is feasible. These include developing and implementing site-specific construction traffic management plans for marine navigation; installing visual barriers between construction work areas and sensitive receptors; applying aesthetic design treatments to all structures; and employing noise-reducing construction practices. Many of these details can be found on p. 15-263 of the 2013 Public Draft BDCP EIR/EIS. Additionally, Appendix 3B, Environmental Commitments, describes how the proposed project will develop and implement a noise abatement plan. The proposed project would include environmental commitments to prevent water quality effects, including environmental training; implementation of stormwater pollution prevention plans, erosion and sediment control plans, hazardous materials management plans, and spill prevention, containment, and countermeasure plans; disposal of spoils, RTM, and dredged material; and a barge operations plan (Appendix 3B, Environmental Commitments).
1538	8	[From Att 1:] It is important to recognize that boat owners with boats at marinas pay property taxes, both recreational boaters and marina owners have a direct and mutually vested interest in the impacts and the mitigations upon Delta recreation - and especially so	The Lead Agencies acknowledge that boat owners and marina operators pay property taxes and generate revenues to the state government and to local agencies, and that recreation is an important economic activity in the Delta.

DEIRS Ltr#	Cmt#	Comment	Response
		relevant to whichever BDCP alternative is selected. In addition, Recreational Boaters Club of California concerns with the draft with regard to recreational boating and access to Delta waterways extends to alternative 4 both during its construction and thereafter.	Please note that effects on marinas and recreational boating in the Delta, and mitigation for identified effects, under Alternative 4 are discussed in Chapter 15, Recreation, EIR/EIS under Impact REC-2: Result in long-term reduction of recreation opportunities and experiences as a result of constructing the proposed water conveyance facilities; Impact REC-3: Result in long-term reduction of recreational navigation opportunities as a result of constructing the proposed water conveyance facilities; Impact REC-7: Result in long-term reduction in water-based recreation opportunities as a result of maintenance of the proposed water conveyance facilities; and Impact REC-10: Result in long-term reduction in boating-related recreation opportunities as a result of implementing the proposed conservation components.
1538	9	[From Att 1:] The negative impacts of the currently available Draft Consultant Administrative DEIR/DEIS include a significant reduction in the extent of navigable waterways available to boaters, as well as a permanent alteration of boat navigation, including but not limited to: Barriers - at Consumes River Preserve, Boathouse Marina, Landing 63,Deckhand's Marina Supply, Walnut Grove Dock, Boon Dox Dock, Dagmar's Landing, Brannan Island State Recreation Area, Sherman Island, and Bullfrog Landing Marina. Gates - at Mokelumne River, Snodgrass Slough, Georgiana Slough, Connection Slough, Railroad Cut, Woodward Canal, Fisherman's Cut, Old River, Meadow Slough, Victoria Canal and Three Mile Slough. Fish screens without boat passage - at Boathouse Marina, Walnut Grove Public Guest Dock, Boon Dox guest dock, Delta Cross Channel, San Joaquin River, Middle River, Victoria Canal \ North Canal, and Old River. Lock - on Old River. These are in addition to the temporary construction effects that will detrimentally impact recreational boating including: temporary channel closures, fish screens, gates, cofferdams, large waterborne equipment including cranes, piers or temporary barge unloading facilities, boat passage obstructions, siphons, congestion, channel modifications, dredging activities, reduced speed limits and traffic delays [see Att 8].	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. However, 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. For operable gate sites, construction would be phased, allowing for at least half of the waterway to remain open at any one time. In this way, use of the waterway for recreational navigation would be allowed to continue during construction. Barge routes and landing sites will be selected by the construction contractor and will be expected to comply with the following criteria: • 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
1538	10	Based on the recent experiences with major state construction projects, the draft's projected duration, costs and impacts can reasonably be expected to be overly optimistic and to grossly understate the real timeframe, costs and impacts that will be realized.	The estimated cost for the BDCP includes a 35 percent contingency which is above the industry standard of 25-30%. Numerous studies have been conducted, some by state agencies and others by outside entities, which have concluded that the proposed project is affordable for ratepayers and agricultural users. More information about the estimated costs of the proposed project and how the proposed project would be funded is provided in Master Response 5.
1538	11	[From Att 1] There are optimistic statements in the draft that Conservation Measures, once implemented, could benefit recreational boating by expanding the extent of navigable waterways available to boaters. This statement is speculative and does not provide adequate mitigation to the negative impacts set forth in the draft.	Mitigation, whenever and wherever possible, has been included in the document to lessen impacts, as much as is feasible. 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.
1538	12	[From Att 1] From the provisions set forth in the draft, it is clear that the BDCP will have a severely detrimental effect on the navigable waters of the United States and recreational boating in particular in the Delta. The boating experience will become unpleasant, difficult, and in some instances dangerous to boaters in the Delta. Barriers to access (even with	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. However, 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

DEIRS Ltr#	Cmt#	Comment	Response
		locks), the effects offish screens, siphons, dredging, and moving channels will be detrimental to boating. The presence of working heavy duty equipment and barges during construction will be a dangerous, noisy and dirty annoyance to the recreational enjoyment of boaters.	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. For operable gate sites, construction would be phased, allowing for at least half of the waterway to remain open at any one time. In this way, use of the waterway for recreational navigation would be allowed to continue during construction. Barge routes and landing sites will be selected by the construction contractor and will be expected to comply with the following criteria: • 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 In addition, Appendix E, Section E.3.3 of RDEIR/SDEIS includes a detailed assessment of impacts on navigation during construction and operation of the preferred alternative.
1538	13	[From Att 1] The draft's provisions will adversely affect the public's right to use waterways, which is an important entitlement that is recognized in the United States Constitution, the California State Constitution, the California Public Trust Doctrine, as well as our state's laws set forth in the Public Resources Code, Civil Code, Harbors and Navigation Code and well-established case law .	Any channel closures would be partial and/or temporary. The proposed project would result in temporary impacts to boaters and on-water recreationists. However, the project includes plans to reduce those impacts as much as possible. 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. In addition, Appendix E, Section E.3.3 of RDEIR/SDEIS includes a detailed assessment of impacts on navigation during construction and operation of the preferred alternative.
1538	14	[From Att 1] Cumulatively, these BDCP construction and operational impacts will essentially destroy the unique and enjoyable recreational boating experience as it has been enjoyed in the past in the Delta.	The proposed project aims to allow the federal and state water projects to deliver more reliable water supplies, in a way less harmful to fish. In the process, on-water recreationists would still notice mostly temporary impacts from the project. However, the proposed project does include mitigation measures to reduce impacts on Delta recreationists as much as possible. These include developing and implementing site-specific construction traffic management plans for marine navigation; installing visual barriers between construction work areas and sensitive receptors; applying aesthetic design treatments to all structures; and employing noise-reducing construction practices. Many of these details can be found on p. 15-263 of the 2013 Public Draft BDCP EIR/EIS. Additionally, Appendix 3B, Environmental Commitments, describes how the proposed project will develop and implement a noise abatement plan. The proposed project would include environmental commitments to prevent water quality effects, including environmental training; implementation of stormwater pollution prevention plans, erosion and sediment control plans, hazardous materials management plans, and spill prevention, containment, and countermeasure plans; disposal of spoils, RTM, and dredged material; and a barge operations plan (Appendix 3B, Environmental Commitments).
1538	15	[From Att 1] The negative impact to Delta recreation and tourism will be significant .According to the 2012 Delta Protection Report "Economic Sustainability Plan for the	Additionally, DWR is revising the Socioeconomic Impact Analysis for the project based on changes included in the Recirculated Draft EIR/Supplemental Draft EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		Sacramento-San Joaquin Delta": Recreation is an integral part of the Delta economy, generating roughly 12 million visitor days of use annually and approximately $250 million dollars in visitor spending in the Delta each year. Of the roughly 12 million visitor days spent in the Delta each year, approximately 8 million days are for resource-related activities (e.g., boating and fishing), 2 million days are for right-of-way related and tourism activities (e.g., bicycling and driving for pleasure), and 2 million days are for urban parks-related activities (e.g., picnicking and organized sports). Boating and fishing have the biggest economic impact, and are estimated to generate nearly 80 percent of the recreation and tourism spending in the Delta, including significant expenditures on lodging, meals, supplies, marina services, and fuel. In addition to visitor spending, non-tr ip spending such as boat purchases and marina rentals are estimated at roughly $60 million annually for total recreation-related spending of $312 million annually in the Delta. As seen in Table A above, Delta recreation and tourism supports over 3,000 jobs in the five Delta counties. These jobs provide about $100 million in labor income and a total of $175 million in value added to the regional economy. Across all of California, Delta recreation and tourism supports over 5,300 jobs, and contributes about $353 million in value added. The 1,000 miles of Delta waterways are populated by 100 marinas and waterside resorts and 50 boat launching ramps. The probable decline of boating will have a severe economic impact. Marinas already have empty slips due to the economic downturn. Trailerable boats will likely be removed from marinas and larger boats will likely move to marinas outside the Delta or be sold. Boat repair and maintenance companies, restaurants and other businesses providing services to boaters would therefore decline or go out of business. Housing values will plummet, especially water front property homes. Because construction will take a long period of time (6-10 years or more), it is unlikely that the Delta economy would ever recover.	See Response to Comment 1538-1. For more information about recreational and socioeconomic impact issues, as related to Alternative 4A project evaluation, see Master Response 24. See also Chapters 15 and 16 of the final EIR/EIS.
1538	16	[Att 2] Figure M15-4: Index Recreation Facilities -Through Delta/Separate Corridors	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.
1538	17	[Att 3] Figure M15-4:Sheet 1 of 5 Recreation Facilities -Through Delta/Separate Corridors	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.
1538	18	[Att 4] Figure M15-4: Sheet 2 of 5 Recreation Facilities -Through Delta/Separate Corridors	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.
1538	19	[Att 5} Figure M15-4: Sheet 3 of 5 Recreation Facilities -Through Delta/Separate Corridors	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.
1538	20	[Att 6} Figure M15-4: Sheet 4 of 5 Recreation Facilities -Through Delta/Separate Corridors	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.
1538	21	[Att 7] Figure M15-4: Sheet 5 of 5 Recreation Facilities -Through Delta/Separate Corridors	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

DEIRS Ltr#	Cmt#	Comment	Response
			already addressed in comment referencing the attachment or the Final EIR/EIS.
1538	22	[Att 8] Examples of Boating Impacts DRAFT BDCP DELTA PLAN EIR - EIS Draft Chapter 15 - Recreation Alternative 9: Through Delta I Separate Corridors (p.415-452)	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.
1539	1	As the Executive Secretary of the Los Angeles/Orange Counties Building and Construction Trades Council, I represent 140,000 members within 50 affiliated local unions for 14 Trades. We strongly support the Bay Delta Conservation Plan (BDCP) and its goal of protecting the water supply that serves 26 million Californians, businesses and 3 million acres of farmland. This water supply is essential to the entire state, fueling jobs and our economy.	Please note that the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP. 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.
1539	2	Our Council (Los Angeles/Orange Counties Building and Construction Trades Council) represents unions that provide good, middle-class careers, with benefits and retirement security. We literally cannot get a construction project permitted without proving it has an adequate water supply. This is one of the many ways in which a water shortage has wide-ranging effects, not just in lawns that turn brown or restaurants not filling glasses. This shortage will attack and devastate the guts of our economy.	Please note that the employment effects of increased water supply reliability under the proposed project are addressed in Section 5.2.4, Employment Impacts of Water Reliability, Bay Delta Conservation Plan Statewide Economic Impact Report.
1539	3	The water that so many depend on moves through the Sacramento-San Joaquin Delta and is protected today only by a maze of 100-year-old levees that is vulnerable to failure. Experts say that when a major earthquake hits the Bay Area, those levees could collapse, allowing saltwater from the San Francisco Bay to contaminate freshwater. It could take up to a year to re-establish this water as a usable supply. Southern California would lose a third of its water supply.	This comment is consistent with Master Response 16, Appendix 6A, and Section 3E.2.6.2 of Appendix 3E, Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies, major failure of Delta levees could require up to 6 years to repair the levees and dewater the islands depending upon the number of levee failures. Following a levee failure, sea water from San Francisco Bay would rapidly flow into the inundated island. This would cause large volumes of seawater and/or brackish water to flow into the western Delta, which would cause water quality concerns for Delta water users as well as the SWP and CVP water users. Following repair of the levees, water from the SWP and CVP reservoirs would need to be released to flush brackish water from the Delta. The amount of water available to flush the Delta would depend upon the volume of water stored in the reservoirs, the extent of sea water intrusion into the interior Delta, and sea level rise. In the future with more extensive sea level rise, it will take longer to flush the Delta. During this time, pumping for the SWP and CVP facilities, and possibly Delta facilities would be reduced or eliminated to reduce sea water intrusion in the Delta. Therefore, it could be several years following a major seismic event with multiple levee failures before SWP and CVP water would be exported from the Delta.
1539	4	Building a modern water delivery system as proposed in the BDCP is essential. Construction of two tunnels that route a portion of water underneath, rather than through, the fragile Delta would protect water supplies in a seismic event.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. Please note that the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP.
1539	5	It's estimated the BDCP would create and protect more than 1 million jobs, including 155,000 in construction. The cost of BDCP, spread among water users from the Bay Area to San Diego, is roughly $5 per household per month phased in over the course of 10 years. It's an insurance policy worth buying. The price of inaction is even greater.	Please refer to Master Response 5 regarding costs and funding of the project.
1539	6	As we continue to face one of the worst droughts in our state's history, we need to ensure we are preparing for future generations. The local water supply projects being developed must be coupled with a solid statewide foundation. After eight years of development,	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.

DEIRS Ltr#	Cmt#	Comment	Response
		refinement and review, it's time to get BDCP across the finish line. We urge you to join us in supporting this important process.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1541	1	The Delta Conservancy was established by the Delta Reform Act of 2009 to be a lead agency for ecosystem restoration in the Delta and to support efforts that advance environmental protection and the economic wellbeing of Delta residents. In this capacity, we anticipate that we will be actively involved in the coordination and integration of the many ongoing and future restoration efforts in the Delta. Additionally, we anticipate that we will be the lead for some ecosystem restoration projects depending on funding availability. The Conservancy's Economic Development and Education and Outreach Programs are currently engaged in many projects that would intersect with proposed BDCP activities. The Board of the Conservancy was specifically designed to allow for local input in the governance of the organization and in project development, evaluation and funding decisions. This local input is invaluable in gaining local support and fostering a trusted and transparent long-term restoration effort. Moving forward, it is imperative that the State work with the Conservancy to develop projects in a manner that incorporates the local perspective. Further, it is vital that proposed conservation measures be compatible with Delta communities and agriculture. This will be critical for maintaining the viability of the region. Representatives to the Board from the Natural Resources Agency and the Department of Finance abstain from this action, and this letter in no way implies a recommendation or position from the Governor.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.
1541	2	Att 1: Delta Conservancy's Legislative Mandates and Initiatives	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.
1542	1	Before the close of the comment period Friends of the River will submit detailed comments on the Bay Delta Conservation Plan (BDCP) Draft Plan, Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Draft Implementing Agreement (IA). Our purpose here is to summarize several profoundly disturbing abuses of the BDCP National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and Endangered Species Act (ESA) processes being carried out by your agencies.	The comment indicates that detailed comments will be provided in the correspondence. Although commenter indicates concerns with the EIR/EIS, due to the lack of specificity in this comment, no additional response is made. Individual concerns will be addressed below.
1542	2	The BDCP Draft EIR/EIS alternatives chapter and Draft Plan alternatives- to- take chapter fail to include any real alternatives, let alone the required range of reasonable alternatives to the new water conveyance upstream from the already imperiled San Francisco Bay-Delta - the BDCP Water Tunnels. The Water Tunnels would divert enormous quantities of water from the Sacramento River near Clarksburg, California. As a result of this massive diversion, enormous quantities of water that presently flow through designated critical habitats in the Sacramento River and sloughs to and through the Bay-Delta would not reach the Delta. Flows would be reduced in the Sacramento River, sloughs and Delta to the detriment of listed and other fish species. All of the so-called project alternatives set forth in the Draft Plan and Draft EIR/EIS are simply different versions of the same project. They all create a capacity to divert more water by way of new conveyance upstream from the Delta. And they do so in the face of the Endangered Species Act (ESA) Section 7 command prohibiting federal agency actions that "result in the destruction or adverse modification of [critical] habitat of [listed] species." 16 U.S.C. [Section] 1536 (a)(2) The failure of the BDCP Drafts to include so much as one alternative reducing exports seems	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. See Master Response 5. 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, 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. For more information regarding alternatives development and screening please see Master Response 4. 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. For more information responses to reduced south of Delta water supplies, please see Appendix 5B of the

DEIRS Ltr#	Cmt#	Comment	Response
		at first blush astonishing. After all, a claimed purpose of the BDCP Plan is "Reducing the adverse effects on certain listed [fish] species due to diverting water." (BDCP Draft EIR/EIS Executive Summary, p. ES-10). As the National Academy of Sciences warned back in May 2011-- in commenting on an earlier version of the BDCP Plan-- "Scientific reasons for not considering alternative actions are not presented in the plan." (Report in Brief, p. 2, May 5, 2011). More than two years ago, the Environmental Water Caucus (EWC) (a coalition of over 30 organizations including Friends of the River) pointed out to the California Resources Agency Deputy Secretary: "The absence of a full range of alternatives, including an alternative which would reduce exports from the Delta. It is understandable that the exporters, who are driving the [BDCP] project, are not interested in this kind of alternative; however, in order to be a truly permissible project, an examination of a full range of alternatives, including ones that would reduce exports, needs to be included and needs to incorporate a public trust balancing of alternatives." (April 16, 2012, letter, p. 2). There has been a complete failure to develop and evaluate alternatives reducing diversions/exports including the EWC Reduced Exports Plan transmitted to the California Resources Agency in December 2012 as well as the more detailed Responsible Exports Plan developed in May 2013. In fact, this BDCP process ignoring and concealing obvious and direct alternatives that would reduce the "adverse effects on certain [listed] fish species due to diverting water" is not astonishing. It is a deliberate, bad faith, end run on the alternatives analysis requirements of NEPA, CEQA, and the ESA. The exporters have money, lobbyists and power. They are driving the project. They do not want the public including environmental organizations, Indian tribes, Northern California, and San Francisco Bay-Delta interests to have a BDCP alternative that they could support. This concealment and silencing of any alternatives that would reduce exports as opposed to all of the current BDCP alternatives that increase the capacity for exports is calculated to increase the likelihood of the BDCP proponents getting what they want. This bad faith omission of alternatives reducing exports skews the debate in favor of new conveyance and against reducing exports since no other alternatives are presented. The current BDCP Draft's omission of the range of reasonable alternatives required by law requires the preparation of a new Draft Plan and Draft EIR/EIS and a new public review period to attempt to cure this fatal flaw.	FEIR/EIS. Please see Master Response 4 regarding alternatives development and screening. Please also see Master Response 39, 40 and 41 regarding the lead agencies public review process, public outreach, transparency, and response to public comments.
1542	3	After the 40,000 pages of BDCP project advocacy called the Draft Plan and Draft EIR/EIS were released in December 2013 for public review and comment, the BDCP website was closed to the posting of comments and correspondence from the public. Consequently, an organization or individual attempting to wade through the 40,000 pages of self-interested project advocacy to spot the issues and figure out the truth is unable to learn from the comments and correspondence from other organizations and individuals who are not project proponents. The public's ability to be informed regarding this project including cons as well as claimed pros would have been facilitated by having access to comments and correspondence made by others during the review process. Instead, the BDCP agencies have done their very best to keep the public in the dark about issues spotted by those who are not project proponents. This blinding of the public to critical environmental information even extends to comments	Since 2006, DWR has sought to include as many voices into the planning process as possible and has demonstrated that commitment with an unprecedented level of public involvement. During the interim planning years (2009-2013) and although there is no specific requirement or guidance under state and federal environmental laws or policies to do so, meeting materials, meeting notes, meeting presentations, audio recordings of meetings, draft documents, and comment letters were made available to the public on the BDCP website. Many of the comments posted are critical of the BDCP. The opinion that the viewpoints were restricted by not providing comments and information for public and agency review is unfounded. More information on how DWR has developed the project in an open and transparent manner is provided in Master Response 41. More information about the public outreach conducted during the comment review periods for the DEIR/EIS and RDEIR/SDEIS is provided in Master Response 40.

DEIRS Ltr#	Cmt#	Comment	Response
		by sister agencies. Here are just a few of the many possible examples of comments from public agencies that the citizen using the BDCP website does not get to see. "The BDCP is based upon this misrepresentation: that a massive new twin tunnel system, which would greatly reduce the natural flow of water through the Delta, qualifies as a 'conservation' project to restore the Delta ecosystem and protect species already verging on extinction." (County of San Joaquin comments, p. 1, July 9, 2014). Another example is: "Chapter 8 of the current BDCP does not provide the detailed information necessary for potential participating agencies to evaluate individual agency cost-benefit (or feasibility) of the proposed project." (San Diego County Water Authority, p. 2, June 2, 2014). There is the June 24, 2014, comment letter from the Delta Stewardship Council. The public trying to understand the project is not informed that the State agency responsible for ultimately determining whether the BDCP is consistent with the Delta Plan has found that the BDCP EIR: should "Identify the water available for export and other beneficial uses under alternative flow criteria considered in the draft EIR/EIS" (Letter p. 1), "The benefits of tidal marsh restoration to delta smelt are likely overstated" (p. 2), "Water quality impacts are compared to SWRCB water quality objectives with little regard to specific water quality needs of aquatic species of concern" (Id.), "San Francisco Bay should be included in the scope of the analysis, especially for water quality" (p. 12), and so forth. This is a double attack on the truth and on informed public review of the proposed project. The BDCP agencies have refused, as shown above, to identify, develop, or consider in the Draft Plan and Draft EIR/EIS any alternatives that would reduce exports. At the same time, the agencies have also shut down the BDCP website to the posting of public comments and correspondence to prevent independent organizations and individuals from informing the public about alternatives and critical information that the exporters do not want the public to see. The government agencies would not be blinding themselves and the public to alternatives reducing exports while at the same time eliminating public comment and correspondence from the BDCP website if the agencies actually believed the BDCP proponents' claims about the asserted benefits of the project. The silencing of comments on the BDCP website is powerful evidence that the BDCP proponents are afraid of the facts and the truth. Friends of the River objects to approval of the BDCP and is in favor of reducing exports. That said, Friends of the River also believes in the American tradition of democracy and informed, indeed spirited, public debate of important and controversial issues. Because of that, we have been seeking and obtaining copies of BDCP comment letters under the Freedom of Information Act beginning in February 2014 and posting them on our website at www.friendsoftheriver.org/bdcpcomments . We have been posting all comment letters we have obtained regardless of whether the particular comments oppose or favor the Water Tunnels. The government agencies should be doing what we have been forced to do. That is the American way.	All formal comments received on the DEIR/EIS and RDEIR/SDEIS have been catalogued, evaluated, and responses incorporated into the Final EIR/EIS. All of the comments on the RDEIR/SDEIS were also made available on the project website. Comments received during the public review and other forms of public engagement resulted in changes to the preferred project (Alternative 4A is now the preferred alternative). The Final EIR/EIS has incorporated all public review comments and responses. See Master Response 42 for additional details on response to public comments. For comments pertaining to the size and complexity of the document, please refer to Master Response 38. For comments pertaining to the range of alternatives evaluated, please refer to Master Response 4.
1542	4	The only difference between the BDCP and this same Governor's "peripheral canal" that was rejected by a 2-1 statewide referendum vote in June 1982 is that the project proponents, their lobbyists, their lawyers, and their supporters inside the government have come up with the clever trick of calling this a "conservation" plan. That trick is Orwellian. War is not "peace," lies are not "truth," and a new water diversion is not "conservation." The same interests at work now succeeded in essentially destroying the San Joaquin River decades ago by constructing the Friant Dam and diverting most of the water south. As a result, a 60 mile	The proposed project is not the Peripheral Canal noted in the comment. See Master Response 36 for a detailed discussion. There are several comments that are directed to opposition to the project and not to the adequacy of the environmental review. The commenter is referred to: Master Response 3 for a discussion of Purpose and Need Master Response 4 for an evaluation of the Alternatives Development process

DEIRS Ltr#	Cmt#	Comment	Response
		stretch of this once mighty river is dry almost all of the time. Having succeeded in greatly reducing the flows from the south through the Delta, the same interests now seek to reduce the flows through the Delta from the Sacramento River in the north by approving and operating the Water Tunnels. The Effects Analysis chapter (chapter of the Draft Plan admits that the new upstream diversion would reduce flows but blames climate change as the most likely culprit for future salmon population extinctions. That chapter also claims that the adverse effects on listed species and habitats would be outweighed by various conservation measures having nothing to do with the Water Tunnels and that are to be paid for by the public rather than the exporters taking the water. This massive new upstream diversion would include the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) tying their Endangered Species Act hands behind their backs for 50 years by way of regulatory assurances and the "No Surprises Rule" included in the Implementing Agreement. The California Department of Fish and Wildlife (CDFA) would likewise give away its powers and responsibilities for the 50 year term of the proposed permit. In the face of admitted declining fish populations caused by water diversions and the admitted worsening future threats caused by climate change, this giveaway by the fishery agencies would be astonishing in its scope and its trampling on the fundamental ESA federal agency obligation "to afford first priority to the declared national policy of saving endangered species." Tennessee Valley Authority v. Hill, 437 U.S. 153, 185 (1978). This proposed action if carried out would be so contrary to the language and purpose of the ESA as to raise the appearance of impropriety. A function of ESA [Section] 10 Habitat Conservation Plans is to allow private property owners to make economically viable use of their lands avoiding "Regulatory Takings" issues under the Fifth Amendment of the Constitution. Those issues could arise if such use would be prevented because of prohibitions against adversely affecting critical habitat for endangered species on the land owners' property. No such issues are present here. The contractors do not own the water in the Sacramento River and the Delta. The water is a public resource. Even the permits for use of the water are held by the Federal and State governments- not the exporters. The exporters also have nothing to do with proposed mitigation funding; mitigation would be paid for by way of bonds or other public funds. The public, meaning the taxpayers, would pay for the conservation measures as well as for attempting to mitigate adverse effects resulting from the new upstream conveyance with the exception of the project footprint itself. Habitat restoration on the ground is no substitute for taking away designated critical freshwater habitat. Consequently, there is no nexus between either the fish or the contractors and the BDCP mitigation and conservation measures. Again, calling this a conservation plan is a clever trick. New upstream conveyance needs to be treated lawfully for what it really is-- a proposed new diversion project to take massive quantities of freshwater away from the lower Sacramento River, sloughs, and the San Francisco Bay-Delta. New upstream conveyance is not properly or lawfully a conservation plan or part of a lawful Habitat Conservation Plan.	Master Response 5 addressing governance, funding responsibilities and the transition from the BDCP to the preferred project Alternative 4A Master Response 30 for an overview of the modeling conducted for the environmental assessment.
1542	5	There are references throughout the BDCP Drafts including the "Effects Analysis" chapter of the Plan to the meetings with federal agency scientists "during the August 2013 workshops." (Example, Plan ch. 5, p. 5. 1-32). There have been negotiations and meetings by the agencies with the exporters--the "water takers" -- who have had the seats that count on the inside of the process. Those interests are the "winners" in the BDCP processes. The ignored "water	More information on the adequacy of public outreach activities is provided in Master Response 40. Issues related to transparency and public involvement are addressed in Master Response 41. Master Response 28 provides details related to operational criteria for existing and proposed export facilities. Upstream reservoir operations and effects are addressed in Master Response 25. More

DEIRS Ltr#	Cmt#	Comment	Response
		givers"-- the fish, the River, the Delta, Delta and Northern California agriculture, fishing, business, recreation and public interests have been excluded from the inside process. The federal agencies are apparently trying to cover up issues that should have been resolved before the public Draft BDCP document review period commenced. These issues are instead being secretly planned to be decided in the Final BDCP Plan and EIR/EIS without being aired in new Draft documents and a new public review period. The close of the BDCP comment period in a few days affords time to only mention several examples since the subject documents were just obtained from the federal agencies under the Freedom of Information Act (FOIA). These examples come from something called the "BDCP Federal Open Issues Tracker:" "Open" issues that will require further refinements between draft and final: 1. Issues with Conservation Measure 1 operations 1. Real Time Operations a. STATUS: Further work is needed on four issues: . . ; 2) whether the High Outflow Scenario (HOS) draws from Oroville only or whether other COA [Coordinated Operations Agreement] "adjustments" will occur; 3) whether water transfer programs are part of meeting the HOS requirements, and if so, how to address their NEPA/CEQA-related effects; . . . 2. High Outflow Scenario (HOS) and Decision Tree a. STATUS: At present only the HOS appears to be permissible based upon the best available science. The Services will only authorize operations that meet permit issuance criteria. The State's proposed project may therefore need to be changed at the time of permit issuance. b. The Plan needs to more clearly and specifically state the scientific work related to HOS/Decision Tree that will be carried out prior to operations with respect to salmonids. 4 .CVP Upstream Operations a. STATUS: Recent refinements to real-time operations state that meeting BDCP exports will require an (unspecified) accounting between the CVP and the State project. This accounting needs to be clarified and agreed upon. b. This change raises several fundamental issues of project operations and Project impacts and it may trigger additional NEPA/CEQA analyses. This change may also affect the scope and timing of the ESA section 7 consultations associated with the BDCP. (PRELIMINARY WORKING DRAFT-FOR INTERNAL USE ONLY-MARCH 28, 2014). These are just a few examples of critical issues that are being dealt with in secret with the project proponents being at the table while the public is relegated to trying to find out what is going on behind closed doors by Freedom of Information Act requests. The Effects Analysis chapter in the Plan represents over and over that the "only" changes in upstream operations will involve Oroville and the Feather River. It turns out that is not the case. Other upstream reservoir operations and upstream reaches of other rivers will also be affected. These critical issues of "adjustments" to other reservoir operations, water transfers, salmon survival questions, and change between the CVP and State project need to be aired openly in a new Draft Plan and Draft EIR/EIS circulated for a new public review and	information on the decision tree approach is provided in Master Response 44. The timing of Endangered Species Act (ESA) compliance is addressed in Master Response 29. The preferred project has been modified since the public review process for the DEIR/EIS. See Master Response 4A. The lead agencies concur that the Services will only issue permits that meet their requirements. Adaptive management will be necessary; see Master Response 33 for additional discussion. The decision tree is discussed in Master Response 44. The governance of the program is addressed in Master Response 5. As far as the commenters position that decisions are being made in secret, the project has exceeded all regulatory requirements for public review and public outreach. See Master Responses 39, 40 and 41.

DEIRS Ltr#	Cmt#	Comment	Response
		comment period. That is necessary to allow the public to have the opportunity to comment on the actual project as it is and will be as opposed to finding out those critical details after the horse is out of the barn and the public comment period is over.	
1542	6	"[A]cross the globe, large infrastructure projects almost invariably arrive late, over-budget and fail to perform up to expectations. Cost overruns and benefit shortfalls of 50% are common; cost overruns above 100% are not uncommon." Flyvbjerg, Garbuio and Lovallo, Delusion and Deception in Large Infrastructure Projects, 51 California Management Review 170, 171-2 (winter 2009). "The underlying reasons for all forecasting errors can usefully be grouped into three categories: delusions or honest mistakes; deceptions or strategic manipulation of information or processes; or bad luck." (Id. at 172). [P]oliticians, planners, or project champions deliberately and strategically overestimate benefits and underestimate costs in order to increase the likelihood that their projects, and not their competition's, gain approval and funding. These actors purposefully spin scenarios of success and gloss over the potential for failure." (Id. at 173). Large California infrastructure project proponents are masters of delusion and deception as evidenced by the explosion of the forecasted cost of the new San Francisco-Oakland Bay Bridge span from $1 billion to $6 billion. Here, the BDCP project proponents are striving to be the all-time champions of carrying out "delusion and deception in large infrastructure projects." The only true statewide benefit-cost study of the proposed Water Tunnels project conducted so far concluded two years ago that "We find the tunnels are not economically justified because the costs of the tunnels are roughly 2.5 times larger than their benefits." Eberhardt School of Business, Business Forecasting Center, University of the Pacific, Benefit-Cost Analysis of Delta Water Conveyance Tunnels (July 12, 2012). "The recent recession is a powerful reminder that no amount of financial engineering can change the fundamental economics of an investment from bad to good." (Id. at 13)." [I]t is clear that the Delta water conveyance tunnels proposed in the draft BDCP are not justified on an economic or financial basis." (Id.). This helps explain the absence of information in the Draft Implementing Agreement about who is going to pay for what as well as the ongoing efforts of the exporters to quietly shift as many of the billions of dollars of costs as possible to taxpayers and to urban and suburban ratepayers. Again, the deliberate omission of any alternative reducing exports and not including new upstream conveyance, coupled with the refusal to post correspondence and comments on the BDCP website, aids and abets the deception of the public with respect to the environmental, economic, and financial risks and drawbacks of the Water Tunnels. Finally, what could be more deceptive or delusional than falsely claiming or actually believing that taking more water away from the fish and their habitats will be good for them and is "conservation?"	Please see Master Response 5 (BDCP Chapter 8, Implementation Costs and Funding Sources) regarding the estimated cost, including the risk of cost overruns. Please also see Master Response 5 regarding the adequacy of the proposed project funding strategy for the purposes of the state and federal endangered species authorizations. The draft Implementing Agreement is a contract between DWR, the participating state water contractors, and the state and federal wildlife agencies about the provisions of dispute resolution process of the BDCP. The Draft Implementing Agreement for the proposed project was made available for public review on May 30, 2014. Implementing Agreements are not intended to provide details of funding commitments or responsibilities. Separate funding agreements would be developed by DWR and Reclamation with their respective water contractors. 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. Implementing agreements are a requirement under the California Natural Community Conservation Planning Act (NCCPA), and are routinely executed under the ESA Section 10 (HCP) permitting process. Since the current proposed project is no longer a NCCP or HCP, an implementing agreement was not released with the RDEIR/SDEIS or Final EIR/EIS for the project. Please see Master Response 4 for additional information regarding alternatives development and screening. Master Responses 39, 40 and 41 provide additional information regarding the lead agencies public review process, public outreach and transparency, and response to public comments.
1542	7	Over and over again throughout the Draft Plan, Draft EIR/EIS and Draft Implementing Agreement adaptive management and the decision tree are referred to as the future procedures that will save the fish from all of the claimed uncertainties in the BDCP. If the exporters have the money, political power and influence to get the controversial Water Tunnels approved now, that would evidence the worthlessness of adaptive management and the "decision tree" in the future. Now, the billions of dollars to build the Water Tunnels have not been spent. After that investment is made and the Water Tunnels have been	The preferred alternative, 4A, includes a decision tree (see Master Response 44). The preferred project has an initial operations that is fully analyzed in the REDEI/SEIS. Due to climate change and findings subsequent to monitoring conducted after construction, there is expected to be adaptations to the operations. Adaptive management is a key component of the preferred alternative in part because of the remaining scientific uncertainties and disagreements and in part because operations of the preferred alternative would not begin for at least a decade, during which time scientific understanding may evolve. See Master Response 33

DEIRS Ltr#	Cmt#	Comment	Response
		constructed and are ready for operation adaptive management and the decision tree will be puppets dancing to the tunes played by the exporters. The exporters would then have an additional argument for their lobbyists and lawyers to make-- that the exporters invested billions of dollars in the development of the Water Tunnels and cannot equitably be stopped from filling them with water. The same powerful interests that succeeded in destroying the once mighty San Joaquin River will not hesitate to turn the Delta into a salty, polluted, stagnant pond. The exporters have already had sufficient control over the BDCP agencies to prevent the development and consideration of a BDCP reduced exports no new conveyance alternative. The exporters have had sufficient control over the BDCP agencies to exclude public comments and correspondence from the BDCP website. Given that successful track record of power and domination over the BDCP agencies, the so-called adaptive management and the decision tree will be no safeguards at all against the extirpation of listed fish species and the destruction of the Delta.	regarding adaptive management and monitoring and Master Response 44 regarding the decision tree.
1542	8	Corrective Actions: The BDCP agencies will eventually have the opportunity, should they choose to steam full speed ahead in the face of red flags flying, to convince the courts that they proceeded in the manner required by NEPA, CEQA and the Endangered Species Act (ESA). That is, the agencies can try to convince the courts that they really did not have to develop and consider a range of reasonable alternatives reducing exports; it was okay to suppress public comments and correspondence from the BDCP website; it was okay to misrepresent a new water diversion as a conservation plan; and it is okay to make significant changes or "adjustments" in proposed project operations without disclosing and assessing those changes and adjustments in a new Draft Plan and Draft EIR/EIS. The BDCP agencies have the opportunity to instead take a different path. That is, the agencies can present a range of reasonable alternatives reducing exports in a new Draft Plan, Draft EIR/EIS and Draft Implementing Agreement. The agencies can welcome instead of ban public comment and correspondence on the BDCP website during a new public review period on new draft BDCP documents. The agencies can take the proposed new conveyance out of the Habitat Conservation Plan and deal with any such proposal in the normal, lawful project review process. The agencies can make sure that significant changes or adjustments in proposed project operations are disclosed in draft environmental documents out for public review periods rather than attempting to unlawfully insert them in Final NEPA and CEQA documents to evade public review and comment. And there is so much more the agencies can, indeed must, do to represent the public as opposed to only representing the water takers. The agencies can require ESA consultations and California public trust doctrine analysis to take place before rather than after the BDCP Draft NEPA and CEQA processes so that the public can actually be informed by the work of agency scientists as opposed to attempting to wade through thousands of pages of financially-interested project proponent advocacy. The agencies can either finally admit that the costs of the water tunnels would be 2.5 times larger than the benefits or require their own statewide benefit-cost study to be performed comparing the water tunnels with reduced export alternatives.	Please note that the preferred alternative is now Alternative 4A (i.e., the California WaterFix Project) and no longer includes an HCP or NCCP. 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. Please see Master Response 3 for more information on the purpose and need for the 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 Lead Agencies carefully considered all potential alternatives that were proposed during the scoping process and during time of preparation of the EIR/EIS. See Master Response 4 for additional information on the selection of alternatives. 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 presentations/ Q&As. Documents, studies, administrative drafts, and meeting materials– more than 3,000 documents – have been posted online since 2010 in a commitment to public access and government transparency. After the conclusion of scoping under CEQA and NEPA and prior to the release of public Draft BDCP and associated Draft EIR/EIS for public review and comment, State and Federal lead agencies sought to ensure transparency and public access throughout the interim planning years (2009-2013) by hosting public meetings, steering committee meetings, working group meetings and publication of preliminary and administrative drafts of both the BDCP and the EIR/EIS for informal public review. Although there is no specific requirement or guidance under state and federal environmental laws or policies to do so, meeting materials, meeting notes, meeting presentations, audio recordings of meetings, draft documents, and comment letters were made available to the public on the BDCP website. However, during the formal comment period of the 2013 Draft EIR/EIS and 2015 RDEIR/SDEIS, all incoming correspondence is considered a formal comment on the EIR/EIS. All formal comments were required to be processed and considered by the State and Federal lead agencies. Public comments submitted during the official public comment periods, are available to the public in this Final EIR/EIS. For more information on transparency and the posting of public comments, see Master Response 40 regarding the adequacy of public outreach, Master Response 41 regarding transparency of the public involvement process, and 42 regarding how public comments were considered. The State Water Resources Control Board (the Board) is charged with the comprehensive planning and allocation of water resources in California. Any change in purpose, place of use, or point of diversion

DEIRS Ltr#	Cmt#	Comment	Response
			requires approval by the Board. DWR will seek to obtain the Board's approval for the proposed project through the permit process. Water rights permits carefully spell out the amounts, conditions, and construction timetables for proposed water projects. DWR, as the permit applicant, will follow the process set forth in the Board's regulations, which includes environmental review, public notice, and a hearing process to address objections which is underway as of the date of this response. For additional details and updated information please refer to the SWRCB Change in Point of Diversion Petition for the California Water Fix. For information on the costs of the proposed project see Master Response 5.
1543	1	I have serious concerns regarding the implementation of the plan. How is the health of the Delta enhanced by removing fresh water from the Delta? It is important for the ecology of the Delta that fresh water levels be maintained. Increased salinity in the Sacramento/San Joaquin Delta means death to farms and death to fish.	The effects of less Sacramento River water flowing through the Delta on salinity-related parameters under certain project alternatives is fully addressed in Chapter 8, Water Quality. The water quality assessment addresses effects of changes in salinity on agricultural and fish and wildlife resources due to the project alternatives via the EC assessment (Impact WQ-11) through evaluation of compliance with agricultural and fish and wildlife objectives in the Bay-Delta Water Quality Control Plan and degradation relative to existing conditions and the No Action Alternative. Where significant impacts to beneficial uses would occur due to the alternative, as opposed to other forces including climate change and sea level rise, mitigation to lessen those impacts is provided. The effects on fish from changes in flows and salinity are evaluated in Chapter 11, with mitigation provided as necessary.
1543	2	This marshland that you have planned is incomprehensible to me. The Sacramento/San Joaquin Delta grows food for all over California and the world. What farm land is going to replace the thousands of acres you plan to put under water? Who is going to feed the world? The arid ground of the Southern California farms is planted water sucking cash crops like almonds. What about asparagus, cherries, peaches, tomatoes, berries: the nutritious food the human race needs survive? That depends on Delta soil. What happens to the farmers and the economy of the Sacramento/San Joaquin Delta communities?	The BDCP/California WaterFix project is being proposed to address the conflict between the ecological needs of a range of at-risk Delta species and natural communities, while providing for more reliable water supplies for people, communities, agriculture, and industry. Although both the construction of new physical facilities in the Delta and the restoration of habitat will lead to the conversion of some amounts of agricultural land in the Delta, effects of the BDCP will be subject to aggressive mitigation efforts. Land that is not directly affected by construction or habitat restoration should remain productive. Please see Master Response 18 for more information regarding agricultural impact mitigation. Socioeconomic effects, including impacts on agricultural employment, are described in Chapter 16, Socioeconomics, of the EIR/EIS. State constitutional restrictions require the reasonable and beneficial use of water and state law requires that water supplied from the Delta be put to beneficial uses. The Lead Agencies do not have the authority to designate what water deliveries are used for. Please refer to Master Response 34 regarding the potential uses of water delivered via BDCP proposed conveyance facilities.
1543	3	The building of these tunnels is in an area where the ground contains the spores of Valley Fever. Has this risk been studied? This is a serious health risk which needs to be considered before digging up this ground and spewing Valley Fever spores into the community at large.	Valley Fever infection can occur year-round and tends to occur in areas with dry weather conditions that allow the fungus to grow in soil. The fungal spores become airborne when the soil is disturbed by wind, farming, construction and other activities. In California, the highest rates of reported Valley Fever cases from 2008-2012 occurred in Merced; Madera, Fresno, Tulare, Kern, Kings, Monterey, and San Luis Obispo counties; Kern and Kings counties had the highest rates of infection during this 5-year period (approximately 217 and 145 people per 100,000, respectively) (California Department of Public Health 2013). BDCP construction activities will occur in San Joaquin, Yolo, Contra Costa, Sacramento, Alameda, Sutter and Solano counties, where rates of Valley Fever have ranged from less than 1 to 10 people per 100,000. Proposed project construction activities would require implementation of basic and enhanced control measures at all construction and staging areas to reduce construction-related fugitive dust. Baseline conditions such as wind and agricultural practices can generate the specific types of spores associated with Valley Fever into the air and while Valley Fever it is not considered a project specific problem, it is something

DEIRS Ltr#	Cmt#	Comment	Response
			that the project proponents are aware of and would respond to accordingly with regards to the project should it be detected. Described in the BDCP/California WaterFix EIR/EIS Appendix 3B (beginning on page 3B-31), are environmental commitments to control fugitive dust. Chapter 22 (Air Quality and Greenhouses Gases) does speak to related issues and regulations for control and oversight of such issues.
1543	4	The twin tunnels do not provide any new water. It is not prudent to invest in a system that basically is shell game with the water of California. Let's pursue some energy and investment into systems that contain rain water (when it is available) and engage every Californian in water conservation efforts.	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. 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 proposed project. 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. Please see Master Response 4 regarding the selection of alternatives analyzed, and Master Response 6 regarding demand management. For more information regarding purpose and need please see Master Response 3.
1544	1	Please extend this deadline so these issues can be illuminated given the alluvial deposits and the sediments in the river. If there is a big shake it will sink. Is it being built on bedrock? Who has done the foundation studies? Have they any experience with foundation recommendations dealing with the fault lines and previous issues in the fault ridden areas of Northern California? It's not our fault. It won't work given the Loma Prieta Quake where bridge collapses occurred and highways pancaked that were not supposed to be affected. Have we come up with a good foundation for these projects? I would like to hear more. Please extend the deadline?	Regarding the parts of the comment pertaining to extension of the comment period, please refer to Master Response 39. Regarding the part of the comment pertaining to geologic and seismic hazards, the geologic and seismic setting and hazards within which the conveyance facilities would be constructed are described in Chapter 9 Geology and Seismicity. The underlying soil materials and seismic hazards at the conveyance facilities are described in Impacts GEO-3, GEO-5, GEO-6 GEO-7, and GEO-8 in Chapter 9. The hazard of subsidence at the conveyance facilities is described in Impact SOILS-3 in Chapter 10. The analyses of the foundation materials along the conveyance alignments have been conducted by licensed geotechnical engineers, engineering geologists, and civil engineers from DWR and private engineering firms. These individuals have experience with and are qualified by the State of California to assess soil characteristics for engineering suitability, to assess seismic shaking and fault movement hazards, and to prepare design measures and prescribe construction techniques to reduce soil and seismic hazards to acceptable levels.
1545	1	Really? Two forty foot tunnels will fix the delta? Nothing lives in tunnels!	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. The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS.
1545	2	For the cost to build these two tunnels, the state could build 10 large dams in the foothills along the Sacramento River to store surface water diverted from the river during above normal water years. Then the water could be released during low water years to help flush the Delta with fresh water.	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

DEIRS Ltr#	Cmt#	Comment	Response
			operational flexibility. Please see Master Response 37 regarding why an alternative focused on creating additional storage, either in the Delta or elsewhere, was not included in the FEIR/EIS. For more information regarding purpose and need please see Master Response 3.
1545	3	The state could build 30 desalination plants along the coast to provide fresh water to municipalities/farmers reducing the burden on the fresh water that is needed to flow through the delta to maintain its health.	The comment does not raise any environmental issue related to the 2015 RDEIR/SDEIS or the 2013 DEIR/EIS. See Master Response 7 for a more detailed discussion of various desalination projects under consideration and in development at this time. 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.
1545	4	I have stood at the Walnut Grove bridge on the Sacramento River last fall and watched the influence of the tides push the Sacramento River uphill. There was not enough fresh water flowing down the Sacramento River to keep the ocean at bay. Diverting water upstream will only cause the salt water intrusion to worsen. Once salt water enters our Delta, we will need to change the Sacramento/San Joaquin Delta name to the Sacramento/San Joaquin Estuary. Farmers that grow America's food in the Delta region needs fresh water. Corn does not grow with salt water. Grapes do not grow with salt water. Tomatoes do not grow with salt water. Asparagus does not grow with salt water. Pears do not grow with salt water. Safflower does not grow with salt water. Alfalfa does not grow with salt water. Melons do not grow with salt water. Nothing farmed in the Delta region grows with salt water! The Delta needs more fresh water!	The water quality assessment of the diversion of Sacramento River water under the project alternatives addresses effects on salinity-related parameters in the Delta, including electrical conductivity (EC), and compliance with related agricultural use objectives in the Bay-Delta Water Quality Control Plan and degradation relative to these uses in Impact and WQ-11 (EC) in Chapter 8, Water Quality. Where significant impacts to agricultural beneficial uses would occur due to the alternative, as opposed to other forces including climate change and sea level rise, mitigation to lessen those impacts is provided. Further, the proposed project has been modified since publication of the Draft EIR/EIS to Alternative 4A, which would have less than significant impacts on salinity-related parameters.
1545	5	The two proposed tunnels will not add any additional water to our already tapped water supply. The water diverted into the tunnels can already be diverted with the existing delta waterways to get water into the canals that take water to the south. We need more fresh water to flow through the Delta to maintain and improve the Delta's health. This can only be done by creating new water supplies by creating additional water storage or building desalination plants. Let's use valuable taxpayers dollars in a smarter way that will actually benefit the delta, municipalities, and farmers. Let's scrap the expensive tunnel idea that could potentially cause more harm than good, and not add any additional water for our thirsty state and Delta.	The proposed project has been developed to provide environmental benefits while stabilizing water supplies for a large population of California residents, consistent with statutory policy as found in the Delta Reform Act of 2009 (see, e.g., Cal. Pub. Resources Code, §§ 85001(c), 85002, 85004(a), 85020.) By establishing a point of water diversion in the north Delta and new operating criteria to improve water volume, timing, and salinity, along with other conservation measures, the proposed project is designed to improve native fish migratory patterns and habitat conditions and allow for greater operational flexibility. Please see Master Response 3 for additional information regarding the purpose and need The proposed project would be funded through a "beneficiary pays" principle, meaning the cost will be borne by those who receive the benefit. The beneficiaries of the water conveyance facilities include certain municipal, industrial, and agricultural water users served by the SWP and CVP. As such, the cost of the construction and operation of the new water facilities, as well as for mitigation necessary to address impacts to terrestrial and aquatic species associated with construction and operation, will be paid by participating state and federal water contractors. See Master Response 6 for more information on feasibility of desalination to meet project needs.
1547	1	Please do not act without first understanding the consequences. I understand southern California needs more water but potentially destroying the bay delta will not solve this problem. Solutions must come from conservation, increased awareness, and improved water management in local areas. You have the power to see that what was once one of the largest estuaries in the world is	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.

DEIRS Ltr#	Cmt#	Comment	Response
		not destroyed forever. I am speaking for myself and for many others who do not have the time or resources to access this information.	
1548	1	In order to fully realize the impacts of the proposed BDCP, the entire project must be presented. As a Habitat Conservation Plan and Natural Community Conservation Plan, the BDCP fails to identify specific locations where all of the proposed Conservation Measures (CMs) are expected to take place. CM 1, Water Facilities and Operation, is the only measure that has specific locations, thus potential impacts can be studied, evaluated, and ultimately mitigated.	See Master Response 29 regarding specificity of the Conservation Measures. Also, note that the proposed project (Alternative 4A) no longer includes the BDCP, and therefore does not need to meet Habitat Conservation Plan or Natural Community Conservation Plan requirements.
1548	2	The Conservation Measures that propose habitat restoration, CMs 2-11, and those that have physical components to guard against other stressors, CMs 16 to 18, and 21 do not have specified locations. Multiple areas in the BDCP EIR/EIS state that locations for these activities have not been selected and thus the effects are unknown. These later CMs will likely impact a considerable amount of productive land within the Delta that is not currently dedicated and managed as habitat. Such a change in land use will have significant impacts on the Delta economy, the legacy towns and the Delta as Place. Consequently, the potential success of these Conservation Measures as part of a HCP/NCCP cannot be evaluated by State and Federal permitting agencies without any specific location information, nor can any adverse impacts be assessed. The EIR/EIS only provides a superficial and general overview of impacts of the Conservation Measures beyond CM1. This is due to the lack of specific conservation measure location information. The Final BDCP EIR/EIS should include this level of detail and impact analysis in order to identify any mitigation strategies to reduce impacts to less than significant levels.	Please see Master Response 3 regarding the level of detail needed to analyze CMs 2-11. The State and Federal permitting agencies will evaluate the effects of these CMs at the project level prior to their implementation. Also see Master Response 14 regarding the analysis of potential restoration areas. 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.
1548	3	There is an overall lack of consideration of adverse impacts on Local Maintaining Agencies and their ability to maintain and manage the reclamation works and levee systems within their jurisdiction. When searching in the document for impacts on human safety, which would occur, when levees are compromised as a result of BDCP implementation, Chapter 25: Public Health redirects readers to Chapter 6: Surface Water. Chapter 6 provides very little on adverse impacts to the levee systems and potential flooding concerns. The document is incomplete without and adequate analysis of all BDCP impacts on Delta island drainage and levee systems. This deficiency should be addressed in any Final BDCP EIR/EIS.	Please see Section 7 in Appendix 6A for 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. Chapter 6, FEIR/EIS, includes analyses on impacts to flood flows, alterations to existing drainage patterns and runoff, flood exposure risks to people and/or structures, and redirection or impedance of flood flows. Chapter 9 includes information on potential impacts to levee stability, ground settlement, slope failure, and liquefaction. Please see Appendix 6A, Section 6A.6, FEIR/EIS, for more information on potential impacts to flood protection and levee during construction and operations of the proposed project. In addition, it is anticipated DWR conduct additional flood risk analyses, including hydraulic analysis on changes in velocity, water surface elevation, flowage distribution, scour, sedimentation, and any up- or downstream effects as a result of constructing and operating the new water conveyance facilities and implementation of the environmental commitments. See Section 6A.6.3 for more information.
1548	4	Chapter 6: Surface Water According to Figures 6-14 and 6-15, flow downstream of the intakes on the Sacramento	Expected changes in the water surface elevations in the central Delta channels (represented by Mokelumne River at Terminus) are shown in the EIR/EIS Appendix 5A Section C, , which show similar minimum water surface elevations under all action alternatives, including Alternative 4A (Proposed Project) as compared to

DEIRS Ltr#	Cmt#	Comment	Response
		River will be reduced by approximately 5000 cubic feet per second (cfs) or 25% on average. This will in turn have impacts on downstream channels. The North and South Fork of the Mokelumne River are partially fed by this river through the Delta Cross Channel. An analysis needs to be done to determine the river stages of channels connected to the Sacramento River when the project is operational. According to BDCP Effects Analysis, Appendix 5C- Delta Habitat, a reduction in 6000 cfs is expected to drop the river level 3 feet (5C.5.4-6). If levels in the channels drop too low, the ability to siphon or pump water would be adversely affected. This could involve some diversions on Staten Island that are used to irrigate crops and accommodate the seasonal flooding for managed water fowl habitat.	the Existing Conditions and No Action Alternative; similar or higher maximum water surface elevations under all action alternatives as compared to Existing Conditions; similar or higher maximum water surface elevations under Alternative 4A as compared to No Action Alternative; and lower maximum water elevations under the remaining action alternatives as compared to No Action Alternative.
1548	5	On Figure M3-4 Sheet 7, the muck spoil site obliterates the main drainage canal on the southern end of the island. This will have a significant impact on the entire drainage network feeding into this principal system component. There is some discussion in the documents regarding relocating drainage systems prior to construction, however this main artery in Reclamation District 38's reclamation works and cannot easily be relocated without significantly impacting farming operations and even compromising levee safety on a major portion of the island.	The area shown for RTM spoil sites show a general area; however, the locations of spoil placement within the larger boundary will be further defined during design. At that time, methods to reduce impacts to drainage and water supply facilities would be identified in accordance with Mitigation Measure GW-5 of the EIR/EIS.
1548	6	Chapter 7: Ground Water There are three (3) tunnel shafts proposed to be located on Staten Island. It is estimated that the construction of these shafts will require dewatering a 2600 foot radius to a depth of 300 feet (p. 7-46). On Staten Island a total of 1,195 acres lie within the projected dewatering influence area. It is likely dewatering will cause subsidence within the 2600 foot well area of influence and most likely beyond. This is not mentioned in the Report. Subsidence and associated impacts as a result of dewatering activities are potentially significant and must be addressed. For example, subsidence from dewatering can weaken the levees by creating higher hydrostatic pressures or may even cause the levees to rotate. The areas of special concern for the District are the northern and southern under crossings of the levee by the tunnel shafts. The dewatering area of influence includes the levee. The impact on levee integrity and the potential increased flood risk from adjacent dewatering activities is not evaluated, but would be a significant adverse impact that would require mitigation.	Please refer to the response to comment 1717-83.
1548	7	Chapter 7 discusses the possibility of seepage occurring on an island if an adjacent island is flooded for habitat purposes. This will cause an increased flood risk on the subject island if seepage is left unmitigated and begins to undermine the levees. This consequence of that impact is not discussed in the documents. Rather, it is recognized as a potentially serious adverse impact that may not be mitigated because of high costs associated with resolving seepage issues, according to the report (p. 7-51). The costs to remediate potential adverse seepage impacts would then be transferred to Reclamation District 38. This could place an undue economic burden on the District and seriously hamper its ability to adequately maintain the levee system the level of protection warranted by the resources protected. There is no discussion of the affects dewatering will have on irrigating crops, such as increased drawdown or the ability to irrigate crops in those areas. Groundwater effects on agricultural drainage and irrigation is briefly addressed in Chapter 14, which continues to emphasize that the geographic incidence and potential severity of these effects are unknown (p.14-128). More research is obviously needed regarding dewatering issues to	As described under Section 7.3.3.2 of Chapter 7, Groundwater, of the EIR/EIS, groundwater during operations could rise near tidal, channel margin, and seasonally inundated floodplain restoration sites (Impact GW-6). Mitigation measures have been identified in the EIR/EIS. In most cases, the mitigation measures would reduce the impacts to become less than significant as compared to Existing Conditions. However, it is possible, that some impacts may not be mitigable depending upon specific information that would be collected during design and construction phases, as stated in the EIR/EIS.

DEIRS Ltr#	Cmt#	Comment	Response
		properly assess impacts in any EIR/EIS for the Plan. Additionally, there are no specific mitigation measures in the EIR/EIS to resolve any unanticipated impacts to drainage after construction activities have commenced. In the winter, much of the land area is flooded to provide habitat for the threatened Greater Sandhill Crane and other waterfowl. Dewatering could adversely affect this time honored practice and as such has not been considered in the potential impacts of dewatering. The impacts of the dewatering wells, such as noise that would disrupt terrestrial species, are not discussed, nor are their specific locations determined. There is no discussion in the Plan as to whether or not, or when, the dewatering wells will be removed once construction is complete or if the land will be returned to its pre-construction state.	
1548	8	Chapter 12: Terrestrial Species: The preferred alternative, Alternative 4, will permanently remove approximately 1,500 acres from beneficial use. Most of this land is used for agriculture and is flooded in the winter to support threatened Greater Sandhill crane, shorebirds, and other waterfowl. Sandhill cranes are one species that almost exclusively use Staten Island over other islands in the Delta for nesting and roosting areas. Staten Island supports an estimated 15% of the regions threatened Greater Sandhill Crane population (Ivey 13). This chapter does discuss creating about 700 to 900 acres of habitat for Greater Sandhill Crane, which doesn't offset the acres lost on Staten alone. The chapter concludes that the net effect is a substantial decrease in the amount of managed wetland (p. 12-2052). The BDCP suggests that more habitat will be created that will also support Sandhill crane but doesn't say if it will be exclusively managed for Sandhill crane. There is no discussion of what will happen if the Sandhill cranes do not choose to use the new areas for roosting or nesting. Given how they have exclusively used Staten for quite some time, expecting this species to thrive in other locations is uncertain, so the project impact is most likely adverse. The land that will be taken out of production will be used as reused tunnel material (RTM) areas. Conservation Measure 1, Alternative 4 indicates that the ponds will be created to dewater the tunnel muck material. There is no discussion of the effects the ponds could have if used by sandhill cranes or other water birds that use Staten Island for nesting, roosting, and foraging.	The commenter's opinion is that there is no discussion in the Draft EIR/EIS on the possibility that cranes may not use habitat created for cranes and that there is no discussion of the potential effects of dewatering ponds on cranes on Staten Island. While Chapter 12 of the Draft EIR/EIS contains a thorough and extensive assessment of BDCP potential effects on sandhill crane, including impacts that would occur on Staten Island, DWR staff and consultants have continued to work with USFWS and CDFW staff to explore additional ways to lessen the risk of adverse effects on cranes using Staten Island. Modifications to the construction of CM1 under Alternative 4, as well as the new alternatives 4A, 2D, and 5A, have been developed to remove permanent impacts on Staten Island. Water conveyance facilities under these alternatives do not include any permanent features or RTM placement on Staten Island, nor do they include any new transmission lines on Staten Island. The avoidance and minimization measure associated with cranes (AMM20) have been modified to provide additional protections to the cranes. Additionally, please note that Alternative 4A is now the preferred alternative and no longer contains an HCP/NCCP.
1548	9	Chapter 14: Agricultural Resources: Based on information provided for the preferred Alternative 4, at least 1,500 acres of Important Farmland will be permanently removed and used as Reused Tunnel Material sites. It appears though, that once construction is complete this material will be moved off site and used for other purposes. This should allow farming practices to continue on previous spoil sites after construction and removal of RTM. However, page 14-109 indicates that the operations in the RTM areas would preclude future agricultural use. The statement implies a significant adverse impact that is not addressed. There is also no proposed schedule for the RTM removal from the spoil sites. The effects of the loss of a minimum 1,500 acres on Staten Island will have an economic impact of at least $1.5 million to $2.3 million annually depending on what type of crops are planted. This estimation uses the gross return of $1,020 per acre for corn and $1,540 per acre for alfalfa, crops typically planted on Staten Island (URS 2008, UCD 2011). This is a significant amount of lost production that would require mitigation. The proposed	The design of CM 1 (water conveyance facilities) has been revised to reduce the project footprint on Staten Island. Specifically, the proposed tunnel launch facilities, large reusable tunnel material storage areas, a barge landing site, and high voltage transmission lines would not be located on the island. This change also reduces the overall construction time on Staten Island. Please see BDCP EIR/EIS Chapter 16, Socioeconomics, for analysis of effects on agricultural economics in the Delta Region Please see Master Response 18 for further discussion regarding agricultural mitigation for the BDCP.

DEIRS Ltr#	Cmt#	Comment	Response
		mitigation measure to offset lost agriculture, AG-1, creates an Agriculture Land Stewardship Program (ALSP) that suggests providing landowners with subsidies to operate the land in a way that may improve habitat or aide in operations. It is not specified in Chapter 8 of the BDCP what funding sources will be used to compensate landowners for lost productivity or to support an ALSP. It is expected that owners will not be fully compensated for the loss of agricultural operations. This will not only have significant impacts on the landowner and employees, it will also extend to the Delta legacy towns that depend on agricultural operations for their continued viability. Reclamation District 38 obtains funding for drainage system management, levee maintenance activities and rehabilitation projects from assessments against the land owner. Any permanent loss in agricultural production and revenues would ultimately impact the District's financial resources and ability to carry out its responsibilities for flood protection and drainage. Components of Conservation Measure 1 will benefit from the protection of the levees and thus should be subject to assessments. There is no discussion in the BDCP of this issue or a mitigation strategy in this chapter or in BCDP Chapter 8.	
1548	10	Several gas lines owned by Lodi Gas and PG&E cross beneath Staten Island. These pipelines are required to have safety coverage so that agriculture operations can take place above. Subsidence from dewatering activities could reduce the coverage of these pipes, creating a potentially hazardous situation for the farming operations. The gas lines would have to be lowered if minimum coverage standards are not met. This possible scenario has not been considered and could be an adverse project impact that would require immediate mitigation to protect public health and safety.	As indicated in Ch. 24, Hazards and Hazardous Materials, of the EIR/EIS, any effects on the environment and public safety due to implementation of the project and disturbance of oil or gas pipelines would be more likely to occur if utilities were not carefully surveyed prior to construction, including contact with local utility service providers. California Government Code Sections 4216–4216.9 require that anyone planning to excavate contact the appropriate regional notification center at least two working days (but not more than 14 calendar days) before beginning to excavate. Implementation of pre-construction surveys, and then utility avoidance or relocation if necessary, would minimize any potential disruption and hazardous effects due to disruption of this infrastructure. Mitigation Measures UT-6a: Verify locations of utility infrastructure, and UT-6c: Relocate utility infrastructure in a way that avoids or minimizes any effect on worker and public health and safety (described in Chapter 20, Public Services and Utilities) address these effects.
1548	11	Chapter 19: Transportation: According to Conservation Measure 1, Alternative 4 has project components along North Staten Island Road. The road runs immediately parallel to the tunnel alignment and is adjacent to two tunnel shafts, spoil areas, and a Safe Haven area. There is no analysis of the effects of the construction activity on this road in Table 19-26, either physically or function ally. Analysis shows that SJ 01 has deficient baseline conditions and construction activity will result in even worse. This is likely the case for North Staten Island Road. The northern most tunnel shaft location appears to be adjacent to the levee. It is not discussed whether or not levee access roads will be used by construction equipment to construct certain elements of the BDCP. Increased loads from large construction equipment frequenting levee patrol and access roads could hinder District access and adversely impact the levee structure, resulting in maintenance, flood response, and increased flood risk issues for Reclamation District 38 and island, creating significant adverse impacts that have not been identified. Increase traffic on the main north-south access road will further exacerbate the access and operational problems for the District, and severely disrupt island farming operations, with significant adverse economic impacts.	As discussed in Appendix 19A, BDCP Construction Traffic Impact Analysis, page 31, segments were selected as follows. Beginning in January 2012, agencies were first contacted regarding the general approach and methodology intended for both the traffic operations and pavement conditions assessment related to construction impacts. Agencies were sent the list of study segments for review and comment. In one case, study segments were adjusted within a jurisdiction to be consistent with current truck routing practices. Subsequently, agencies were requested to supply readily available existing pavement condition information to populate Table 5 in the previous section. Agency representatives were also asked about potential mitigation approaches to address potential pavement condition impacts. Through this outreach, sample mitigation approaches used for similar projects were obtained. Table 6 in Appendix 19A identifies all agencies contacted as part of this outreach effort.
1548	12	Page 19-69 mentions the affected roadways will be brought back to preconstruction condition or better after construction. The report is silent on the adverse impacts to Staten Ranch and Reclamation District 38 operations during the lengthy construction period. This chapter also says "the BDCP proponents are not solely responsible for the timing,	Page 19-69 of the EIR/EIS Chapter 19, Transportation, describes Mitigation Measure TRANS-2c and its results assuming it is implemented. Similarly, page 19-175 describes Mitigation Measure TRANS-1c and its results assuming it is implemented. Page 19-191 acknowledges the fact that implementation of TRANS-1c is dependent on agreement among many affected agencies, and thus implementation is not guaranteed.

DEIRS Ltr#	Cmt#	Comment	Response
		nature, or complete funding of required improvements" (p. 19-191). These two statements conflict and negate the assurances that one of the impacts might be mitigated, after-the-fact, or that unidentified on-going impacts will be addressed. This is just another example of the inadequacies of the BDCP and the EIR/EIS analysis.	
1548	13	On Figure M3-4 Sheet 7, the muck spoil site for Alternative 4 will cover the southern end of the main Staten Island Road north-south road. This will block the District's direct access to the levees on the southern end of the island. As previously mentioned, blocking access will compromise the District's ability to monitor and maintain the levees in that area. The District would also be unable to access this area quickly if a potential flood emergency occurs in this part of the island. The levees in the southern end of Staten Island are the most vulnerable levees and are exposed to greater hydrostatic pressures than the rest of the levee system. Thus the potential impacts to the unfettered use of this main island thoroughfare are significant and adverse. These impacts to Staten Island operations are not addressed in this chapter.	The new proposed project, Alternative 4A, no longer includes a Reusable Tunnel Material (RTM) storage site on Staten Island. For descriptions of the new sub alternatives and an updated map depicting the Alternative 4A alignment, please see Chapter 3 of the FEIR/EIS. Please see Section 6A.6 in Appendix 6A for a discussion on levees modified by construction of the California WaterFix (CWF), 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.
1548	14	Conservation Measure 1: Water Facilities and Operation: According to Figure M3-4 Sheet 7 there is a major spoil re-handling site located directly adjacent to the south east levee on Staten Island. This potential placement of significant amounts of Reused Tunnel Material could adversely impact the integrity of the adjacent levee, stretching over 4 miles along the Mokelumne River South Fork. The Plan does not provide any detail about the proposed containment berms and whether they will be built adjacent to the levee or if the levee themselves will be used to contain the RTM. The weight from the RTM could consolidate the soils below and induce significant subsidence that would likely jeopardize levee integrity and increase flooding risk exposure. So will the activity associated with the barge unloading and, likely, loading operation projected for the levee area east of the main island road. There is no discussion regarding the need of construction vehicles to access the levee patrol road to access barges. There is also no description of what the loading facility will look like or how it will be constructed and its relationship to the levee structure. This is just another example of a seriously deficient impacts analysis.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. For detailed responses on the primary issues being raised with regard to the BDCP or Alternative 4, as well as a discussion of the current status of the draft BDCP Effects Analysis, please see Master Response 5.
1548	15	Conservation Measure 6: Channel Margin Habitat: Channel Margin Habitat is planned along the North and South Forks of the Mokelumne Rivers (p. 3.4-158). These channels border Staten Island. While channel margin habitat locations are not specified in the Plan, some impacts of performing this conservation measure should be addressed. This deficiency is overlooked in the EIR/EIS analysis. There is no discussion on the limitations this could have on Reclamation District 38 levee maintenance activities, or even if it is physically and economically feasible. Page 3.4-158 just says the office will coordinate these activities with flood management agencies. It is not clear if the flood management agencies will also be required to provide financial/personnel resources for this work. There is no discussion on who is expected to manage the channel margin habitat areas after work is complete. Many other impacts of this Conservation Measure can only be determined after the locations are selected and a design is engineered.	This comment addresses Alternative 4 (known also as the BDCP) or analysis contained within the draft BDCP Effects Analysis. Alternative 4 remains a viable alternative, but a modified proposed project (Alternative 4A/California WaterFix) is being considered. Numerous comments were received that focused on various elements of the BDCP. Where the comments focused on elements of the BDCP that overlap with the elements of Alternatives 2D, 4A, or 5A (e.g., CM1 as it comprises of the North Delta Diversions, tunnels, and supporting facilities), specific responses are presented. Where comments raised issues as to whether the BDCP and other HCP/NCCP alternatives in the 2013 Draft EIR/EIS were potentially feasible and could function as an alternative for purposes of meeting CEQA and NEPA's requirements to analyze a reasonable range of alternatives to the proposed project (e.g., issues regarding the BDCP Effects Analysis or financial feasibility), responses are presented generally in Master Response 5. Where comments submitted on the BDCP were focused on elements outside the scope of the environmental analysis or viability of the BDCP and other HCP/NCCP alternatives within the context of CEQA/NEPA (e.g., request of specific revisions to the BDCP related to mapping or references), no specific responses are provided and further consideration will be

DEIRS Ltr#	Cmt#	Comment	Response
		If set-back levees are the contemplated solution, there could be a whole host of adverse impacts to farming operations and drainage that would require mitigation, to say nothing of the economic consequences for Staten Ranch and Reclamation District 38.	given to these comments, and any revisions to the Draft BDCP would only be made, if an HCP/NCCP alternative was ultimately approved at the conclusion of the CEQA/NEPA process.